



ComEd Summary Impact Evaluation Report

Energy Efficiency / Demand Response Plan:
Program Year 2020 (CY2020)
(1/1/2020-12/31/2020)

Prepared for:

ComEd
FINAL (Revised)

May 4, 2021

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Table of Contents

1. Introduction	1
2. Portfolio Savings.....	3
2.1 Annual Savings	3
2.2 Cumulative Persisting Annual Savings (CPAS)	6
2.2.1 Gas Savings	6
2.2.2 Legacy Savings	7
2.2.3 Historical Savings	7
2.2.4 Expiring Savings	7
2.2.5 Total Savings	8
2.2.6 Applicable Annual Incremental Goal (AAIG).....	8
2.3 Weighted Average Measure Life	20
3. Savings by Program.....	22
4. Savings by Measure.....	27
5. Lifetime Savings and Total Resource Cost Savings Summary.....	31
6. High Impact Measures	34
Appendix A. Program-Level Detail.....	A-1
A.1 Portfolio Savings.....	A-1
A.1.1 Cumulative Persisting Annual Savings (CPAS)	A-1
A.1.2 Weighted Average Measure Life	A-12
A.2 Savings by Program	A-13
A.3 Lifetime Savings and Total Resource Cost Savings Summary.....	A-17

List of Tables, Figures, and Equations

Figure 2-1. Annual Incremental Electric Savings by Sector	6
Figure 3-1. Net Energy Savings by Program – Electric Only	26
Figure 4-1. Net Energy Savings by End-use Type – Electric Only	29
Table 1-1. ComEd CY2020 Energy Efficiency Programs.....	2
Table 2-1. Total Annual Savings	4
Table 2-2. Total Annual Incremental Electric Savings	5
Table 2-3. CPAS by Program – Electric	9
Table 2-4. CPAS by Program – Gas	12
Table 2-5. CPAS from Gas Counting Toward ComEd Goal.....	15
Table 2-6. Savings from Gas Counting Toward ComEd Goal.....	16
Table 2-7. CPAS by Program Counting Toward ComEd Goal – Total Electric + Gas	17
Table 2-8. WAML and Verified Gross Savings by Program	21
Table 3-1. Energy Savings by Program – Electric Only	22

Table 3-2. Energy Savings by Program – Total Electric + Gas	23
Table 3-3. Carryover Energy Savings by Program	24
Table 3-4. Summer Peak Demand Savings by Program	25
Table 3-5. Comparing Electric Net Goals to Actual Achieved by CY2020 Program	27
Table 4-1. Energy Savings by Measure Category – Electric Only.....	28
Table 4-2. Summer Peak Demand Savings by Measure Category.....	28
Table 4-3. Energy Savings by Measure Category and Sector	30
Table 4-4. Secondary Energy Savings from Water Reduction by Measure – Electric Only.....	31
Table 5-1. Verified First Year and Lifetime Savings and Acquisition Costs – Electric Only	32
Table 5-2. Total Resource Cost Savings Summary	33
Table 6-1. Summary Table of CY2020 High Impact Measures – Business Gross Impact.....	34
Table 6-2. Summary Table of CY2020 High Impact Measures – Business Net Impact.....	35
Table 6-3. Summary Table of CY2020 High Impact Measures – Residential Gross Impact	36
Table 6-4. Summary Table of CY2020 High Impact Measures – Residential Net Impact	36
Table 6-5. Summary Table of CY2020 High Impact Measures – Income Eligible Gross Impact	37
Table 6-6. Summary Table of CY2020 High Impact Measures – Income Eligible Net Impact ..	38
Table A-1. CPAS by Program – Electric.....	A-2
Table A-2. CPAS by Program – Gas	A-5
Table A-3. Savings from Gas Counting Toward ComEd Goal	A-8
Table A-4. CPAS by Program Counting Toward ComEd Goal – Total Electric + Gas.....	A-9
Table A-5. WAML and Verified Gross Savings by Program.....	A-12
Table A-6. Energy Savings by Program – Electric Only.....	A-13
Table A-7. Energy Savings by Program – Total Electric + Gas	A-14
Table A-8. Summer Peak Demand Savings by Program.....	A-15
Table A-9. Comparing Electric Net Goals to Actual Achieved by CY2020 Program.....	A-16
Table A-10. Verified First Year and Lifetime Savings and Acquisition Costs – Electric Only.	A-17
Table A-11. Total Resource Cost Savings Summary.....	A-18
Equation 2-1. Incremental Expiring Savings.....	7
Equation 2-2. Applicable Annual Incremental Goal (AAIG).....	8
Equation 2-3. Applicable Annual Incremental Goal Achieved	8
Equation 2-4. Portfolio Level WAML Calculation	20
Equation 2-5. Program Level WAML Calculation.....	20

1. Introduction

This report presents the results of the impact evaluation of ComEd's Program Year 2020 (CY2020) 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. CY2020 covers January 1, 2020 through December 31, 2020.

In CY2020, ComEd's portfolio evaluation included 36 programs, including 9 Business, 7 Residential, 5 Income Eligible, 4 Pilot, 10 Third Party programs, 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 CY2020: 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 CY2018 and CY2019 that were installed in CY2020. 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 five of those programs, including Single Family Retrofits, Affordable Housing New Construction, Elementary Education Kits, Non-Residential New Construction, and RetroCommissioning.

Table 1-1. ComEd CY2020 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		Public, Private
Business	Strategic Energy Management		
Residential			
Residential	Appliance Rebates		
Residential	Fridge & Freezer Recycling		
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	One report, separate sections for CBA, IHWAP
Third Party Programs			
Third Party Programs-Business	Agriculture		
Third Party Programs-Business	Grocery		
Third Party Programs-Business	Non-Profit Retrofits		
Third Party Programs-Business	Public Buildings in Distressed Communities		
Third Party Programs-Business	Small Business Kits		
Third Party Programs-Business	Telecommunications		
Third Party Programs-Income Eligible	Food Bank-LED Distribution		
Third Party Programs-Income Eligible	Manufactured Housing Retrofit		
Third Party Programs-Income Eligible	UIC-ERC Income Eligible Kits		
Third Party Programs-Residential	Elementary Education Kits	Nicor Gas & PGL/NSG	
Pilots			
Pilot	Building Operator Certification Training		
Pilot	IE Senior Design Pilot		
Pilot	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 CY2020 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 CY2020. 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	1,894,065,696	265,171
Portfolio Gross Realization Rate	1.05	1.23
Verified Gross Savings	1,985,103,241	325,144
Portfolio Net-to-Gross Ratio (NTG)	0.87	0.88
Verified Net Savings	1,724,332,392	286,903
Legacy Savings†	3,537,033,300	
Gas Savings Eligible for Claiming (Therms)	9,480,216	
Gas Savings Counted Toward Goal (Therms)	3,486,215	
Gas Savings Counted Toward Goal (kWh)‡	102,180,962	
Total Net Savings (Electric + Gas Savings Counted)	1,826,513,354	286,903
Historic Portfolio Total Savings (Electric + Gas Savings Counted)§	3,312,523,570	
Grand Total Net Savings (Plus Legacy & Historic Savings)	8,676,070,224	286,903
CPAS Statutory Goal	8,174,476,960	
CPAS Achieved as Percent of Goal	106.1%	
Applicable Annual Incremental Goal (AAIG)	1,021,809,620	
Applicable Annual Incremental Savings Achieved‡§	1,162,044,708	
AAIG Achieved as Percent of Goal	113.7%	

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 error.

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

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 2020 CPAS Legacy Savings percent (4.5%) 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 2020 CPAS Goal percent (10.4%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 78,600,740.

‡§ Estimated as new incremental savings from 2020 after offsetting incremental expiring savings in 2020.

Source: ComEd tracking data and evaluation team analysis

Table 2-2 summarizes savings from the sectors. In CY2020, ComEd's energy efficiency portfolio achieved 1,724,332 verified net MWh savings, with the Business programs achieving 922,921 verified net MWh, the Residential programs achieving 324,159 verified net MWh, the Third Party programs achieving 181,998 verified net MWh, the Income Eligible programs achieving 77,313 verified net MWh, the Pilot programs achieving 1,944 verified net MWh, and 215,996 net MWh savings from Voltage Optimization. The portfolio savings included 1,654,300 net MWh from measures funded in CY2020 and 70,032 net MWh from previously funded lighting measures, or carryover, funded in CY2018 or CY2019 through the 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 Programs and expected to be installed in 2020.¹

Table 2-2. Total Annual Incremental Electric Savings

Savings Type	Portfolio	Ex Ante Gross Savings	Verified Gross Realization Rate	Verified Gross Savings	NTG*	Verified Net Savings
Energy (kWh)	Business	1,070,542,927	1.01	1,084,918,011	0.85	922,921,492
Energy (kWh)	Residential	366,346,423	1.11	408,126,189	0.60	324,159,470
Energy (kWh)	Income Eligible	76,520,796	1.13	86,443,396	0.89	77,313,232
Energy (kWh)	Third Party	163,986,281	1.14	187,325,135	0.97	181,998,086
Energy (kWh)	Pilots	86,832	26.42	2,294,194	0.80	1,943,796
Energy (kWh)	Voltage Optimization	216,582,437	1.00	215,996,316	1.00	215,996,316
Energy (kWh)	Total	1,894,065,696	1.05	1,985,103,241	0.87	1,724,332,392
Peak Demand (kW)	Business	178,008	1.03	183,290	0.85	156,318
Peak Demand (kW)	Residential	13,810	4.21	58,109	0.62	49,465
Peak Demand (kW)	Income Eligible	2,780	4.21	11,703	0.89	10,458
Peak Demand (kW)	Third Party	24,137	1.10	26,597	0.95	25,266
Peak Demand (kW)	Pilots	12	26.75	310	0.80	261
Peak Demand (kW)	Voltage Optimization	46,424	0.97	45,134	1.00	45,134
Peak Demand (kW)	Total	265,171	1.23	325,144	0.88	286,903

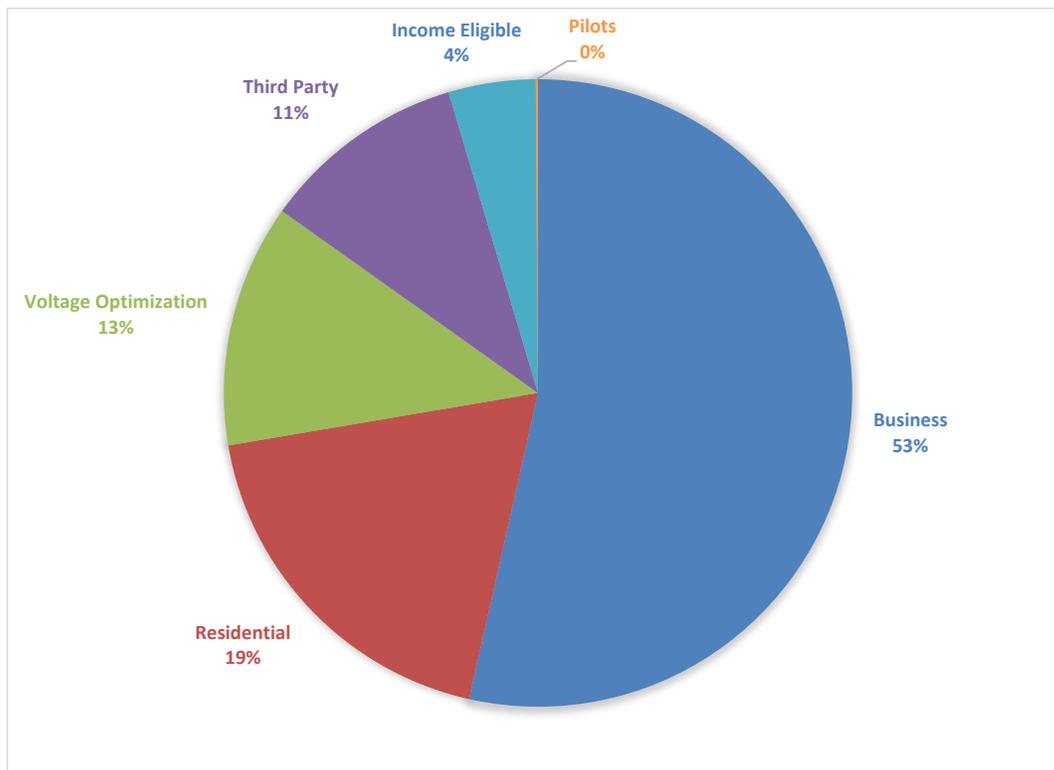
Note: The kWh savings in this table does not include any converted gas savings.

* The NTG 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 produced 53% of the portfolio net savings, Residential programs contributed 19%, Voltage Optimization contributed 13%, Third Party programs contributed 11%, Income Eligible programs contributed 4%, and Pilot programs contributed less than half of one percent (see Figure 2-1). Further detail on the savings by program is 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 Electric Savings by Sector


Source: ComEd tracking data and evaluation 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 2020, 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 CY2020, ComEd's savings target (AAIG) is 1,021,810 MWh and so ComEd can claim up to 102,181 MWh in gas savings.³

The Future Energy Jobs Act (FEJA) specifies that ComEd shall prioritize other fuels (which in CY2020 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.

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 3,537,033 MWh toward ComEd verified CPAS in CY2020.⁴

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 and 2019 that have not reached the end of their Effective Useful Life (EUL). It also means that the CPAS tables account for expiring savings. The evaluation applied the historical contribution to CPAS of 3,312,524 MWh (electric 3,116,033 MWh plus counted gas converted savings of 196,491 MWh) toward the ComEd verified total CPAS in CY2020.

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 CY2020 is estimated as CY2020 incremental expiring savings plus the legacy incremental expiring savings in CY2020 and historical expiring savings since CY2018, given a value of 664,469 MWh (from legacy incremental expiring savings of 550,205 MWh, and historical incremental expiring savings⁵ of 114,264 MWh).

³ FEJA Statute: 220 ILCS 5/8-103B(g)(7.5). Section 8-103B. The 2020 applicable annual incremental goal is estimated as the difference in the 2020 CPAS Statutory Goal (8,174,477 MWh) and the 2019 CPAS Statutory Goal (7,152,667 MWh).

⁴ For CY2020, legacy savings are estimated by multiplying statutory 2020 CPAS Legacy Savings percent (4.5%) 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 CY2020 energy efficiency programs achieved total electric CPAS of 1,724,332 MWh. They achieved 9,480,216 therms of gas savings, which converts to 277,865 MWh.⁶ From those gas savings, ComEd can claim 102,181 MWh toward its annual incremental goal. Adding the current year electric savings to the allowable converted gas savings gives 1,826,513 MWh total savings.

Adding the legacy savings of 3,537,033 MWh and historical savings since CY2018, the grand total CY2020 CPAS that ComEd can claim is 8,676,070 MWh (which is 106% of the CPAS goal of 8,174,477 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 (CY2020) and the CPAS goal for the immediately preceding year (CY2019). We calculate progress toward AAIG that ComEd achieved in CY2020 as the difference in verified CY2020 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 CY2020, the AAIG is estimated as 1,021,810 MWh. The estimated progress toward goal that ComEd achieved is 1,162,045 MWh, which is the difference between the CPAS that ComEd can claim against its goal (rounded 1,826,513 MWh) and the grand total incremental expiring savings (664,469 MWh). The AAIG achieved as percent of goal (1,021,810 MWh) is 114%.

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*	CY2020 Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	Verified Net kWh Savings											
					2018	2019	2020	2021	2022	2023	2024	2025	2026			
Business	Incentives - Custom + Standard	13.2	334,311,151	0.80	3,452,822,972			267,103,743	267,103,743	266,755,111	266,523,377	265,367,193	262,096,766	253,827,180		
Business	Business Instant Discounts	11.3	273,193,069	0.82	2,197,082,939			223,468,489	223,468,489	223,468,489	223,468,489	165,559,167	160,998,743	157,961,640		
Business	Small Business - Public + Private	12.0	225,428,906	0.97	2,371,424,383			218,666,038	218,570,739	216,835,353	207,558,515	190,625,850	189,698,577	188,010,389		
Business	LED Streetlighting	12.0	79,967,787	0.85	795,880,765			68,131,157	68,131,157	68,131,157	68,131,157	65,419,517	65,419,517	65,419,517		
Business	Industrial Systems + Industrial Energy Management	8.0	57,891,644	0.79	359,309,259			45,484,105	45,484,105	45,484,105	24,045,722	24,045,722	19,845,369	19,845,369		
Business	RetroCommissioning + VCx	8.0	47,103,027	0.96	361,675,639			45,389,774	45,389,774	45,389,774	45,389,774	45,389,774	45,389,774	45,389,774		
Business	Strategic Energy Management	5.0	33,582,105	1.00	167,910,525			33,582,105	33,582,105	33,582,105	33,582,105	33,582,105	-	-		
Business	Non-residential New Construction	17.4	29,536,638	0.59	303,223,124			17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616		
Business	Facility Assessments	4.0	3,903,685	0.94	14,737,480			3,669,464	3,669,464	1,849,638	1,849,638	1,849,638	-	-		
Residential	Lighting Discount	11.0	328,671,663	0.55	1,410,587,438			180,736,660	180,736,660	180,736,660	180,736,660	98,564,094	94,750,273	91,708,747		
Residential	Appliance Rebates	10.0	43,097,501	0.84	361,121,194			36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091		
Residential	Single-Family Assessment	9.6	15,279,900	0.85	86,872,536			12,923,176	12,923,176	12,923,176	12,923,176	6,336,237	6,336,237	6,301,961		
Residential	Multi-Family Assessments	7.5	10,647,892	0.88	67,771,746			9,336,002	9,259,334	9,144,797	8,773,033	8,305,048	5,767,751	2,795,381		
Residential	Fridge & Freezer Recycling	6.5	5,363,298	0.41	14,360,817			2,220,808	2,220,808	2,220,808	2,220,808	2,191,124	2,191,124	1,095,340		
Residential	Residential HVAC	13.8	5,065,935	0.77	47,758,144			3,886,094	3,886,094	3,886,094	3,783,188	3,783,188	3,783,188	2,464,495		
Residential	Residential Behavior	5.0	-	-	196,098,926			79,014,639	56,890,540	34,561,003	17,856,518	7,776,226	-	-		
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	10.0	78,110,398	0.88	604,991,539			68,980,234	68,980,234	68,980,234	68,980,234	66,215,410	65,051,213	63,454,581		
Income Eligible	Single Family Retrofits - CBA + IHWAP	15.9	3,490,986	1.00	47,412,401			3,490,986	3,490,986	3,490,986	3,490,986	3,486,958	3,486,958	3,155,101		
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	14.0	1,985,877	1.00	26,539,951			1,985,877	1,979,302	1,961,710	1,905,896	1,862,822	1,650,638	1,428,139		
Income Eligible	Affordable Housing New Construction	13.2	1,669,264	1.00	20,955,910			1,669,264	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382		
Income Eligible	Public Housing Retrofits	8.7	1,186,871	1.00	10,003,266			1,186,871	1,173,821	1,155,986	1,152,674	1,118,894	925,997	643,252		
Third Party	Food Bank-LED Distribution	10.0	106,409,645	1.00	932,947,775			106,409,645	106,409,645	106,409,645	106,409,645	106,409,645	106,409,645	106,409,645		
Third Party	UIC-ERC Income Eligible Kits	9.3	32,221,357	1.00	273,961,175			32,221,357	32,221,357	32,221,357	32,221,357	32,221,357	32,221,357	32,221,357		
Third Party	Business Telecomm	9.7	10,094,176	0.67	65,575,921			6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098		
Third Party	Public Buildings in Distressed Communities	14.9	10,067,863	0.97	145,168,130			9,765,827	9,765,827	9,765,132	9,705,388	9,705,388	9,705,388	9,705,388		
Third Party	Business Grocery	9.9	9,536,289	0.97	88,388,032			9,250,200	9,250,200	9,250,200	9,250,200	8,768,480	8,542,913	8,542,913		
Third Party	Small Business Kits	8.0	6,432,331	0.97	38,330,023			6,210,289	6,210,289	6,210,289	6,115,152	3,507,944	2,885,780	2,826,494		
Third Party	Elementary Education Kits	9.0	5,134,150	0.96	38,744,132			4,952,625	4,952,625	4,820,490	4,727,533	4,205,189	3,750,027	3,750,027		
Third Party	Agriculture	14.5	4,003,596	0.77	44,910,715			3,100,046	3,100,046	3,087,144	3,081,724	3,081,724	3,081,724	3,081,724		
Third Party	Nonprofit Retrofits	12.6	3,357,628	0.97	39,169,028			3,256,899	3,256,899	3,251,182	3,242,111	2,993,240	2,927,225	2,704,817		
Third Party	Manufactured Housing Retrofit	13.1	68,101	1.00	659,543			68,101	68,101	68,101	68,101	68,101	68,101	53,155		
Pilots	Building Operator Certification Training	10.2	2,187,735	0.80	17,866,464			1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188		
Pilots	Upstream Commercial Food Service Equipment	11.8	84,129	0.80	792,234			67,304	67,304	67,304	67,304	67,304	67,304	67,304		
Pilots	IE Senior Design Pilot	11.1	22,330	1.00	234,068			22,330	22,330	22,330	22,330	22,330	22,330	22,330		
Pilots	Retail Products Platform	14.0	-	-	1,455,647			103,975	103,975	103,975	103,975	103,975	103,975	103,975		
Voltage Optimization	Voltage Optimization	15.0	215,996,316	1.00	3,239,944,743			215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316		
CY2020 Portfolio Total Electric Contribution to CPAS		11.7	1,985,103,241	0.83	17,846,688,584			1,724,332,392	1,701,958,819	1,675,424,026	1,626,976,461	1,442,223,336	1,378,617,224	1,352,579,687		
Historic Portfolio Total Electric Contribution to CPAS\$								1,765,460,187	3,230,285,186	3,116,032,678	2,663,310,643	2,566,052,757	2,467,261,757	2,255,766,273	2,125,244,477	1,939,991,846
Portfolio Total Electric 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
CY2020 Portfolio Incremental Expiring Electric Savings 										22,373,573	26,534,793	48,447,565	184,753,125	63,606,112	26,037,537	
Historic Portfolio Incremental Expiring Electric Savings#										114,252,509	452,722,034	97,257,886	98,791,000	211,495,484	130,521,796	185,252,631
Portfolio Grand Total Incremental Expiring Electric Savings†										114,252,509	475,095,608	123,792,679	147,238,566	396,248,609	194,127,908	211,290,188

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	245,619,476	238,833,200	232,511,564	222,509,467	173,726,928	123,272,689	107,515,106	103,673,445	21,253,946	21,096,396	20,847,841	20,514,044
Business	Business Instant Discounts	127,158,980	126,248,029	111,266,010	100,178,767	90,334,601	90,093,264	89,212,812	84,196,968	-	-	-	-
Business	Small Business - Public + Private	185,848,969	153,906,752	150,266,249	142,018,111	116,184,978	74,397,798	61,557,241	57,176,079	20,549	20,549	20,549	20,549
Business	LED Streetlighting	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	19,845,369	19,845,369	19,845,369	19,776,941	19,776,941	19,776,941	5,498,602	5,498,602	651,328	651,328	651,328	651,328
Business	RetroCommissioning + VCx	32,405,606	11,541,614	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	6,970,647	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	91,277,794	87,740,150	87,740,150	27,741,101	27,741,101	27,741,101	27,277,931	25,358,356	-	-	-	-
Residential	Appliance Rebates	27,334,162	27,334,162	20,351,311	20,351,227	4,709,371	2,467,398	2,467,398	1,281,391	1,281,391	1,132,380	23,295	23,295
Residential	Single-Family Assessment	5,864,779	5,026,131	5,026,131	271,977	4,095	4,095	4,095	4,095	-	-	-	-
Residential	Multi-Family Assessments	2,795,277	2,771,602	2,771,602	2,415,688	1,595,196	682,700	682,700	675,633	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	2,464,495	2,461,441	2,461,441	2,460,946	1,860,349	1,860,349	1,860,349	1,860,349	1,348,136	1,259,881	1,259,881	164,780
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	35,749,158	34,737,691	34,209,337	6,137,363	6,137,363	6,024,264	5,677,112	5,677,112	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	2,590,102	2,564,920	2,564,920	1,642,382	1,580,275	1,579,696	1,579,696	1,579,696	1,577,171	1,576,760	1,571,628	1,505,549
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	1,333,879	1,326,051	1,326,051	1,193,496	1,138,422	1,051,715	1,051,715	1,051,715	862,128	862,128	858,279	855,952
Income Eligible	Affordable Housing New Construction	1,611,382	1,592,550	971,836	730,993	730,993	705,951	668,390	668,390	437,905	437,905	437,905	294,858
Income Eligible	Public Housing Retrofits	593,154	592,715	592,715	440,602	250,304	32,747	32,747	19,975	18,162	18,162	18,162	18,162
Third Party	Food Bank-LED Distribution	62,673,667	62,602,825	62,602,825	20,094	20,094	20,094	20,094	20,094	20,094	20,094	20,094	20,094
Third Party	UIC-ERC Income Eligible Kits	16,997,436	15,707,119	15,707,119	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	6,763,098	6,420,588	5,050,550	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	9,705,388	9,704,608	9,704,608	9,704,608	9,704,608	9,508,659	9,508,659	9,508,659	-	-	-	-
Third Party	Business Grocery	8,542,913	5,646,591	3,860,932	2,280,891	1,738,902	1,236,110	1,113,294	1,113,294	-	-	-	-
Third Party	Small Business Kits	2,644,306	1,343,480	295,029	21,561	19,803	19,803	19,803	19,803	-	-	-	-
Third Party	Elementary Education Kits	2,878,647	2,527,599	2,179,369	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	3,048,535	3,022,241	3,022,241	3,005,198	3,005,198	3,005,198	3,005,198	2,182,772	-	-	-	-
Third Party	Nonprofit Retrofits	2,556,546	2,529,082	2,500,038	2,359,680	2,144,340	1,821,329	1,821,329	1,804,311	-	-	-	-
Third Party	Manufactured Housing Retrofit	27,759	24,858	24,858	14,001	12,333	12,333	12,333	12,333	12,166	12,166	10,881	10,881
Pilots	Building Operator Certification Training	1,750,188	1,750,188	1,750,188	364,584	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	67,304	63,631	61,436	61,436	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	17,685	13,639	13,639	7,481	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813
Pilots	Retail Products Platform	103,975	103,975	103,975	103,975	103,975	103,975	103,975	103,975	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	-	-	-	-
CY2020 Portfolio Total Electric Contribution to CPAS		1,199,112,477	1,126,828,925	1,077,626,140	864,655,019	761,426,866	598,843,954	554,116,324	536,789,014	44,912,406	44,517,180	32,693,304	24,082,306
Historic Portfolio Total Electric Contribution to CPAS§		1,842,104,211	1,513,089,986	1,344,939,794	1,025,071,214	829,089,351	772,067,306	534,741,571	84,581,534	70,774,542	46,265,392	35,740,912	15,845,646
Portfolio Total Electric 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
CY2020 Portfolio Incremental Expiring Electric Savings 		153,467,209	72,283,552	49,202,785	212,971,121	103,228,153	162,582,912	44,727,630	17,327,310	491,876,609	395,226	11,823,876	8,610,999
Historic Portfolio Incremental Expiring Electric Savings#		97,887,635	329,014,225	168,150,191	319,868,581	195,981,862	57,022,046	237,325,735	450,160,037	13,806,991	24,509,151	10,524,480	19,895,266
Portfolio Grand Total 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

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Custom + Standard	20,514,044	15,761,134	15,761,134	15,761,134	4,418,005	456,303	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public + Private	20,549	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	651,328	651,328	651,328	651,328	-	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	23,259	23,259	23,259	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	164,780	159,724	159,724	159,724	159,724	159,724	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	1,404,455	1,096	1,096	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	854,035	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	54,882	54,882	54,882	54,882	54,882	54,882	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	18,162	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20,094	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	10,881	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	2,813	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Electric Contribution to CPAS		23,739,283	16,651,424	16,651,424	16,627,070	4,632,612	670,910						
Historic Portfolio Total Electric Contribution to CPAS§		12,307,568	12,307,568	11,977,051	1,593,795	536,222							
Portfolio Total Electric CPAS		36,046,852	28,958,993	28,628,475	18,220,864	5,168,834	670,910						
CY2020 Portfolio Incremental Expiring Electric Savings 		343,022	7,087,859			24,355	11,994,458	3,961,701	670,910				
Historic Portfolio Incremental Expiring Electric Savings#		3,538,077		330,518	10,383,256	1,057,573	536,222						
Portfolio Grand Total Incremental Expiring Electric Savings*†		3,881,100	7,087,859	330,518	10,407,611	13,052,031	4,497,924	670,910					

Note: The green highlighted cell shows program total first year electric savings. The gray cells are blank, indicating values irrelevant to the CY2020 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/ntg_2020.

‡ 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	CY2020 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	14.9	5,017,493	0.78	58,498,429			3,913,554	3,913,554	3,913,554	3,913,554	3,913,554	3,907,814	3,907,814	
Business	Small Business - Public + Private	10.6	445,246	0.97	4,566,031			431,888	431,888	401,416	401,416	401,416	390,689	390,689	
Business	RetroCommissioning + VCx	8.6	119,470	0.94	965,792			112,301	112,301	112,301	112,301	112,301	112,301	112,301	
Business	Non-residential New Construction	17.4	70,186	0.59	720,527			41,410	41,410	41,410	41,410	41,410	41,410	41,410	
Business	Facility Assessments	4.6	9,815	0.94	42,282			9,226	9,226	5,958	5,958	5,958	5,958	-	
Business	Business Instant Discounts		-		-			-	-	-	-	-	-	-	
Business	Industrial Systems + Industrial Energy Management		-		-			-	-	-	-	-	-	-	
Business	LED Streetlighting		-		-			-	-	-	-	-	-	-	
Business	Strategic Energy Management		-		-			-	-	-	-	-	-	-	
Residential	Appliance Rebates	11.1	3,343,508	0.99	36,531,825			3,301,626	3,301,626	3,301,626	3,301,626	3,301,626	3,301,626	3,301,626	
Residential	Residential HVAC	13.7	379,411	0.77	3,419,307			290,466	290,466	290,466	290,466	290,466	290,466	246,252	
Residential	Fridge & Freezer Recycling		-		-			-	-	-	-	-	-	-	
Residential	Lighting Discount		-		-			-	-	-	-	-	-	-	
Residential	Multi-Family Assessments		-		-			-	-	-	-	-	-	-	
Residential	Residential Behavior		-		-			-	-	-	-	-	-	-	
Residential	Single-Family Assessment		-		-			-	-	-	-	-	-	-	
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	19.1	325,003	1.00	6,040,794			325,003	325,003	322,502	322,502	317,478	317,228	317,228	
Income Eligible	Single Family Retrofits - CBA + IHWAP	19.8	282,952	1.00	5,366,818			282,952	282,952	282,952	282,952	282,720	282,720	281,304	
Income Eligible	Affordable Housing New Construction		-		-			-	-	-	-	-	-	-	
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]		-		-			-	-	-	-	-	-	-	
Income Eligible	Public Housing Retrofits		-		-			-	-	-	-	-	-	-	
Third Party	UIC-ERC Income Eligible Kits	10.0	577,895	1.00	5,778,947			577,895	577,895	577,895	577,895	577,895	577,895	577,895	
Third Party	Small Business Kits	7.2	151,918	0.97	1,065,472			147,361	147,361	147,361	147,361	147,361	65,734	65,734	
Third Party	Elementary Education Kits	8.8	32,399	1.00	284,038			32,399	32,399	30,299	26,992	26,992	26,992	26,992	
Third Party	Food Bank-LED Distribution	20.0	8,383	1.00	167,650			8,383	8,383	8,383	8,383	8,383	8,383	8,383	
Third Party	Manufactured Housing Retrofit	14.2	2,414	1.00	32,885			2,414	2,414	2,414	2,414	2,414	2,414	2,414	
Third Party	Business Grocery	10.0	92	0.97	895			89	89	89	89	89	89	89	
Third Party	Agriculture		-		-			-	-	-	-	-	-	-	
Third Party	Business Telecomm		-		-			-	-	-	-	-	-	-	
Third Party	Nonprofit Retrofits		-		-			-	-	-	-	-	-	-	
Third Party	Public Buildings in Distressed Communities		-		-			-	-	-	-	-	-	-	
Pilots	IE Senior Design Pilot	15.9	3,205	1.00	51,053			3,205	3,205	3,205	3,205	3,205	3,205	3,205	
Pilots	Upstream Commercial Food Service Equipment	10.0	57	0.80	456			46	46	46	46	46	46	46	
Pilots	Building Operator Certification Training		-		-			-	-	-	-	-	-	-	
Pilots	Retail Products Platform		-		-			-	-	-	-	-	-	-	
Voltage Optimization	Voltage Optimization		-		-			-	-	-	-	-	-	-	
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)			10,769,444	0.88	123,533,202			9,480,216	9,480,216	9,441,875	9,438,568	9,433,313	9,334,969	9,283,381	
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡			315,652,415	0.88	3,620,758,148			277,865,129	277,865,129	276,741,359	276,644,432	276,490,409	273,607,934	272,095,887	
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§						216,877,650	387,368,187	386,997,809	385,743,580	383,751,393	377,439,558	371,458,114	362,626,924	361,149,300	
Portfolio Total Gas 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	
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)										38,341	3,307	5,255	98,344	51,588	
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 										1,123,770	96,927	154,023	2,882,475	1,512,047	
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#						370,378	1,254,229	1,992,187	1,992,187	6,311,835	5,981,444	8,831,190	1,477,623		
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†						370,378	1,254,229	3,115,957	3,115,957	6,408,761	6,135,467	11,713,666	2,989,671		

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	3,907,814	3,907,814	3,907,814	3,886,634	3,874,459	3,874,459	3,874,459	3,874,459	791	791	791	791
Business	Small Business - Public + Private	390,689	390,689	390,689	196,231	86,185	86,185	86,185	86,185	718	718	718	718
Business	RetroCommissioning + VCx	112,301	67,381	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	16,564	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	3,301,626	3,301,626	3,301,626	3,301,626	71,313	71,313	71,313	-	-	-	-	-
Residential	Residential HVAC	246,252	244,631	244,631	244,206	106,588	106,588	106,588	106,588	3,475	3,475	3,475	3,475
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	312,487	304,784	304,784	290,120	289,805	289,805	287,989	287,989	187,186	187,186	187,186	187,186
Income Eligible	Single Family Retrofits - CBA + IHWAP	281,304	280,544	280,544	258,052	255,274	255,274	253,990	253,990	253,607	253,607	253,607	253,607
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	577,895	577,895	577,895	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	65,734	65,734	65,734	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	26,992	26,992	26,992	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383
Third Party	Manufactured Housing Retrofit	2,414	2,050	2,050	953	953	953	953	953	942	942	942	942
Third Party	Business Grocery	89	89	89	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	3,205	3,205	3,205	3,205	1,756	1,756	1,756	1,756	1,756	1,756	1,756	1,756
Pilots	Upstream Commercial Food Service Equipment	46	46	46	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)		9,278,640	9,223,270	9,155,889	8,230,819	4,736,125	4,736,125	4,733,025	4,661,712	498,266	498,266	473,420	456,856
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†		271,956,925	270,334,044	268,359,111	241,245,303	138,815,831	138,815,831	138,724,972	136,634,782	14,604,179	14,604,179	13,875,949	13,390,463
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		357,434,494	275,898,351	243,764,095	118,837,384	118,745,754	115,720,242	52,702,712	31,720,535	31,066,336	27,253,065	26,645,674	22,639,386
Portfolio Total Gas 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
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)		4,741	55,370	67,381	925,070	3,494,694	-	3,100	71,313	4,163,446	-	24,846	16,564
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 		138,962	1,622,881	1,974,933	27,113,808	102,429,472	-	90,858	2,090,191	122,030,603	-	728,229	485,486
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#		3,714,806	81,536,143	32,134,256	124,926,710	91,631	3,025,512	63,017,530	20,982,177	654,199	3,813,271	607,391	4,006,288
Portfolio Total 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

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Custom + Standard	791	791	791	791	791	-	-	-	-	-	-	-
Business	Small Business - Public + Private	718	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
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	3,475	1,363	1,363	1,363	1,363	1,363	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	187,186	98,894	97,816	97,816	97,816	97,816	-	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	253,607	252	252	252	252	252	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	8,383	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	942	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	1,756	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)		456,856	101,299	100,221	100,221	100,221	99,430	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡		13,390,463	2,969,074	2,937,487	2,937,487	2,937,487	2,914,303	-	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		9,288,464	9,288,464	9,288,464	9,288,464	2,958,318	-	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent)		22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)		-	355,557	1,078	-	-	791	99,430	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent) 		-	10,421,390	31,587	-	-	23,184	2,914,303	-	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#		13,350,923	-	-	-	6,330,146	2,958,318	-	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†		13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-

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 CY2020 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/ntg_2020.

† 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 Y_{n-1} - CPAS Y_n.

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

*† 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	CY2020 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)	1,196,646	17,387,095			1,196,646	1,196,646	1,194,145	1,194,145	1,188,890	1,188,640	1,187,224	
All Other Gas (Therms)	2,952,744	34,473,126			2,289,569	2,289,569	2,289,569	2,289,569	2,289,569	2,289,569	2,289,569	
Income Eligible Gas (kWh Equivalent)†	35,073,692	509,615,743			35,073,692	35,073,692	35,000,394	35,000,394	34,846,371	34,839,033	34,797,527	
All Other Gas (kWh Equivalent)‡	86,544,933	1,010,407,326			67,107,270	67,107,270	67,107,270	67,107,270	67,107,270	67,107,270	67,107,270	
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)	4,149,390	51,860,221			3,486,215	3,486,215	3,483,714	3,483,714	3,478,459	3,478,209	3,476,793	
CY2020 Portfolio Total Gas CPAS (kWh Equivalent)§	121,618,625	1,520,023,069			102,180,962	102,180,962	102,107,664	102,107,664	101,953,641	101,946,302	101,904,797	
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)			94,320,888	196,501,850	196,490,892	196,345,720	196,272,927	195,933,773	192,722,923	185,345,248	185,325,462	
Portfolio Total Gas CPAS (kWh Equivalent)#			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	
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)	-	-				-	2,501	-	5,255	250	1,416	
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†	-	-				-	73,298	-	154,023	7,339	41,505	
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)					10,958	145,172	72,793	339,154	3,210,849	7,377,675	19,785	
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†‡					10,958	145,172	146,091	339,154	3,364,872	7,385,014	61,291	

Sector	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Income Eligible Gas (Therms)	1,182,483	1,173,655	1,173,655	557,508	554,415	554,415	551,315	551,315	450,117	450,117	450,117	450,117
All Other Gas (Therms)	2,289,569	2,287,948	2,287,948	2,287,524	2,287,524	2,287,524	2,287,524	2,287,524	48,149	48,149	23,304	6,740
Income Eligible Gas (kWh Equivalent)†	34,658,565	34,399,821	34,399,821	16,340,550	16,249,902	16,249,902	16,159,044	16,159,044	13,192,920	13,192,920	13,192,920	13,192,920
All Other Gas (kWh Equivalent)‡	67,107,270	67,059,755	67,059,755	67,047,315	67,047,315	67,047,315	67,047,315	67,047,315	1,411,259	1,411,259	683,030	197,543
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)	3,472,052	3,461,603	3,461,603	2,845,031	2,841,938	2,841,938	2,838,839	2,838,839	498,266	498,266	473,420	456,856
CY2020 Portfolio Total Gas CPAS (kWh Equivalent)§	101,765,835	101,459,577	101,459,577	83,387,865	83,297,217	83,297,217	83,206,359	83,206,359	14,604,179	14,604,179	13,875,949	13,390,463
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)	184,691,220	171,052,656	154,512,313	118,357,582	118,265,951	115,240,439	52,702,712	31,720,535	31,066,336	27,253,065	26,645,674	22,639,386
Portfolio Total Gas CPAS (kWh Equivalent)#	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
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)	4,741	10,449	-	616,572	3,093	-	3,100	-	2,340,573	-	24,846	16,564
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†	138,962	306,258	-	18,071,712	90,648	-	90,858	-	68,602,180	-	728,229	485,486
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)	634,242	13,638,564	16,540,343	36,154,731	91,631	3,025,512	62,537,727	20,982,177	654,199	3,813,271	607,391	4,006,288
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†‡	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

Sector	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Income Eligible Gas (Therms)	450,117	99,145	98,068	98,068	98,068	98,068	-	-	-	-	-	-
All Other Gas (Therms)	6,740	2,154	2,154	2,154	2,154	1,363	-	-	-	-	-	-
Income Eligible Gas (kWh Equivalent)†	13,192,920	2,905,947	2,874,360	2,874,360	2,874,360	2,874,360	-	-	-	-	-	-
All Other Gas (kWh Equivalent)‡	197,543	63,127	63,127	63,127	63,127	39,943	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)	456,856	101,299	100,221	100,221	100,221	99,430	-	-	-	-	-	-
CY2020 Portfolio Total Gas CPAS (kWh Equivalent)§	13,390,463	2,969,074	2,937,487	2,937,487	2,937,487	2,914,303	-	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)	9,288,464	9,288,464	9,288,464	9,288,464	2,958,318	-	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent)#	22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)	-	355,557	1,078	-	-	791	99,430	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†	-	10,421,390	31,587	-	-	23,184	2,914,303	-	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)	13,350,923	-	-	-	6,330,146	2,958,318	-	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†‡	13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-

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 CY2020 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 CY2020 equivalent kWh CPAS and historic equivalent kWh CPAS.

*† Incremental expiring savings are equal to CPAS Y_{n-1} - CPAS Y_n.

Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent) is the sum of CY2020 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. 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)	1,196,646	35,073,692	1,196,646	35,073,692	All Income Eligible Measures Counted (weighted EUL 14.9)
Business	Incentives - Custom + Standard	2,872,122	84,181,910	2,240,165	65,659,240	CHP (24), Building Energy Management System (15)
Business	Non-residential New Construction	70,186	2,057,145	41,410	1,213,715	All Projects (17.4)
Business	Small Business - Public + Private	740	21,701	718	21,050	ENERGY STAR Dishwasher (20)
Residential	Residential HVAC	7,940	232,713	5,520	161,800	Ground Source Heat Pump (25), Duct Sealing (20)
Pilots	IE Senior Design Pilot	1,756	51,464	1,756	51,464	Air Sealing (20)
Total		4,149,390	121,618,625	3,486,215	102,180,962	

Note: This table shows only gross and net gas savings counted towards ComEd's goal in CY2020. Results shown for programs in sectors other than Income Eligible may be different from program specific reports.

Source: Evaluation team analysis

Table 2-7. CPAS by Program Counting Toward ComEd Goal – Total Electric + Gas

Sector	Program	WAML	CY2020 Verified Gross Savings (kWh)	NTG*	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	13.6	418,493,061	0.80	4,437,920,234			332,762,984	332,762,984	332,414,351	332,182,617	331,026,434	327,756,006	319,486,420		
Business	Business Instant Discounts	11.3	273,193,069	0.82	2,197,082,939			223,468,489	223,468,489	223,468,489	223,468,489	165,559,167	160,998,743	157,961,640		
Business	Small Business - Public + Private	12.0	225,450,607	0.97	2,371,845,385			218,687,089	218,591,789	216,856,403	207,579,565	190,646,901	189,719,627	188,031,439		
Business	LED Streetlighting	12.0	79,967,787	0.85	795,880,765			68,131,157	68,131,157	68,131,157	68,131,157	65,419,517	65,419,517	65,419,517		
Business	Industrial Systems + Industrial Energy Management	8.0	57,891,644	0.79	359,309,259			45,484,105	45,484,105	45,484,105	24,045,722	24,045,722	19,845,369	19,845,369		
Business	RetroCommissioning + VCx	8.0	47,103,027	0.96	361,675,639			45,389,774	45,389,774	45,389,774	45,389,774	45,389,774	45,389,774	45,389,774		
Business	Strategic Energy Management	5.0	33,582,105	1.00	167,910,525			33,582,105	33,582,105	33,582,105	33,582,105	33,582,105	-	-		
Business	Non-residential New Construction	17.4	31,593,782	0.59	324,341,770			18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332		
Business	Facility Assessments	4.0	3,903,685	0.94	14,737,480			3,669,464	3,669,464	1,849,638	1,849,638	1,849,638	-	-		
Residential	Lighting Discount	11.0	328,671,663	0.55	1,410,587,438			180,736,660	180,736,660	180,736,660	180,736,660	98,564,094	94,750,273	91,708,747		
Residential	Appliance Rebates	10.0	43,097,501	0.84	361,121,194			36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091		
Residential	Single-Family Assessment	9.6	15,279,900	0.85	86,872,536			12,923,176	12,923,176	12,923,176	6,336,237	6,336,237	6,301,961	6,301,961		
Residential	Multi-Family Assessments	7.5	10,647,892	0.88	67,771,746			9,336,002	9,259,334	9,144,797	8,773,033	8,305,048	5,767,751	2,795,381		
Residential	Fridge & Freezer Recycling	6.5	5,363,298	0.41	14,360,817			2,220,808	2,220,808	2,220,808	2,220,808	2,191,124	2,191,124	1,095,340		
Residential	Residential HVAC	14.2	5,298,648	0.76	50,499,287			4,047,895	4,047,895	3,944,989	3,944,989	3,944,989	3,944,989	2,626,296		
Residential	Residential Behavior	5.0	-	-	196,098,926			79,014,639	56,890,540	34,561,003	17,856,518	7,776,226	-	-		
Income Eligible	Product Discounts - [Lighting Discounts + Appliance Rebates - IE]	10.0	78,110,398	0.88	604,991,539			68,980,234	68,980,234	68,980,234	66,215,410	65,051,213	63,454,581	63,454,581		
Income Eligible	Single Family Retrofits - CBA + IHWAP	18.7	11,784,314	1.00	204,713,827			11,784,314	11,784,314	11,784,314	11,784,314	11,773,495	11,773,495	11,400,133		
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	18.2	11,511,701	1.00	203,595,623			11,511,701	11,505,126	11,414,236	11,358,422	11,168,116	10,948,593	10,726,094		
Income Eligible	Affordable Housing New Construction	13.2	1,669,264	1.00	20,955,910			1,669,264	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382		
Income Eligible	Public Housing Retrofits	8.7	1,186,871	1.00	10,003,266			1,186,871	1,173,821	1,155,986	1,152,674	1,118,894	925,997	643,252		
Third Party	Food Bank-LED Distribution	10.0	106,655,337	1.00	937,861,606			106,655,337	106,655,337	106,655,337	106,655,337	106,655,337	106,655,337	106,655,337		
Third Party	UIC-ERC Income Eligible Kits	9.5	49,159,452	1.00	443,342,121			49,159,452	49,159,452	49,159,452	49,159,452	49,159,452	49,159,452	49,159,452		
Third Party	Business Telecomm	9.7	10,094,176	0.67	65,575,921			6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098		
Third Party	Public Buildings in Distressed Communities	14.9	10,067,863	0.97	145,168,130			9,765,827	9,765,827	9,765,132	9,705,388	9,705,388	9,705,388	9,705,388		
Third Party	Business Grocery	9.9	9,536,289	0.97	88,388,032			9,250,200	9,250,200	9,250,200	9,250,200	8,766,480	8,542,913	8,542,913		
Third Party	Small Business Kits	8.0	6,432,331	0.97	38,330,023			6,210,289	6,210,289	6,210,289	6,115,152	3,507,944	2,885,780	2,826,494		
Third Party	Elementary Education Kits	9.0	5,134,150	0.96	38,744,132			4,952,625	4,952,625	4,820,490	4,727,533	4,205,189	3,750,027	3,750,027		
Third Party	Agriculture	14.5	4,003,596	0.77	44,910,715			3,100,046	3,100,046	3,087,144	3,081,724	3,081,724	3,081,724	3,081,724		
Third Party	Nonprofit Retrofits	12.6	3,357,628	0.97	39,169,028			3,256,899	3,256,899	3,251,182	3,242,111	2,993,240	2,927,225	2,704,817		
Third Party	Manufactured Housing Retrofit	13.7	138,855	1.00	1,623,411			138,855	138,855	138,855	138,855	138,855	138,855	123,909		
Pilots	Building Operator Certification Training	10.2	2,187,735	0.80	17,866,464			1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188		
Pilots	Upstream Commercial Food Service Equipment	11.8	84,129	0.80	792,234			67,304	67,304	67,304	67,304	67,304	67,304	67,304		
Pilots	IE Senior Design Pilot	17.3	73,793	1.00	1,263,342			73,793	73,793	73,793	73,793	73,793	73,793	73,793		
Pilots	Retail Products Platform	14.0	-	-	1,455,647			103,975	103,975	103,975	103,975	103,975	103,975	103,975		
Voltage Optimization	Voltage Optimization	15.0	215,996,316	1.00	3,239,944,743			215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316		
CY2020 Portfolio Total Contribution to CPAS (kWh)								1,826,513,354	1,804,139,781	1,777,531,690	1,729,084,125	1,544,176,977	1,480,563,526	1,454,484,484		
Historic Portfolio Total Contribution to CPAS†						1,859,781,075	3,426,787,036	3,312,523,570	2,859,656,363	2,762,325,684	2,663,195,529	2,448,489,197	2,310,589,725	2,125,317,308		
Legacy Savings (kWh)§																
Portfolio Total CPAS (kWh)						1,859,781,075	7,514,025,516	8,676,070,224	7,807,825,744	7,290,883,274	6,828,902,594	6,193,486,893	5,756,171,751	5,387,618,812		
CY2020 Portfolio Incremental Expiring Savings 																
Historic Portfolio Incremental Expiring Savings#								114,263,467	452,867,207	97,330,680	99,130,154	214,706,333	137,899,472	185,272,417		
Legacy Incremental Expiring Savings								550,205,180	393,003,700	393,003,700	314,402,960	235,802,220	235,802,220	157,201,480		
Portfolio Grand Total Incremental Expiring Savings**								664,468,647	868,244,480	516,942,471	461,980,680	635,415,701	437,315,142	368,552,939		
Progress towards Applicable Annual Incremental Goal (AAIG)††								1,162,044,708	-	-	-	-	-	-		

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Custom + Standard	311,278,716	304,492,440	298,170,805	288,168,708	239,386,168	188,931,930	173,174,346	169,332,685	21,277,130	21,119,580	20,871,025	20,537,228
Business	Business Instant Discounts	127,158,980	126,248,029	111,266,010	100,178,767	90,334,601	90,093,264	89,212,812	84,196,968	-	-	-	-
Business	Small Business - Public + Private	185,870,019	153,927,802	150,287,299	142,039,161	116,206,028	74,418,848	61,578,291	57,197,129	41,599	41,599	41,599	41,599
Business	LED Streetlighting	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	19,845,369	19,845,369	19,845,369	19,776,941	19,776,941	19,776,941	5,498,602	5,498,602	651,328	651,328	651,328	651,328
Business	RetroCommissioning + VCx	32,405,606	11,541,614	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	7,456,133	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	91,277,794	87,740,150	87,740,150	27,741,101	27,741,101	27,741,101	27,277,931	25,358,356	-	-	-	-
Residential	Appliance Rebates	27,334,162	27,334,162	20,351,311	20,351,227	4,709,371	2,467,398	2,467,398	1,281,391	1,281,391	1,132,380	23,295	23,295
Residential	Single-Family Assessment	5,864,779	5,026,131	5,026,131	271,977	4,095	4,095	4,095	4,095	-	-	-	-
Residential	Multi-Family Assessments	2,795,277	2,771,602	2,771,602	2,415,688	1,595,196	682,700	682,700	675,633	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	2,626,296	2,575,727	2,575,727	2,562,792	1,962,194	1,962,194	1,962,194	1,962,194	1,449,981	1,361,727	1,361,727	266,626
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	35,749,158	34,737,691	34,209,337	6,137,363	6,137,363	6,024,264	5,677,112	5,677,112	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	10,835,133	10,787,658	10,787,658	9,205,878	9,062,367	9,061,788	9,024,143	9,024,143	9,010,378	9,009,967	9,004,835	8,938,756
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	10,492,872	10,259,275	10,259,275	9,696,924	9,632,607	9,545,899	9,492,686	9,492,686	6,348,545	6,348,545	6,344,697	6,342,370
Income Eligible	Affordable Housing New Construction	1,611,382	1,592,550	971,836	730,993	730,993	705,951	668,390	668,390	437,905	437,905	437,905	294,858
Income Eligible	Public Housing Retrofits	593,154	592,715	592,715	440,602	250,304	32,747	32,747	19,975	18,162	18,162	18,162	18,162
Third Party	Food Bank-LED Distribution	62,919,358	62,848,516	62,848,516	265,786	265,786	265,786	265,786	265,786	265,786	265,786	265,786	265,786
Third Party	UIC-ERC Income Eligible Kits	33,935,531	32,645,214	32,645,214	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	6,763,098	6,420,588	5,050,550	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	9,705,388	9,704,608	9,704,608	9,704,608	9,704,608	9,508,659	9,508,659	9,508,659	-	-	-	-
Third Party	Business Grocery	8,542,913	5,646,591	3,860,932	2,280,891	1,738,902	1,236,110	1,113,294	1,113,294	-	-	-	-
Third Party	Small Business Kits	2,644,306	1,343,480	295,029	21,561	19,803	19,803	19,803	-	-	-	-	-
Third Party	Elementary Education Kits	2,878,647	2,527,599	2,179,369	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	3,048,535	3,022,241	3,022,241	3,005,198	3,005,198	3,005,198	3,005,198	2,182,772	-	-	-	-
Third Party	Nonprofit Retrofits	2,556,546	2,529,082	2,500,038	2,359,680	2,144,340	1,821,329	1,821,329	1,804,311	-	-	-	-
Third Party	Manufactured Housing Retrofit	98,513	84,931	84,931	41,935	40,267	40,267	40,267	40,267	39,769	39,769	38,485	38,485
Pilots	Building Operator Certification Training	1,750,188	1,750,188	1,750,188	364,584	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	67,304	63,631	61,436	61,436	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	69,149	65,102	65,102	58,945	54,277	54,277	54,277	54,277	54,277	54,277	54,277	54,277
Pilots	Retail Products Platform	103,975	103,975	103,975	103,975	103,975	103,975	103,975	-	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	-	-	-	-
CY2020 Portfolio Total Contribution to CPAS (kWh)		1,300,878,312	1,228,288,502	1,179,085,717	948,042,884	844,724,083	682,141,171	637,322,683	619,995,373	59,516,584	59,121,359	46,569,254	37,472,769
Historic Portfolio Total Contribution to CPAS†		2,026,795,431	1,684,142,642	1,499,452,108	1,143,428,796	947,355,303	887,307,745	587,444,283	116,302,068	101,840,878	73,518,456	62,386,586	38,485,032
Legacy Savings (kWh)§		1,650,615,540	1,414,813,320	1,336,212,580	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		4,978,289,283	4,327,244,464	4,014,750,404	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
CY2020 Portfolio Incremental Expiring Savings 		153,606,171	72,589,810	49,202,785	231,042,832	103,318,801	162,582,912	44,818,488	17,327,310	560,478,789	395,226	12,552,105	9,096,485
Historic Portfolio Incremental Expiring Savings#		98,521,878	342,652,789	184,690,534	356,023,312	196,073,493	60,047,558	299,863,462	471,142,214	14,461,190	28,322,422	11,131,871	23,901,554
Legacy Incremental Expiring Savings		157,201,480	235,802,220	78,600,740	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		409,329,529	651,044,819	312,494,059	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
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	20,537,228	15,784,319	15,784,319	15,784,319	4,441,189	456,303	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public + Private	41,599	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	651,328	651,328	651,328	651,328	-	-	-	-	-	-	-	-
Business	RetroCommissioning + VCx	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	23,259	23,259	23,259	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	266,626	199,667	199,667	199,667	199,667	199,667	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - (Lighting Discounts +Appliance Rebates - IE)	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single Family Retrofits - CBA + IHWAP	8,837,663	8,473	8,473	7,377	7,377	7,377	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	6,340,452	2,898,569	2,866,983	2,866,983	2,866,983	2,866,983	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	54,882	54,882	54,882	54,882	54,882	54,882	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	18,162	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	265,786	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	38,485	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	54,277	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Contribution to CPAS (kWh)		37,129,747	19,620,498	19,588,911	19,564,557	7,570,098	3,585,213	-	-	-	-	-	-
Historic Portfolio Total Contribution to CPAS†		21,596,032	21,596,032	21,265,514	10,882,258	3,494,540	-	-	-	-	-	-	-
Legacy Savings (kWh)§		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		58,725,779	41,216,530	40,854,426	30,446,815	11,064,638	3,585,213	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Savings 		343,022	17,509,249	31,587	24,355	11,994,458	3,984,886	3,585,213	-	-	-	-	-
Historic Portfolio Incremental Expiring Savings#		16,889,000	-	330,518	10,383,256	7,387,719	3,494,540	-	-	-	-	-	-
Legacy Incremental Expiring Savings		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		17,232,022	17,509,249	362,104	10,407,611	19,382,177	7,479,425	3,585,213	-	-	-	-	-
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 CY2020 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/ntg_2020. 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 CY2020 programs as 11.2 years excluding Voltage Optimization and 11.6 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 CY2020, 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

<i>Program Level WAML</i>	is the program level WAML
<i>Program Level Verified Gross Savings</i>	is the ex post gross verified savings for the program that occurred during CY2020 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

<i>Measure Level EUL</i>	is the effective useful life (EUL) for each measure in the program ⁹
<i>Measure Level Verified Gross Savings</i>	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. The lifetime savings are estimated by multiplying the first year verified gross savings by the 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	418,493,061	13.6
Business	Business Instant Discounts	273,193,069	11.3
Business	Small Business - Public + Private	225,450,607	12.0
Business	LED Streetlighting	79,967,787	12.0
Business	Industrial Systems + Industrial Energy Management	57,891,644	8.0
Business	RetroCommissioning + VCx	47,103,027	8.0
Business	Strategic Energy Management	33,582,105	5.0
Business	Non-residential New Construction	31,593,782	17.4
Business	Facility Assessments	3,903,685	4.0
Business	Subtotal	1,171,178,767	12.0
Residential			
Residential	Lighting Discount	328,671,663	11.0
Residential	Residential Behavior*	79,014,639	5.0
Residential	Appliance Rebates	43,097,501	10.0
Residential	Single-Family Assessment	15,279,900	9.6
Residential	Multi-Family Assessments	10,647,892	7.5
Residential	Fridge & Freezer Recycling	5,363,298	6.5
Residential	Residential HVAC	5,298,648	14.2
Residential	Subtotal	487,373,542	9.8
Income Eligible			
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	78,110,398	10.0
Income Eligible	Single Family Retrofits - CBA + IHWAP	11,784,314	18.7
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	11,511,701	18.2
Income Eligible	Affordable Housing New Construction	1,669,264	13.2
Income Eligible	Public Housing Retrofits	1,186,871	8.7
Income Eligible	Subtotal	104,262,548	11.9
Third Party			
Third Party	Food Bank-LED Distribution	106,655,337	10.0
Third Party	UIC-ERC Income Eligible Kits	49,159,452	9.5
Third Party	Business Telecomm	10,094,176	9.7
Third Party	Public Buildings in Distressed Communities	10,067,863	14.9
Third Party	Business Grocery	9,536,289	9.9
Third Party	Small Business Kits	6,432,331	8.0
Third Party	Elementary Education Kits	5,134,150	9.0
Third Party	Agriculture	4,003,596	14.5
Third Party	Nonprofit Retrofits	3,357,628	12.6
Third Party	Manufactured Housing Retrofit	138,855	13.7
Third Party	Subtotal	204,579,675	10.2
Pilots			
Pilots	Building Operator Certification Training	2,187,735	10.2
Pilots	Retail Products Platform*	103,975	14.0
Pilots	Upstream Commercial Food Service Equipment	84,129	11.8
Pilots	IE Senior Design Pilot	73,793	17.3
Pilots	Subtotal	2,449,633	10.6
Portfolio	Grand Total	1,969,844,164	11.2
Voltage Optimization			
Voltage Optimization	Voltage Optimization	215,996,316	15.0
Voltage Optimization	Subtotal	215,996,316	15.0
Portfolio	Total Including VO	2,185,840,480	11.6

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	345,201,245	0.97	334,311,151	0.80	267,103,743
Business	Business Instant Discounts	252,855,430	1.08	273,193,069	0.82	223,468,489
Business	Small Business - Public + Private	227,824,102	0.99	225,428,906	0.97	218,666,038
Business	LED Streetlighting	80,287,433	1.00	79,967,787	0.85	68,131,157
Business	Industrial Systems + Industrial Energy Management	48,699,774	1.19	57,891,644	0.79	45,484,105
Business	RetroCommissioning + VCx	47,611,559	0.99	47,103,027	0.96	45,389,774
Business	Strategic Energy Management	33,403,760	1.01	33,582,105	1.00	33,582,105
Business	Non-residential New Construction	30,586,186	0.97	29,536,638	0.59	17,426,616
Business	Facility Assessments	4,073,438	0.96	3,903,685	0.94	3,669,464
Business	Subtotal	1,070,542,927	1.01	1,084,918,011	0.85	922,921,492
Residential	Lighting Discount	284,196,237	1.16	328,671,663	0.55	180,736,660
Residential	Appliance Rebates	43,012,184	1.00	43,097,501	0.84	36,042,091
Residential	Single-Family Assessment	14,866,529	1.03	15,279,900	0.85	12,923,176
Residential	Multi-Family Assessments	10,717,612	0.99	10,647,892	0.88	9,336,002
Residential	Fridge & Freezer Recycling	5,485,651	0.98	5,363,298	0.41	2,220,808
Residential	Residential HVAC	8,068,210	0.63	5,065,935	0.77	3,886,094
Residential	Residential Behavior†	NA	NA	NA	NA	79,014,639
Residential	Subtotal	366,346,423	1.11	408,126,189	0.79	324,159,470
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	67,931,160	1.15	78,110,398	0.88	68,980,234
Income Eligible	Single Family Retrofits - CBA + IHWAP	3,657,572	0.95	3,490,986	1.00	3,490,986
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	2,008,035	0.99	1,985,877	1.00	1,985,877
Income Eligible	Affordable Housing New Construction	1,768,410	0.94	1,669,264	1.00	1,669,264
Income Eligible	Public Housing Retrofits	1,155,620	1.03	1,186,871	1.00	1,186,871
Income Eligible	Subtotal	76,520,796	1.13	86,443,396	0.89	77,313,232
Third Party	Food Bank-LED Distribution	90,670,123	1.17	106,409,645	1.00	106,409,645
Third Party	UIC-ERC Income Eligible Kits	25,153,813	1.28	32,221,357	1.00	32,221,357
Third Party	Business Telecomm	10,074,332	1.00	10,094,176	0.67	6,763,098
Third Party	Public Buildings in Distressed Communities	10,179,723	0.99	10,067,863	0.97	9,765,827
Third Party	Business Grocery	9,368,231	1.02	9,536,289	0.97	9,250,200
Third Party	Small Business Kits	6,452,843	1.00	6,432,331	0.97	6,210,289
Third Party	Elementary Education Kits	3,161,851	1.62	5,134,150	0.96	4,952,625
Third Party	Agriculture	5,445,709	0.74	4,003,596	0.77	3,100,046
Third Party	Nonprofit Retrofits	3,411,435	0.98	3,357,628	0.97	3,256,899
Third Party	Manufactured Housing Retrofit	68,223	1.00	68,101	1.00	68,101
Third Party	Subtotal	163,986,281	1.14	187,325,135	0.97	181,998,086
Pilots	Building Operator Certification Training‡	-	NA	2,187,735	0.80	1,750,188
Pilots	Upstream Commercial Food Service Equipment	64,798	1.30	84,129	0.80	67,304
Pilots	IE Senior Design Pilot	22,034	1.01	22,330	1.00	22,330
Pilots	Retail Products Platform†	NA	NA	NA	NA	103,975
Pilots	Subtotal	86,832	26.42	2,294,194	0.85	1,943,796
Voltage Optimization	Voltage Optimization	216,582,437	1.00	215,996,316	1.00	215,996,316
Voltage Optimization	Subtotal	216,582,437	1.00	215,996,316	1.00	215,996,316
Portfolio	Grand Total	1,894,065,696	1.05	1,985,103,241	0.87	1,724,332,392

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/ntg_2020.

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	345,201,245	1.21	418,493,061	0.80	332,762,984
Business	Business Instant Discounts	252,855,430	1.08	273,193,069	0.82	223,468,489
Business	Small Business - Public + Private	227,845,803	0.99	225,450,607	0.97	218,687,089
Business	LED Streetlighting	80,287,433	1.00	79,967,787	0.85	68,131,157
Business	Industrial Systems + Industrial Energy Management	48,699,774	1.19	57,891,644	0.79	45,484,105
Business	RetroCommissioning + VCx	47,611,559	0.99	47,103,027	0.96	45,389,774
Business	Strategic Energy Management	33,403,760	1.01	33,582,105	1.00	33,582,105
Business	Non-residential New Construction	32,899,888	0.96	31,593,782	0.59	18,640,332
Business	Facility Assessments	4,073,438	0.96	3,903,685	0.94	3,669,464
Business	Subtotal	1,072,878,330	1.09	1,171,178,767	0.85	989,815,497
Residential	Lighting Discount	284,196,237	1.16	328,671,663	0.55	180,736,660
Residential	Appliance Rebates	43,012,184	1.00	43,097,501	0.84	36,042,091
Residential	Single-Family Assessment	14,866,529	1.03	15,279,900	0.85	12,923,176
Residential	Multi-Family Assessments	10,717,612	0.99	10,647,892	0.88	9,336,002
Residential	Fridge & Freezer Recycling	5,485,651	0.98	5,363,298	0.41	2,220,808
Residential	Residential HVAC	8,281,805	0.64	5,298,648	0.76	4,047,895
Residential	Residential Behavior†	NA	NA	NA	NA	79,014,639
Residential	Subtotal	366,560,018	1.11	408,358,903	0.79	324,321,270
Income Eligible	Product Discounts - (Lighting Discounts +Appliance Rebates - IE)	67,931,160	1.15	78,110,398	0.88	68,980,234
Income Eligible	Single Family Retrofits - CBA + IHWAP	11,865,912	0.99	11,784,314	1.00	11,784,314
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	11,728,369	0.98	11,511,701	1.00	11,511,701
Income Eligible	Affordable Housing New Construction	1,768,410	0.94	1,669,264	1.00	1,669,264
Income Eligible	Public Housing Retrofits	1,155,620	1.03	1,186,871	1.00	1,186,871
Income Eligible	Subtotal	94,449,470	1.02	104,262,548	0.91	95,132,384
Third Party	Food Bank-LED Distribution	90,670,123	1.18	106,655,337	1.00	106,655,337
Third Party	UIC-ERC Income Eligible Kits	41,988,171	1.17	49,159,452	1.00	49,159,452
Third Party	Business Telecomm	10,074,332	1.00	10,094,176	0.67	6,763,098
Third Party	Public Buildings in Distressed Communities	10,179,723	0.99	10,067,863	0.97	9,765,827
Third Party	Business Grocery	9,368,231	1.02	9,536,289	0.97	9,250,200
Third Party	Small Business Kits	6,452,843	1.00	6,432,331	0.97	6,210,289
Third Party	Elementary Education Kits	3,161,851	1.62	5,134,150	0.96	4,952,625
Third Party	Agriculture	5,445,709	0.74	4,003,596	0.77	3,100,046
Third Party	Nonprofit Retrofits	3,411,435	0.98	3,357,628	0.97	3,256,899
Third Party	Manufactured Housing Retrofit	139,175	1.00	138,855	1.00	138,855
Third Party	Subtotal	180,891,591	1.13	204,579,675	0.97	199,252,627
Pilots	Building Operator Certification Training‡	-	NA	2,187,735	0.80	1,750,188
Pilots	Upstream Commercial Food Service Equipment	64,798	1.30	84,129	0.80	67,304
Pilots	IE Senior Design Pilot	79,275	0.93	73,793	1.00	73,793
Pilots	Retail Products Platform†	NA	NA	NA	NA	103,975
Pilots	Subtotal	144,073	16.28	2,345,658	0.85	1,995,260
Voltage Optimization	Voltage Optimization	216,582,437	1.00	215,996,316	1.00	215,996,316
Voltage Optimization	Subtotal	216,582,437	1.00	215,996,316	1.00	215,996,316
Portfolio	Grand Total	1,931,505,919	1.09	2,106,721,866	0.87	1,826,513,354

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/ntg_2020.

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 CY2018 and CY2019 that were installed in CY2020.

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	25,287,453	0.82	20,785,961
Energy (kWh)	Residential	Lighting Discount	33,610,034	0.59	19,821,643
Energy (kWh)	Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	7,806,436	1.00	7,806,436
Energy (kWh)	Third Party	Elementary Education Kits	1,999,176	0.91	1,817,650
Energy (kWh)	Third Party	Food Bank-LED Distribution	15,740,080	1.00	15,740,080
Energy (kWh)	Third Party	Small Business Kits	486,561	0.91	442,892
Energy (kWh)	Third Party	UIC-ERC Income Eligible Kits	3,617,066	1.00	3,617,066
Energy (kWh)	Portfolio	Total	88,546,806	0.79	70,031,728
Peak Demand (kW)	Business	Business Instant Discounts	5,720	0.82	4,701
Peak Demand (kW)	Residential	Lighting Discount	4,484	0.59	2,646
Peak Demand (kW)	Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	1,021	1.00	1,021
Peak Demand (kW)	Third Party	Elementary Education Kits	264	0.91	240
Peak Demand (kW)	Third Party	Food Bank-LED Distribution	1,905	1.00	1,905
Peak Demand (kW)	Third Party	Small Business Kits	115	0.91	105
Peak Demand (kW)	Third Party	UIC-ERC Income Eligible Kits	413	1.00	413
Peak Demand (kW)	Portfolio	Total	13,921	0.79	11,031

* 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/ntg_2020.

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	57,363	1.08	61,768	0.82	50,529
Business	Small Business - Public + Private	53,502	1.00	53,443	0.97	51,840
Business	Incentives - Custom + Standard	54,545	0.95	51,910	0.80	41,698
Business	Industrial Systems + Industrial Energy Management	6,930	1.36	9,403	0.78	7,355
Business	Non-residential New Construction	5,085	0.87	4,444	0.59	2,622
Business	RetroCommissioning + VCx	582	3.88	2,257	0.98	2,222
Business	LED Streetlighting	NA	NA	64	0.81	52
Business	Facility Assessments	NA	NA	NA	NA	NA
Business	Strategic Energy Management	NA	NA	NA	NA	NA
Business	Subtotal	178,008	1.03	183,290	0.85	156,318
Residential	Lighting Discount	NA	NA	44,030	0.55	24,031
Residential	Appliance Rebates	8,478	0.95	8,028	0.87	7,004
Residential	Residential HVAC	2,142	0.97	2,087	0.81	1,685
Residential	Single-Family Assessment	2,009	1.02	2,042	0.85	1,737
Residential	Multi-Family Assessments	1,181	1.01	1,188	0.89	1,061
Residential	Fridge & Freezer Recycling	NA	NA	734	0.42	310
Residential	Residential Behavior	NA	NA	NA	NA	13,638
Residential	Subtotal	13,810	4.21	58,109	0.85	49,465
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	1,173	8.61	10,106	0.88	8,862
Income Eligible	Single Family Retrofits - CBA + IHWAP	1,180	0.97	1,145	1.00	1,145
Income Eligible	Affordable Housing New Construction	179	1.12	200	1.00	200
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	168	0.95	160	1.00	160
Income Eligible	Public Housing Retrofits	79	1.16	92	1.00	92
Income Eligible	Subtotal	2,780	4.21	11,703	0.89	10,458
Third Party	Food Bank-LED Distribution	10,863	1.17	12,762	1.00	12,762
Third Party	UIC-ERC Income Eligible Kits	3,209	1.19	3,817	1.00	3,817
Third Party	Public Buildings in Distressed Communities	2,735	0.99	2,703	0.97	2,622
Third Party	Agriculture	2,672	0.85	2,259	0.67	1,516
Third Party	Small Business Kits	1,352	1.07	1,449	0.97	1,398
Third Party	Business Grocery	1,185	1.02	1,204	0.97	1,168
Third Party	Business Telecomm	1,095	1.04	1,142	0.67	765
Third Party	Nonprofit Retrofits	681	0.96	653	0.97	633
Third Party	Elementary Education Kits	336	1.79	600	0.96	576
Third Party	Manufactured Housing Retrofit	9	0.95	9	1.00	9
Third Party	Subtotal	24,137	1.10	26,597	0.95	25,266
Pilots	Building Operator Certification Training	NA	NA	295	0.80	236
Pilots	Upstream Commercial Food Service Equipment	8	1.51	12	0.80	9
Pilots	IE Senior Design Pilot	4	0.83	3	1.00	3
Pilots	Retail Products Platform	NA	NA	NA	NA	12
Pilots	Subtotal	12	26.75	310	0.84	261
Voltage Optimization	Voltage Optimization	46,424	0.97	45,134	1.00	45,134
Voltage Optimization	Subtotal	46,424	0.97	45,134	1.00	45,134
Portfolio	Grand Total	265,171	1.23	325,144	0.88	286,903

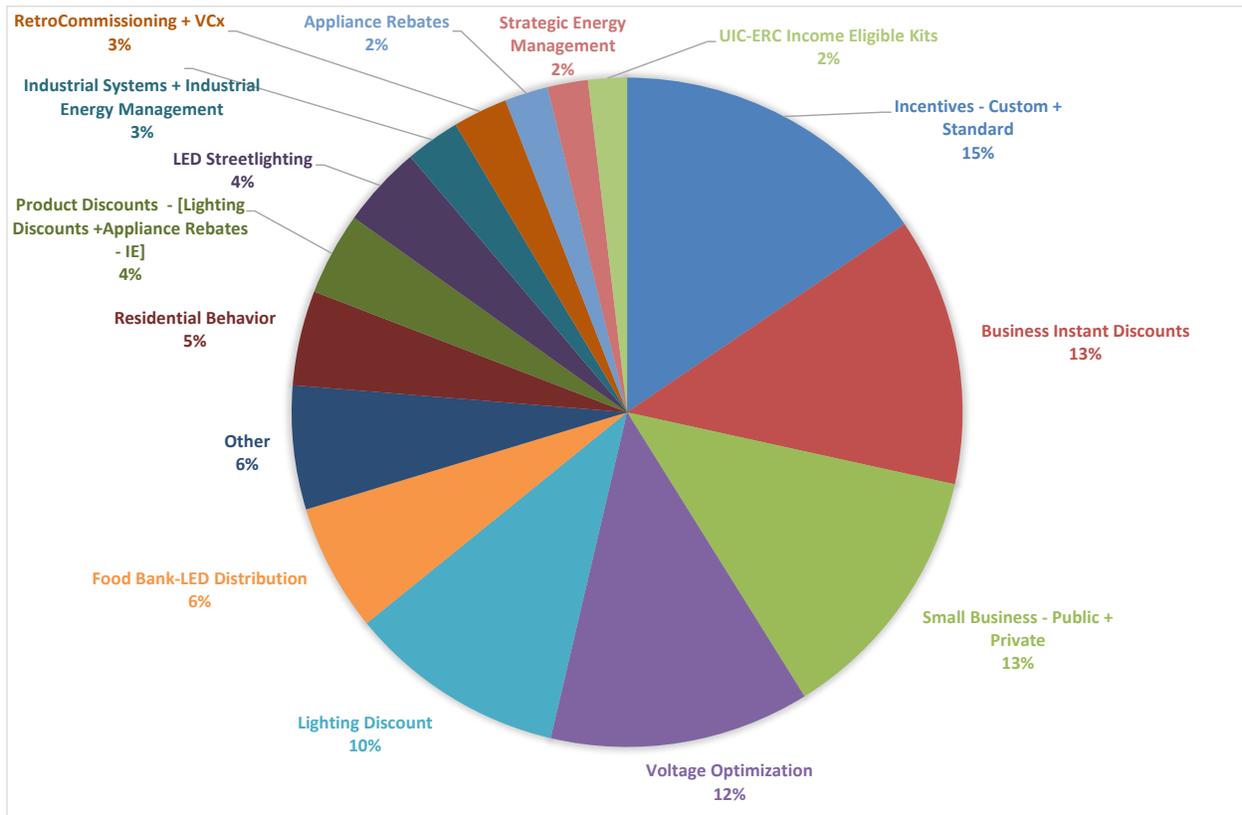
* The program-level NTG values shown in this table is calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: https://www.ilsag.info/ntg_2020. Programs without ex ante gross or verified gross values were excluded from 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

Source: Evaluation team analysis

Figure 3-1 shows energy savings for the CY2020 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 CY2020 programs.

Table 3-5. Comparing Electric Net Goals to Actual Achieved by CY2020 Program

Sector	Program	Verified Net Electric Savings (kWh)	2020 Original Plan Savings Goal (kWh)	Implementation Plan Savings Goal (kWh)	Verified Net over Original Plan	Verified Net over Implementation Plan
Business	Incentives - Custom + Standard	267,103,743	300,865,000	254,395,634	0.89	1.05
Business	Small Business - Public + Private	218,666,038	163,269,300	177,000,000	1.34	1.24
Business	Business Instant Discounts	202,682,529	210,732,086	213,330,081	0.96	0.95
Business	LED Streetlighting	68,131,157	100,104,000	72,398,784	0.68	0.94
Business	Industrial Systems + Industrial Energy Management	45,484,105	28,467,588	30,916,000	1.60	1.47
Business	RetroCommissioning + VCx	45,389,774	60,326,000	43,966,310	0.75	1.03
Business	Strategic Energy Management	33,582,105	27,978,000	27,978,000	1.20	1.20
Business	Non-residential New Construction	17,426,616	30,669,544	18,949,000	0.57	0.92
Business	Facility Assessments	3,669,464	1,654,000	3,429,000	2.22	1.07
Business	Subtotal	902,135,531	924,065,518	842,362,809	0.98	1.07
Residential	Lighting Discount	160,915,017	93,402,101	108,121,052	1.72	1.49
Residential	Residential Behavior	79,014,639	97,750,000	126,362,000	0.81	0.63
Residential	Appliance Rebates	36,042,091	32,689,098	42,942,928	1.10	0.84
Residential	Single-Family Assessment	12,923,176	17,889,526	26,905,000	0.72	0.48
Residential	Multi-Family Assessments	9,336,002	9,196,819	12,023,000	1.02	0.78
Residential	Residential HVAC	3,886,094	9,744,638	5,370,160	0.40	0.72
Residential	Fridge & Freezer Recycling	2,220,808	21,702,515	11,949,000	0.10	0.19
Residential	Subtotal	304,337,827	282,374,697	333,673,140	1.08	0.91
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	61,173,798	13,584,298	47,358,443	4.50	1.29
Income Eligible	Single Family Retrofits - CBA + IHWAP	3,490,986	6,982,000	4,052,232	0.50	0.86
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	1,985,877	4,877,000	8,650,466	0.41	0.23
Income Eligible	Affordable Housing New Construction	1,669,264	1,479,800	1,141,000	1.13	1.46
Income Eligible	Public Housing Retrofits	1,186,871	1,826,000	2,469,000	0.65	0.48
Income Eligible	Subtotal	69,506,796	28,749,098	63,671,140	2.42	1.09
Third Party	Food Bank-LED Distribution	90,669,565	18,315,990	77,554,000	4.95	1.17
Third Party	UIC-ERC Income Eligible Kits	28,604,291	4,933,800	20,891,400	5.80	1.37
Third Party	Public Buildings in Distressed Communities	9,765,827	32,533,700	19,501,000	0.30	0.50
Third Party	Business Grocery	9,250,200	6,721,279	4,028,786	1.38	2.30
Third Party	Business Telecomm	6,763,098	10,073,000	7,824,845	0.67	0.86
Third Party	Small Business Kits	5,767,397	162,000	6,249,710	35.60	0.92
Third Party	Nonprofit Retrofits	3,256,899	5,003,270	2,999,000	0.65	1.09
Third Party	Elementary Education Kits	3,134,975	2,574,000	10,717,000	1.22	0.29
Third Party	Agriculture	3,100,046	9,002,000	5,305,870	0.34	0.58
Third Party	Manufactured Housing Retrofit	68,101	236,000	1,000,000	0.29	0.07
Third Party	Subtotal	160,380,398	89,555,039	156,071,611	1.79	1.03
Pilots	Building Operator Certification Training	1,750,188	-	-	-	-
Pilots	Retail Products Platform	103,975	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	-	-	-	-
Pilots	IE Senior Design Pilot	22,330	-	-	-	-
Pilots	Subtotal	1,943,796	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	210,000,000	208,236,000	1.03	1.04
Voltage Optimization	Subtotal	215,996,316	210,000,000	208,236,000	1.03	1.04
Other	Lighting Carryover	70,031,728	-	20,000,000	-	3.50
Other	Therm Conversion	102,180,962	102,181,000	102,181,000	1.00	1.00
Portfolio	Grand Total	1,826,513,354	1,636,925,352	1,726,195,700	1.12	1.06

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 - CY2020 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 64% of the portfolio net electric savings in CY2020. Voltage Optimization followed with 13% of net electric savings, with 5% from Residential Behavior, 3% from HVAC measures, and 15% 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	1,283,783,306	1,373,889,472	1,103,684,180
Voltage Optimization	216,582,437	215,996,316	215,996,316
Other	167,092,559	171,077,973	140,119,487
Behavior	-	-	79,014,639
HVAC	67,014,534	62,714,671	53,968,414
Compressed Air	44,838,415	51,933,890	40,382,432
Consumer Electronics	31,587,875	31,638,998	28,328,316
Refrigeration	26,127,052	25,533,188	22,403,354
Appliances	22,123,682	22,184,645	14,803,665
EMS & BAS	24,278,799	19,612,567	15,299,015
Hot Water	5,989,159	5,939,034	5,924,506
Shell	4,045,111	3,941,499	3,902,556
Food Service Equipment	602,768	640,988	505,513
Grand Total	1,894,065,696	1,985,103,241	1,724,332,392

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.

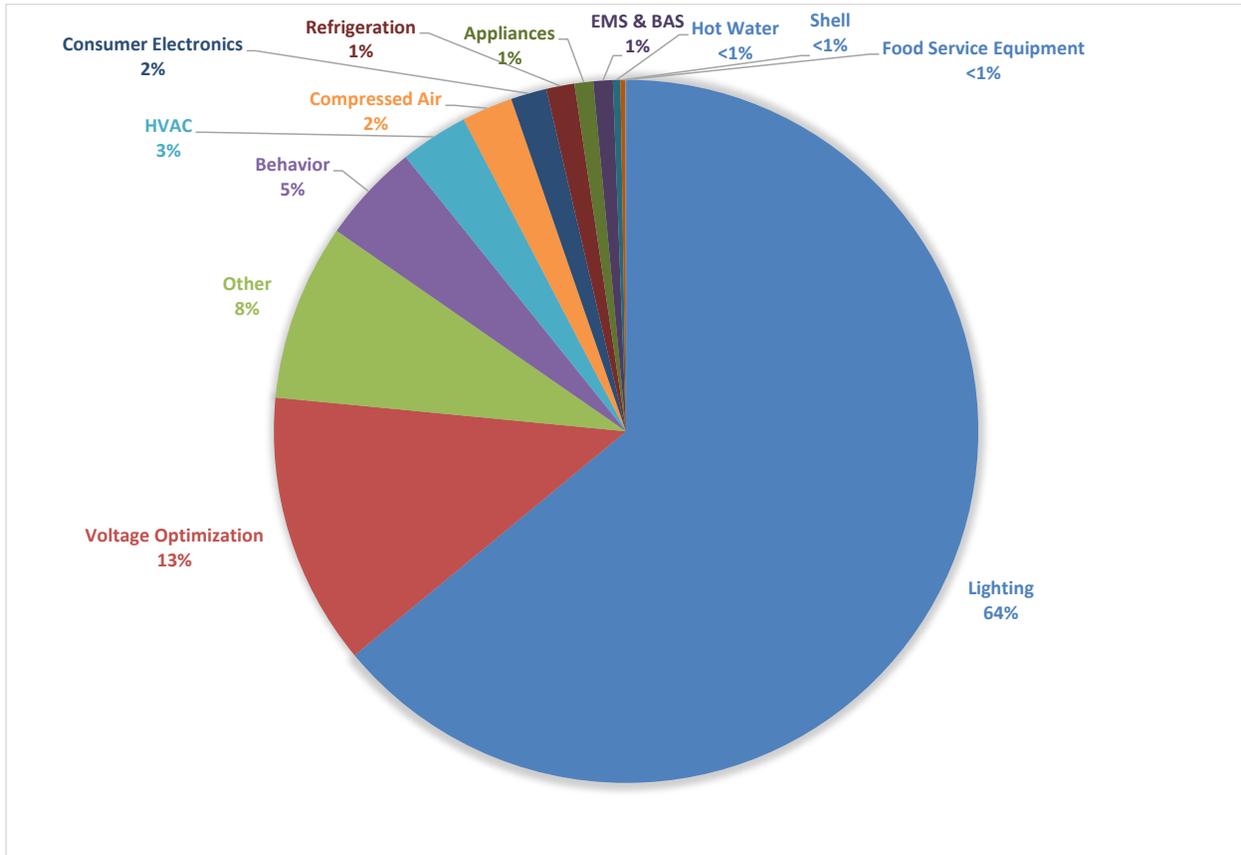
Source: Evaluation team analysis

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	174,057	233,718	191,615
Voltage Optimization	46,424	45,134	45,134
Behavior	-	-	13,638
Other	15,268	15,742	10,897
HVAC	12,116	11,127	9,854
Compressed Air	7,224	8,822	6,924
Consumer Electronics	3,083	3,135	2,837
Appliances	2,368	3,111	2,054
Refrigeration	2,871	2,678	2,291
Hot Water	843	810	810
Shell	836	782	782
Food Service Equipment	76	78	61
EMS & BAS	5	5	5
Grand Total	265,171	325,144	286,903

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 (69%) of net energy savings in the Business sector, 62% in the Residential sector, and 66% in the Income Eligible sector. The Third Party programs had 78% of savings from lighting. Next are the Behavioral programs which contributed 24% in net energy savings in the Residential sector. The Building Operator Certification Training contributed 91% 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	788,372,790	680,528,155		680,528,155	68.8%
Business	Other	158,142,145	131,127,473	1,236,899	132,364,372	13.4%
Business	Compressed Air	51,912,040	40,365,389		40,365,389	4.1%
Business	HVAC	38,540,186	31,170,661		31,170,661	3.1%
Business	EMS & BAS	19,612,567	15,299,015	65,636,056	80,935,071	8.2%
Business	Refrigeration	22,579,728	19,537,672		19,537,672	2.0%
Business	Consumer Electronics	3,816,047	3,112,246		3,112,246	0.3%
Business	Shell	1,298,115	1,259,172		1,259,172	0.1%
Business	Food Service Equipment	565,144	444,838	21,050	465,888	0.0%
Business	Hot Water	79,248	76,870		76,870	0.0%
Business	Subtotal	1,084,918,011	922,921,492	66,894,006	989,815,497	100.0%
Residential	Lighting	353,228,482	201,676,031		201,676,031	62.2%
Residential	HVAC	22,278,542	20,925,170	161,800	21,086,970	6.5%
Residential	Appliances	21,395,384	13,912,087		13,912,087	4.3%
Residential	Consumer Electronics	10,895,752	8,294,398		8,294,398	2.6%
Residential	Hot Water	328,028	337,145		337,145	0.1%
Residential	Behavior	-	79,014,639		79,014,639	24.4%
Residential	Subtotal	408,126,189	324,159,470	161,800	324,321,270	100.0%
Income Eligible	Lighting	71,772,419	62,642,256		62,642,256	65.8%
Income Eligible	Consumer Electronics	9,869,745	9,869,745		9,869,745	10.4%
Income Eligible	Shell	2,638,013	2,638,013	9,421,574	12,059,587	12.7%
Income Eligible	HVAC	1,256,453	1,256,453	7,201,012	8,457,465	8.9%
Income Eligible	Appliances	780,975	780,975		780,975	0.8%
Income Eligible	Other	69,955	69,955	590,806	660,761	0.7%
Income Eligible	Hot Water	44,546	44,546	605,761	650,306	0.7%
Income Eligible	Refrigeration	11,291	11,291		11,291	0.0%
Income Eligible	Subtotal	86,443,396	77,313,232	17,819,152	95,132,384	100.0%
Third Party	Lighting	160,500,933	158,822,890		158,822,890	79.7%
Third Party	Other	10,678,138	7,171,871		7,171,871	3.6%
Third Party	Consumer Electronics	7,057,455	7,051,927		7,051,927	3.5%
Third Party	Hot Water	5,487,212	5,465,945	16,948,185	22,414,130	11.2%
Third Party	Refrigeration	2,942,169	2,854,391		2,854,391	1.4%
Third Party	HVAC	634,821	611,461	294,499	905,961	0.5%
Third Party	Compressed Air	21,850	17,043		17,043	0.0%
Third Party	Shell	2,558	2,558	11,856	14,414	0.0%
Third Party	Subtotal	187,325,135	181,998,086	17,254,540	199,252,627	100.0%
Pilots	Food Service Equipment	75,844	60,675		60,675	3.0%
Pilots	Lighting	14,848	14,848		14,848	0.7%
Pilots	Appliances	8,286	110,603		110,603	5.5%
Pilots	HVAC	4,669	4,669		4,669	0.2%
Pilots	Shell	2,813	2,813	51,464	54,277	2.7%
Pilots	Other	2,187,735	1,750,188		1,750,188	87.7%
Pilots	Subtotal	2,294,194	1,943,796	51,464	1,995,260	100.0%
Voltage Optimization	Voltage Optimization	215,996,316	215,996,316		215,996,316	100.0%
Voltage Optimization	Subtotal	215,996,316	215,996,316		215,996,316	100.0%
Portfolio	Total	1,985,103,241	1,724,332,392	102,180,962	1,826,513,354	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

Fourteen (14) 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. The savings in this table are included within the

electricity savings in the previous tables in this section. The Affordable Housing New Construction Program reported gallons of water saved but Guidehouse determined no energy savings were realized.

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)	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Non-residential New Construction	Other	Whole Building	13,065,087	38,971	0.85	33,146	0.59	19,556
Business	Small Business - Public + Private	Hot Water	Kitchen & Bathroom Faucet Aerator	625,874	-	-	16,700	0.97	16,199
Business	Small Business - Public + Private	Food Service Equipment	ENERGY STAR Dishwasher	101,905	-	-	5,105	0.97	4,952
Business	Small Business - Public + Private	Hot Water	High Efficiency Pre-Rinse Spray Valve	39,811	-	-	1,991	0.97	1,931
Business	Small Business - Public + Private	Hot Water	Low Flow Showerhead	10,801	-	-	541	0.97	525
Business		Subtotal		13,843,479	38,971	1.48	57,483	0.75	43,163
Residential	Appliance Rebates	Appliances	Clothes Washer	44,970,032	178,454	1.01	180,778	0.63	113,890
Residential	Multi-Family Assessments	Hot Water	Low Flow Showerhead	7,830,437	-	-	29,081	1.03	29,953
Residential	Multi-Family Assessments	Hot Water	Kitchen & Bathroom Faucet Aerator	2,080,567	-	-	7,424	1.03	7,647
Residential	Single-Family Assessment	Hot Water	Low Flow Showerhead	882,350	3,286	0.98	3,228	1.04	3,357
Residential	Single-Family Assessment	Hot Water	Kitchen & Bathroom Faucet Aerator	175,510	664	0.98	652	1.04	678
Residential		Subtotal		55,938,896	182,403	1.21	221,162	0.70	155,525
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Low Flow Showerhead	1,934,779	-	-	5,768	1.00	5,768
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Kitchen & Bathroom Faucet Aerator	1,891,774	-	-	5,698	1.00	5,698
Income Eligible	Single Family Retrofits - CBA + IHWAP	Hot Water	Low Flow Showerhead	958,238	2,840	1.00	2,840	1.00	2,840
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	Hot Water	Shower Timer	438,865	-	-	1,289	1.00	1,289
Income Eligible	Single Family Retrofits - CBA + IHWAP	Hot Water	Kitchen & Bathroom Faucet Aerator	221,689	713	1.00	713	1.00	713
Income Eligible	Affordable Housing New Construction	Appliances	Freezer & Refrigerator	460,094	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	Hot Water	Hot Water Conservation	1,855,875	-	-	-	-	-
Income Eligible		Subtotal		7,761,315	3,553	4.59	16,308	1.00	16,308
Third Party	UIC-ERC Income Eligible Kits	Hot Water	Low Flow Showerhead	79,757,120	-	-	271,602	1.00	271,602
Third Party	UIC-ERC Income Eligible Kits	Hot Water	Kitchen & Bathroom Faucet Aerator	62,741,322	-	-	217,818	1.00	217,818
Third Party	Small Business Kits	Hot Water	Kitchen & Bathroom Faucet Aerator	17,488,697	-	-	58,207	0.97	56,461
Third Party	Small Business Kits	Hot Water	High Efficiency Pre-Rinse Spray Valve	14,090,993	-	-	48,759	0.97	47,296
Third Party	Elementary Education Kits	Hot Water	Low Flow Showerhead	8,194,350	30,889	1.00	30,889	1.00	30,889
Third Party	Elementary Education Kits	Hot Water	Kitchen & Bathroom Faucet Aerator	7,176,843	27,054	1.00	27,054	1.00	27,054
Third Party	Small Business Kits	Hot Water	Low Flow Showerhead	1,665,550	-	-	10,853	0.97	10,527
Third Party	Elementary Education Kits	Hot Water	Shower Timer	987,826	3,724	1.00	3,724	1.00	3,724
Third Party	Manufactured Housing Retrofit	Hot Water	Low Flow Showerhead	94,233	-	-	387	1.00	387
Third Party	Manufactured Housing Retrofit	Hot Water	Kitchen & Bathroom Faucet Aerator	42,545	-	-	232	1.00	232
Third Party		Subtotal		192,239,478	61,667	10.86	669,523	0.99	665,988
Pilots	Upstream Commercial Food Service Equipment	Food Service Equipment	Steamers	-	-	-	238	0.80	191
Pilots	Upstream Commercial Food Service Equipment	Food Service Equipment	ENERGY STAR Dishwasher	-	-	-	40	0.80	32
Pilots	Retail Products Platform	Appliances	Clothes Washer	-	-	-	-	-	7,052
Pilots		Subtotal		-	-	-	278	26.15	7,274
Portfolio		Total		269,783,168	286,594	3.37	964,755	0.92	888,259

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/ntg_2020.

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 CY2020 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	0.97	334,311,151	51,910	0.80	267,103,743	41,698	3,452,822,972	0.20	0.02	54,580,193	3,764	Projects	13.6
Business	Business Instant Discounts	1.08	273,193,069	61,768	0.82	223,468,489	50,529	2,197,082,939	0.08	0.01	17,262,161	2,502,340	Lamps	11.3
Business	Small Business - Public + Private	0.99	225,428,906	53,443	0.97	218,666,038	51,840	2,371,424,383	0.28	0.03	60,950,710	7,696	Projects	12.0
Business	LED Streetlighting	1.00	79,967,787	64	0.85	68,131,157	52	795,880,765	0.18	0.02	12,017,279	24,025	Lamps	12.0
Business	Industrial Systems + Industrial Energy Management	1.19	57,891,644	9,403	0.79	45,484,105	7,355	359,309,259	0.19	0.02	8,643,126	545	Measures	8.0
Business	RetroCommissioning + VcX	0.99	47,103,027	2,257	0.96	45,389,774	2,222	361,675,639	0.27	0.03	12,181,914	255	Participants	8.0
Business	Strategic Energy Management	1.01	33,582,105	1.00	1.00	33,582,105	1.00	167,910,525	0.12	0.02	4,060,034	124	Projects	5.0
Business	Non-residential New Construction	0.97	29,536,638	4,444	0.59	17,426,616	2,622	303,223,124	0.34	0.02	5,965,381	33	Projects	17.4
Business	Facility Assessments	0.96	3,903,685	0.94	0.94	3,669,464	0.94	14,737,480	0.35	0.09	1,291,788	178	Measures	4.0
Business	Subtotal	1.01	1,084,918,011	183,290	0.85	922,921,492	156,318	10,624,067,086	0.19	0.02	176,952,587	2,538,960		11.8
Residential	Lighting Discount	1.16	328,671,663	44,030	0.55	180,736,660	24,031	1,410,587,438	0.11	0.01	19,486,666	6,248,990	Lamps	11.0
Residential	Appliance Rebates	1.00	43,097,501	8,028	0.84	36,042,091	7,004	361,121,194	0.42	0.04	15,019,859	148,298	Measures	10.0
Residential	Single-Family Assessment	1.03	15,279,900	2,042	0.85	12,923,176	1,737	86,872,536	0.46	0.07	5,976,346	42,888	Measures	9.6
Residential	Multi-Family Assessments	0.99	10,647,892	1,188	0.88	9,336,002	1,061	67,771,746	0.60	0.08	5,585,524	68,804	Measures	7.5
Residential	Fridge & Freezer Recycling	0.98	5,363,298	734	0.41	2,220,808	310	14,360,817	0.54	0.08	1,197,745	6,477	Measures	6.5
Residential	Residential HVAC	0.63	5,065,935	2,087	0.77	3,886,094	1,685	47,758,144	0.69	0.06	2,676,421	10,970	Measures	14.2
Residential	Residential Behavior	1.11	498,125,189	55,109	0.79	324,152,470	49,403	2,124,570,301	0.17	0.03	55,629,004	8,448,637		10.7
Income Eligible	Product Discounts - (Lighting Discounts + Appliance Rebates - IE)	1.15	78,110,398	10,106	0.88	68,980,234	8,862	604,991,539	0.09	0.01	5,991,515	1,287,500	Measures	10.0
Income Eligible	Single Family Retrofits - CBA + IHWAP	0.95	3,490,986	1,145	1.00	3,490,685	1,145	47,412,401	3.17	0.23	11,089,363	2,779	Projects	18.7
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	0.99	1,985,877	160	1.00	1,985,877	160	26,539,951	3.64	0.27	7,224,653	14,815	Measures	18.2
Income Eligible	Affordable Housing New Construction	0.94	1,669,264	200	1.00	1,669,264	200	20,955,910	1.16	0.09	1,932,250	837	Households	13.2
Income Eligible	Public Housing Retrofits	1.03	1,186,871	92	1.00	1,186,871	92	10,003,266	1.11	0.13	1,315,663	5,118	Measures	8.7
Income Eligible	Subtotal	1.13	86,443,396	11,703	0.89	77,313,232	10,458	709,903,967	0.36	0.04	27,533,444	1,311,148		10.6
Third Party	Food Bank-LED Distribution	1.17	106,409,645	12,762	1.00	106,409,645	12,762	932,947,775	0.08	0.01	8,306,172	2,467,416	Lamps	10.0
Third Party	UIC-ERC Income Eligible Kits	1.28	32,221,357	3,817	1.00	32,221,357	3,817	273,961,175	0.16	0.02	5,026,534	720,000	Measures	9.5
Third Party	Business Telecomm	1.00	10,094,176	1,142	0.67	6,763,098	765	65,575,921	0.34	0.03	2,272,023	58	Sites	9.7
Third Party	Public Buildings in Distressed Communities	0.99	10,067,863	2,703	0.97	9,765,827	2,622	145,168,130	0.29	0.02	2,852,836	78,926	Measures	14.9
Third Party	Business Grocery	1.02	9,536,289	1,204	0.97	9,250,200	1,168	88,388,032	0.30	0.03	2,729,462	158	Measures	9.9
Third Party	Small Business Kits	1.00	6,432,331	1,449	0.97	6,210,289	1,398	38,330,023	0.24	0.04	1,492,106	69,277	Measures	8.0
Third Party	Elementary Education Kits	1.62	5,134,150	600	0.96	4,952,625	576	38,744,132	0.13	0.02	636,289	2,469	Kits	9.0
Third Party	Agriculture	0.74	4,003,596	2,259	0.77	3,100,046	1,516	44,910,715	0.43	0.03	1,320,533	469	Measures	14.5
Third Party	Nonprofit Retrofits	0.98	3,357,628	653	0.97	3,256,899	633	39,169,028	0.59	0.05	1,912,644	14,613	Measures	12.6
Third Party	Manufactured Housing Retrofit	1.00	68,101	9	1.00	68,101	9	669,543	5.59	0.58	380,884	117	Participants	13.7
Third Party	Subtotal	1.14	187,325,135	26,597	0.97	181,998,086	25,266	1,667,854,474	0.15	0.02	26,929,484	3,353,503		10.2
Pilots	Building Operator Certification Training	-	2,187,735	295	0.80	1,750,188	236	17,866,464	-	-	-	17	Participants	10.2
Pilots	Upstream Commercial Food Service Equipment	1.30	84,129	12	0.80	67,304	9	792,234	-	-	-	52	Measures	11.8
Pilots	IE Senior Design Pilot	1.01	22,330	3	1.00	22,330	3	234,068	-	-	-	69	Participants	17.3
Pilots	Retail Products Platform	-	-	-	-	103,975	12	1,455,647	-	-	-	69,397	Measures	14.0
Pilots	Subtotal	26.42	2,294,194	310	0.85	1,943,796	261	20,348,413	-	-	-	69,535		10.3
Voltage Optimization	Voltage Optimization	1.00	215,996,316	45,134	1.00	215,996,316	45,134	3,239,944,743	-	-	-	428	Feeders	15.0
Voltage Optimization	Subtotal	1.00	215,996,316	45,134	1.00	215,996,316	45,134	3,239,944,743	-	-	-	428		15.0
Portfolio	Grand Total	1.05	1,985,103,241	325,144	0.87	1,724,332,392	286,903	17,846,688,584	0.17	0.02	287,024,518	15,722,172		10.7

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. Cost information for pilot programs are not available. 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 - CY2020 Q4 Statewide Quarterly Report; 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 (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	334,311,151	51,910	5,017,493	-	-	(2,277,551)	0.90	0.90	0.78	267,103,743	41,698	3,913,554	-	-	(1,690,201)
Business	Business Instant Discounts	11	273,193,069	61,768	-	-	-	(3,730,745)	0.82	0.82	-	223,468,489	50,529	-	-	-	(3,052,337)
Business	Small Business + Public + Private	12	225,404,568	53,443	445,246	24,338	(2,435,170)	(2,047,800)	0.97	0.97	0.97	218,642,431	51,840	431,888	23,607	(2,362,115)	(1,986,396)
Business	LED Streetlighting	12	79,967,787	64	-	-	-	-	0.85	0.81	-	68,131,157	52	-	-	-	-
Business	Industrial Systems + Industrial Energy Management	8	57,891,644	9,403	-	-	-	(12,032)	0.79	0.78	-	45,484,105	7,355	-	-	-	(9,265)
Business	RetroCommissioning + VCx	8	47,103,027	2,257	119,470	-	-	-	0.96	0.98	0.94	45,389,774	2,222	112,301	-	-	-
Business	Strategic Energy Management	5	33,582,105	-	-	-	-	-	1.00	-	-	33,582,105	-	-	-	-	-
Business	Non-residential New Construction	17	29,503,492	4,444	70,186	33,146	(309,895)	(51,890)	0.59	0.59	0.59	17,407,060	2,622	41,410	19,556	(182,838)	(30,615)
Business	Facility Assessments	4	3,903,685	-	9,615	-	-	(2,066)	0.94	-	0.94	3,669,464	-	9,226	-	-	(1,942)
Residential	Lighting Discount	11	326,671,953	44,030	-	-	-	(6,849,097)	0.55	0.55	-	180,736,660	24,031	-	-	-	(3,722,641)
Residential	Appliance Rebates	10	42,916,723	8,028	3,343,508	180,778	-	-	0.94	0.97	0.99	35,926,201	7,004	3,301,626	113,890	-	-
Residential	Single-Family Assessment	10	15,276,021	2,042	-	3,880	(158,309)	(264,405)	0.85	0.85	-	12,919,141	1,737	-	4,035	(132,980)	(222,101)
Residential	Multi-Family Assessments	7	10,611,387	1,188	-	36,505	(182,943)	(45,306)	0.88	0.89	-	9,298,402	1,061	-	37,600	(150,542)	(38,510)
Residential	Fridge & Freezer Recycling	6	5,363,298	734	-	-	-	-	0.41	0.42	-	2,220,808	310	-	-	-	-
Residential	Residential HVAC‡	14	5,065,935	2,087	379,411	-	-	-	0.77	0.81	0.77	3,886,094	1,685	290,466	-	-	-
Residential	Residential Behavior	5	-	-	-	-	-	-	-	-	-	79,014,639	13,638	-	-	-	-
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates -IE]	10	78,110,398	10,106	-	-	-	(1,303,763)	0.88	0.88	-	68,980,234	8,862	-	-	-	(1,117,289)
Income Eligible	Single Family Retrofits - CBA + IHWAP	19	3,487,433	1,145	282,952	3,553	(3,772)	(26,743)	1.00	1.00	1.00	3,487,433	1,145	282,952	3,553	(3,772)	(26,743)
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	18	1,973,122	160	325,003	12,755	(46,660)	(7,753)	1.00	1.00	1.00	1,873,122	160	325,003	12,755	(46,660)	(7,753)
Income Eligible	Affordable Housing New Construction	13	1,669,264	200	-	-	-	-	1.00	1.00	-	1,669,264	200	-	-	-	-
Income Eligible	Public Housing Retrofits	9	1,186,871	92	-	-	-	(5,117)	1.00	1.00	-	1,186,871	92	-	-	-	(5,117)
Third Party	Food Bank-LED Distribution	10	106,409,645	12,762	8,383	-	-	(2,045,435)	1.00	1.00	1.00	106,409,645	12,762	8,383	-	-	(2,045,435)
Third Party	UIE-ERC Income Eligible Kits	10	31,731,938	3,817	577,895	489,419	-	(459,472)	1.00	1.00	1.00	31,731,938	3,817	577,895	489,419	-	(459,472)
Third Party	Business Telecom	10	10,094,176	1,142	-	-	-	-	0.67	0.67	-	6,763,098	765	-	-	-	-
Third Party	Public Buildings in Distressed Communities	15	10,067,863	2,703	-	-	-	-	0.97	0.97	-	9,765,827	2,622	-	-	-	-
Third Party	Business Grocery	10	9,536,289	1,204	92	-	-	(90,614)	0.97	0.97	0.97	9,250,200	1,168	89	-	-	(87,896)
Third Party	Small Business Kits	8	6,314,512	1,449	151,918	117,818	(90,911)	(80,914)	0.97	0.97	0.97	6,096,005	1,398	147,361	114,284	(88,184)	(78,039)
Third Party	Elementary Education Kits	9	5,072,484	600	32,399	61,667	(29,724)	(5,816)	0.96	0.96	1.00	4,890,958	576	32,399	61,667	(29,724)	(5,816)
Third Party	Agriculture	15	4,003,596	2,259	-	-	-	-	0.77	0.67	-	3,100,046	1,516	-	-	-	-
Third Party	Nonprofit Retrofits	13	3,357,528	653	-	-	(1,446)	(41,408)	0.97	0.97	-	3,256,899	633	-	-	(1,402)	(40,166)
Third Party	Manufactured Housing Retrofit	14	67,482	9	2,414	619	(972)	(437)	1.00	1.00	1.00	67,482	9	2,414	619	(972)	(437)
Pilots	Building Operator Certification Training	10	2,187,735	295	-	-	-	-	0.80	0.80	-	1,750,188	236	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	12	83,851	12	57	278	-	-	0.80	0.80	0.80	67,081	9	46	223	-	-
Pilots	IE Senior Design Pilot	17	22,330	3	3,205	-	-	(302)	1.00	1.00	1.00	22,330	3	3,205	-	-	(302)
Pilots	Retail Products Platform	14	-	-	-	-	-	-	-	-	-	96,923	12	-	-	-	-
Voltage Optimization	Voltage Optimization	15	215,996,316	45,134	-	-	-	-	1.00	1.00	-	215,996,316	45,134	-	-	-	-
Total		12	1,984,138,487	325,144	10,769,445	954,755	(3,259,802)	(19,348,668)	0.88	0.87	0.92	1,723,444,133	286,903	9,480,217	881,207	(2,999,189)	(14,828,443)

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 CY2020 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 CY2020 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 Thems)	Lifetime Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Business	Interior & Exterior LED Fixtures	Lighting	252,335,891	12.6	-	3,176,453,386	252,335,891	17.6%	17.6%
Business	Other Lighting	Lighting	230,950,213	11.9	-	2,750,657,462	230,950,213	16.1%	33.8%
Business	Voltage Optimization	Voltage Optimization	215,996,316	15.0	-	3,239,944,743	215,996,316	15.1%	48.9%
Business	EMS	EMS & BAS	19,612,567	15.0	84,148,790	294,188,510	103,761,357	7.3%	56.1%
Business	TLED Lamps	Lighting	91,337,303	15.0	-	1,368,549,670	91,337,303	6.4%	62.5%
Business	Streetlights	Lighting	79,967,787	12.0	-	959,613,447	79,967,787	5.6%	68.1%
Business	Standard LED Lamps	Lighting	77,255,136	6.9	-	535,842,870	77,255,136	5.4%	73.5%
Business	Whole Building	Other	63,118,743	10.8	2,057,145	681,848,024	65,175,887	4.6%	78.1%
Business	Retro & Virtual Commissioning	Other	47,103,027	8.0	-	376,118,361	47,103,027	3.3%	81.4%
Business	Occupancy Sensor & Other Controls	Lighting	36,326,932	8.1	-	293,530,775	36,326,932	2.5%	83.9%
Business	Other Non-lighting	Other	33,549,874	11.8	-	395,829,006	33,549,874	2.3%	86.2%
Business	Leak Repair	Compressed Air	27,842,056	3.0	-	83,526,169	27,842,056	1.9%	88.2%
Business	Carryover Lamps	Lighting	25,774,013	9.0	-	232,138,822	25,774,013	1.8%	90.0%
Business	Compressor system	Compressed Air	21,492,270	12.3	-	264,379,651	21,492,270	1.5%	91.5%
Business	Variable Speed Drive	HVAC	18,419,811	15.0	-	276,297,170	18,419,811	1.3%	92.8%
Business	Other Non-lighting	HVAC	12,152,344	19.8	-	240,468,987	12,152,344	0.8%	93.6%
Business	Commercial & Industrial Refrigeration	Refrigeration	11,787,668	11.3	-	132,746,156	11,787,668	0.8%	94.4%
Business	LED HID	Lighting	10,489,561	14.3	-	149,731,537	10,489,561	0.7%	95.2%
Business	CHP	Other	8,956,277	24.0	33,120	214,950,643	8,956,277	0.6%	95.8%
Business	EC Motor for Cooler or Freezer	Refrigeration	8,362,377	13.8	-	115,216,156	8,362,377	0.6%	96.4%
Business	Process Cooling & Heating	Other	6,819,648	22.9	-	156,033,161	6,819,648	0.5%	96.9%
Business	LED Exit Signs, Channels & Traffic Signal	Lighting	6,518,196	6.1	-	39,615,516	6,518,196	0.5%	97.3%
Business	New Construction	Other	5,968,109	17.4	-	103,845,096	5,968,109	0.4%	97.7%
Business	Battery Charger	Consumer Electronics	3,441,584	15.0	-	51,623,760	3,441,584	0.2%	98.0%
Business	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	3,430,302	10.0	-	34,303,020	3,430,302	0.2%	98.2%
Business	Equipment Optimization	Other	2,556,042	8.8	-	22,493,169	2,556,042	0.2%	98.4%
Business	Linear Fluorescents	Lighting	2,210,913	11.9	-	26,365,159	2,210,913	0.2%	98.6%
Business	Programmable/Reprogrammable Thermostat	HVAC	2,139,939	8.8	-	18,909,787	2,139,939	0.1%	98.7%
Business	Decorative & Directional LED Lamps	Lighting	2,044,303	11.6	-	23,682,775	2,044,303	0.1%	98.8%
Business	High-Efficiency Air Nozzles	Compressed Air	2,031,257	15.0	-	30,468,849	2,031,257	0.1%	99.0%
Business	HVAC Control System & Maintenance	HVAC	2,002,210	6.3	-	12,615,706	2,002,210	0.1%	99.1%
Business	Demand Control Ventilation	HVAC	1,760,479	10.1	-	17,769,780	1,760,479	0.1%	99.3%
Business	Weather Stripping	Shell	1,298,115	10.0	-	12,981,154	1,298,115	0.1%	99.3%
Business	Omni-Directional LED Lamps	Lighting	952,372	13.9	-	13,213,547	952,372	0.1%	99.4%
Business	Water & Air-Cooled Chiller	HVAC	845,881	23.0	-	19,455,266	845,881	0.1%	99.5%
Business	Waste Water Treatment	Other	748,564	13.0	-	9,731,329	748,564	0.1%	99.5%
Business	Room & Central Air Conditioner	HVAC	745,800	15.0	-	11,187,003	745,800	0.1%	99.6%
Business	No-Loss Condensate Drains	Compressed Air	567,445	10.0	-	5,674,446	567,445	0.0%	99.6%
Business	Other Non-lighting	Food Service Equipment	543,960	14.5	-	7,875,288	543,960	0.0%	99.7%
Business	Motors/Fans/Pumps	HVAC	504,317	20.0	-	10,086,347	504,317	0.0%	99.7%
Business	LED Refrigerated Display Case Lighting	Refrigeration	502,730	8.6	-	4,332,388	502,730	0.0%	99.7%
Business	Linear Fluorescent & Other - Delamping	Lighting	454,133	10.8	-	4,896,648	454,133	0.0%	99.8%
Business	High Efficiency Pre-Rinse Spray Valve	Hot Water	439,547	5.0	-	2,197,735	439,547	0.0%	99.8%
Business	Strip Curtains for Cooler or Freezer	Refrigeration	432,153	4.0	-	1,728,613	432,153	0.0%	99.8%
Business	Kitchen & Bathroom Faucet Aerator	Hot Water	331,306	10.0	-	3,313,059	331,306	0.0%	99.8%
Business	Night Covers	Refrigeration	297,284	5.0	-	1,486,420	297,284	0.0%	99.9%
Business	Air Conditioner Tune-Up	HVAC	294,667	3.0	-	884,002	294,667	0.0%	99.9%
Business	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	233,291	8.0	-	1,866,330	233,291	0.0%	99.9%
Business	Advanced Power Strips Tier 1	Consumer Electronics	232,787	7.0	-	1,629,506	232,787	0.0%	99.9%
Business	Specialty LED Lamps	Lighting	219,668	3.6	-	780,594	219,668	0.0%	99.9%
Business	Smart Socket	Consumer Electronics	184,265	7.0	-	1,289,856	184,265	0.0%	99.9%
Business	ENERGY STAR Solid or Glass Door Refrigerator or Freezer	Refrigeration	183,693	12.0	-	2,204,311	183,693	0.0%	100.0%
Business	Computer Power Controls	Consumer Electronics	141,676	6.0	-	850,057	141,676	0.0%	100.0%
Business	Packaged RTU Sealing	HVAC	136,789	5.0	-	683,946	136,789	0.0%	100.0%
Business	Evaporator Fan Control	Refrigeration	126,614	13.0	-	1,645,986	126,614	0.0%	100.0%
Business	Beverage, Snack and Cooler Machine Controls	Refrigeration	88,934	5.0	-	444,668	88,934	0.0%	100.0%
Business	Q-Sync Motors for Reach-in Coolers/Freezers	Refrigeration	59,008	10.0	-	590,080	59,008	0.0%	100.0%
Business	ENERGY STAR Dishwasher	Food Service Equipment	21,185	20.0	21,701	423,692	42,866	0.0%	100.0%
Business	Tune-up	HVAC	20,554	3.0	-	61,662	20,554	0.0%	100.0%
Business	Low Flow Showerhead	Hot Water	17,286	10.0	-	172,855	17,286	0.0%	100.0%
Business	Advanced Thermostat	HVAC	9,770	11.0	-	107,469	9,770	0.0%	100.0%
Business	HVAC Economizer	HVAC	8,953	5.0	-	44,765	8,953	0.0%	100.0%
Business	Notched & Cogged V-Belt	HVAC	5,453	3.0	-	16,358	5,453	0.0%	100.0%
Business	Notched V Belts	HVAC	2,386	2.7	-	6,442	2,386	0.0%	100.0%
Business	Vending Machine Control	Refrigeration	1,613	5.0	-	8,065	1,613	0.0%	100.0%
Business	Efficient Dryer	Compressed Air	862	13.0	-	11,208.5	862	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 6-2. Summary Table of CY2020 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	Interior & Exterior LED Fixtures	Lighting	234,264,614	-	234,264,614	18.8%	18.8%
Business	Voltage Optimization	Voltage Optimization	215,996,316	-	215,996,316	17.4%	36.2%
Business	Other Lighting	Lighting	190,949,256	-	190,949,256	15.3%	51.5%
Business	EMS	EMS & BAS	15,299,015	65,636,056	80,935,071	6.5%	58.0%
Business	TLED Lamps	Lighting	74,777,342	-	74,777,342	6.0%	64.1%
Business	Streetlights	Lighting	68,131,157	-	68,131,157	5.5%	69.5%
Business	Standard LED Lamps	Lighting	64,918,037	-	64,918,037	5.2%	74.7%
Business	Whole Building	Other	51,008,721	1,213,715	52,222,437	4.2%	78.9%
Business	Retro & Virtual Commissioning	Other	45,389,774	-	45,389,774	3.6%	82.6%
Business	Occupancy Sensor & Other Controls	Lighting	34,194,614	-	34,194,614	2.7%	85.3%
Business	Other Non-lighting	Other	25,943,427	-	25,943,427	2.1%	87.4%
Business	Leak Repair	Compressed Air	21,438,383	-	21,438,383	1.7%	89.1%
Business	Carryover Lamps	Lighting	21,228,853	-	21,228,853	1.7%	90.9%
Business	Compressor system	Compressed Air	16,789,170	-	16,789,170	1.3%	92.2%
Business	Variable Speed Drive	HVAC	14,361,794	-	14,361,794	1.2%	93.4%
Business	Other Non-lighting	HVAC	9,479,315	-	9,479,315	0.8%	94.1%
Business	Commercial & Industrial Refrigeration	Refrigeration	9,069,373	-	9,069,373	0.7%	94.9%
Business	LED HID	Lighting	8,706,336	-	8,706,336	0.7%	95.6%
Business	EC Motor for Cooler or Freezer	Refrigeration	8,111,506	-	8,111,506	0.7%	96.2%
Business	CHP	Other	6,269,394	23,184	6,292,578	0.5%	96.7%
Business	LED Exit Signs, Channels & Traffic Signal	Lighting	5,283,649	-	5,283,649	0.4%	97.1%
Business	Process Cooling & Heating	Other	4,773,753	-	4,773,753	0.4%	97.5%
Business	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	3,327,393	-	3,327,393	0.3%	97.8%
Business	Battery Charger	Consumer Electronics	2,753,267	-	2,753,267	0.2%	98.0%
Business	New Construction	Other	2,677,731	-	2,677,731	0.2%	98.2%
Business	Programmable/Reprogrammable Thermostat	HVAC	2,075,741	-	2,075,741	0.2%	98.4%
Business	Decorative & Directional LED Lamps	Lighting	1,982,974	-	1,982,974	0.2%	98.5%
Business	HVAC Control System & Maintenance	HVAC	1,848,048	-	1,848,048	0.1%	98.7%
Business	Equipment Optimization	Other	1,712,548	-	1,712,548	0.1%	98.8%
Business	Demand Control Ventilation	HVAC	1,699,580	-	1,699,580	0.1%	99.0%
Business	High-Efficiency Air Nozzles	Compressed Air	1,607,773	-	1,607,773	0.1%	99.1%
Business	Linear Fluorescents	Lighting	1,481,330	-	1,481,330	0.1%	99.2%
Business	Weather Stripping	Shell	1,259,172	-	1,259,172	0.1%	99.3%
Business	Omni-Directional LED Lamps	Lighting	923,800	-	923,800	0.1%	99.4%
Business	Room & Central Air Conditioner	HVAC	723,426	-	723,426	0.1%	99.5%
Business	Water & Air-Cooled Chiller	HVAC	651,328	-	651,328	0.1%	99.5%
Business	No-Loss Condensate Drains	Compressed Air	546,270	-	546,270	0.0%	99.5%
Business	Waste Water Treatment	Other	523,995	-	523,995	0.0%	99.6%
Business	LED Refrigerated Display Case Lighting	Refrigeration	487,648	-	487,648	0.0%	99.6%
Business	Linear Fluorescent & Other - Delamping	Lighting	440,229	-	440,229	0.0%	99.7%
Business	High Efficiency Pre-Rinse Spray Valve	Hot Water	426,361	-	426,361	0.0%	99.7%
Business	Other Non-lighting	Food Service Equipment	424,288	-	424,288	0.0%	99.7%
Business	Strip Curtains for Cooler or Freezer	Refrigeration	419,189	-	419,189	0.0%	99.8%
Business	Motors/Fans/Pumps	HVAC	353,022	-	353,022	0.0%	99.8%
Business	Kitchen & Bathroom Faucet Aerator	Hot Water	321,367	-	321,367	0.0%	99.8%
Business	Night Covers	Refrigeration	288,365	-	288,365	0.0%	99.8%
Business	Air Conditioner Tune-Up	HVAC	285,827	-	285,827	0.0%	99.9%
Business	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	226,293	-	226,293	0.0%	99.9%
Business	Advanced Power Strips Tier 1	Consumer Electronics	225,803	-	225,803	0.0%	99.9%
Business	Specialty LED Lamps	Lighting	213,078	-	213,078	0.0%	99.9%
Business	Smart Socket	Consumer Electronics	178,737	-	178,737	0.0%	99.9%
Business	ENERGY STAR Solid or Glass Door Refrigerator or Freezer	Refrigeration	178,182	-	178,182	0.0%	99.9%
Business	Computer Power Controls	Consumer Electronics	133,176	-	133,176	0.0%	100.0%
Business	Packaged RTU Sealing	HVAC	132,686	-	132,686	0.0%	100.0%
Business	Evaporator Fan Control	Refrigeration	122,816	-	122,816	0.0%	100.0%
Business	Beverage, Snack and Cooler Machine Controls	Refrigeration	86,266	-	86,266	0.0%	100.0%
Business	Q-Sync Motors for Reach-in Coolers/Freezers	Refrigeration	57,238	-	57,238	0.0%	100.0%
Business	ENERGY STAR Dishwasher	Food Service Equipment	20,549	21,050	41,599	0.0%	100.0%
Business	Tune-up	HVAC	19,937	-	19,937	0.0%	100.0%
Business	Low Flow Showerhead	Hot Water	16,767	-	16,767	0.0%	100.0%
Business	Advanced Thermostat	HVAC	9,477	-	9,477	0.0%	100.0%
Business	HVAC Economizer	HVAC	8,684	-	8,684	0.0%	100.0%
Business	Notched & Cogged V-Belt	HVAC	5,289	-	5,289	0.0%	100.0%
Business	Notched V Belts	HVAC	2,314	-	2,314	0.0%	100.0%
Business	Vending Machine Control	Refrigeration	1,565	-	1,565	0.0%	100.0%
Business	Efficient Dryer	Compressed Air	836	-	836	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 6-3. Summary Table of CY2020 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	Decorative & Directional LED Lamps	Lighting	110,003,343	9.4	-	1,032,302,680	110,003,343	26.6%	26.6%
Residential	Interior & Exterior LED Fixtures	Lighting	98,826,411	14.9	-	1,472,250,764	98,826,411	23.9%	50.5%
Residential	Specialty LED Lamps	Lighting	85,113,691	9.3	-	790,464,389	85,113,691	20.6%	71.1%
Residential	Carryover Lamps	Lighting	35,609,210	9.6	-	340,195,251	35,609,210	8.6%	79.7%
Residential	Advanced Thermostat	HVAC	16,771,081	11.0	-	184,481,895	16,771,081	4.1%	83.8%
Residential	Advanced Power Strips Tier 1	Consumer Electronics	11,767,132	7.0	-	82,369,924	11,767,132	2.8%	86.6%
Residential	Omni-Directional LED Lamps	Lighting	10,239,958	9.3	-	95,635,208	10,239,958	2.5%	89.1%
Residential	Air Purifier	Appliances	8,839,052	9.0	-	79,551,468	8,839,052	2.1%	91.2%
Residential	LED Exit Signs, Channels & Traffic Signal	Lighting	6,290,862	7.3	-	45,773,620	6,290,862	1.5%	92.7%
Residential	Standard LED Lamps	Lighting	5,422,396	6.9	-	37,570,873	5,422,396	1.3%	94.0%
Residential	Appliance Recycling	Appliances	5,363,298	6.5	-	34,712,575	5,363,298	1.3%	95.3%
Residential	Dehumidifier	Appliances	3,344,751	12.0	-	40,137,009	3,344,751	0.8%	96.2%
Residential	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	2,157,979	13.9	148,232	29,895,641	2,306,211	0.6%	96.7%
Residential	Networked Lighting & Controls	Lighting	2,276,059	10.0	-	22,760,591	2,276,059	0.6%	97.3%
Residential	Clothes Washer	Appliances	1,882,550	14.0	-	26,355,699	1,882,550	0.5%	97.7%
Residential	LED HID	Lighting	1,796,775	11.7	-	20,959,973	1,796,775	0.4%	98.2%
Residential	Freezer & Refrigerator	Appliances	1,743,204	17.1	-	29,819,063	1,743,204	0.4%	98.6%
Residential	Room & Central Air Conditioner	HVAC	1,700,778	18.0	-	30,605,755	1,700,778	0.4%	99.0%
Residential	Low Flow Showerhead	Hot Water	1,270,749	10.0	-	12,707,493	1,270,749	0.3%	99.3%
Residential	ECM Furnace Blower & Motor	HVAC	1,150,802	6.0	-	6,904,811	1,150,802	0.3%	99.6%
Residential	Kitchen & Bathroom Faucet Aerator	Hot Water	735,870	10.0	-	7,358,700	735,870	0.2%	99.7%
Residential	Programmable/Reprogrammable Thermostat	HVAC	362,907	7.9	-	2,876,425	362,907	0.1%	99.8%
Residential	Clothes Dryer	Appliances	222,404	16.0	-	3,558,465	222,404	0.1%	99.9%
Residential	Tune-up	HVAC	128,632	3.0	-	385,897	128,632	0.0%	99.9%
Residential	Shower Timer	Hot Water	119,299	2.0	-	238,599	119,299	0.0%	100.0%
Residential	Furnace Filter Alarm	HVAC	92,957	3.0	-	278,871	92,957	0.0%	100.0%
Residential	Duct Insulation & Sealing	HVAC	6,308	20.0	84,481	126,159	90,789	0.0%	100.0%
Residential	Water Heater Temperature Setback	Hot Water	12,835	2.0	-	25,670	12,835	0.0%	100.0%
Residential	Pipe Insulation	Hot Water	8,864	15.0	-	132,960	8,864	0.0%	100.0%
Residential	Water Cooler	Appliances	125	10.0	-	1,253	125	0.0%	100.0%
Residential	Bathroom & Kitchen Exhaust Fan	HVAC	55	19.0	-	1041.2	55	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 CY2020 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	Behavioral Savings	Behavior	79,014,639	-	79,014,639	24.0%	24.0%
Residential	Decorative & Directional LED Lamps	Lighting	57,363,749	-	57,363,749	17.4%	41.4%
Residential	Specialty LED Lamps	Lighting	51,468,723	-	51,468,723	15.6%	57.0%
Residential	Interior & Exterior LED Fixtures	Lighting	51,400,159	-	51,400,159	15.6%	72.7%
Residential	Carryover Lamps	Lighting	21,639,293	-	21,639,293	6.6%	79.2%
Residential	Advanced Thermostat	HVAC	16,771,081	-	16,771,081	5.1%	84.3%
Residential	Advanced Power Strips Tier 1	Consumer Electronics	9,165,778	-	9,165,778	2.8%	87.1%
Residential	Omni-Directional LED Lamps	Lighting	8,458,403	-	8,458,403	2.6%	89.7%
Residential	Air Purifier	Appliances	6,982,851	-	6,982,851	2.1%	91.8%
Residential	LED Exit Signs, Channels & Traffic Signal	Lighting	5,148,432	-	5,148,432	1.6%	93.4%
Residential	Standard LED Lamps	Lighting	5,053,799	-	5,053,799	1.5%	94.9%
Residential	Dehumidifier	Appliances	2,240,983	-	2,240,983	0.7%	95.6%
Residential	Appliance Recycling	Appliances	2,220,808	-	2,220,808	0.7%	96.3%
Residential	Networked Lighting & Controls	Lighting	1,820,847	-	1,820,847	0.6%	96.8%
Residential	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	1,452,357	87,457	1,539,814	0.5%	97.3%
Residential	LED HID	Lighting	1,491,324	-	1,491,324	0.5%	97.7%
Residential	Room & Central Air Conditioner	HVAC	1,370,277	-	1,370,277	0.4%	98.1%
Residential	Low Flow Showerhead	Hot Water	1,280,229	-	1,280,229	0.4%	98.5%
Residential	Clothes Washer	Appliances	1,186,006	-	1,186,006	0.4%	98.9%
Residential	Freezer & Refrigerator	Appliances	1,132,344	-	1,132,344	0.3%	99.2%
Residential	ECM Furnace Blower & Motor	HVAC	897,625	-	897,625	0.3%	99.5%
Residential	Kitchen & Bathroom Faucet Aerator	Hot Water	737,167	-	737,167	0.2%	99.7%
Residential	Programmable/Reprogrammable Thermostat	HVAC	325,336	-	325,336	0.1%	99.8%
Residential	Clothes Dryer	Appliances	149,011	-	149,011	0.0%	99.9%
Residential	Shower Timer	Hot Water	119,299	-	119,299	0.0%	99.9%
Residential	Tune-up	HVAC	102,906	-	102,906	0.0%	99.9%
Residential	Furnace Filter Alarm	HVAC	92,957	-	92,957	0.0%	100.0%
Residential	Duct Insulation & Sealing	HVAC	5,551	74,344	79,895	0.0%	100.0%
Residential	Water Heater Temperature Setback	Hot Water	12,835	-	12,835	0.0%	100.0%
Residential	Pipe Insulation	Hot Water	7,204	-	7,204	0.0%	100.0%
Residential	Water Cooler	Appliances	84	-	84	0.0%	100.0%
Residential	Bathroom & Kitchen Exhaust Fan	HVAC	36	-	36	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 CY2020 High Impact Measures – Income Eligible Gross Impact

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
Standard LED Lamps	Lighting	87,443,323	10.0	-	874,433,231	87,443,323	33.3%	33.3%
Specialty LED Lamps	Lighting	27,748,280	9.7	-	270,365,110	27,748,280	10.6%	43.9%
Carryover Lamps	Lighting	27,163,582	9.7	-	263,573,189	27,163,582	10.3%	54.2%
Omni-Directional LED Lamps	Lighting	22,403,176	9.5	-	213,912,363	22,403,176	8.5%	62.8%
Interior & Exterior LED Fixtures	Lighting	19,930,561	13.0	-	258,703,272	19,930,561	7.6%	70.3%
Advanced Power Strips Tier 1	Consumer Electronics	15,857,423	7.0	-	111,001,960	15,857,423	6.0%	76.4%
Decorative & Directional LED Lamps	Lighting	14,372,962	9.5	-	136,636,060	14,372,962	5.5%	81.9%
Low Flow Showerhead	Hot Water	1,792,588	10.0	10,600,813	17,925,884	12,393,402	4.7%	86.6%
Attic/Wall/Basement /Floor/Foundation Insulation	Shell	1,648,381	20.0	6,392,361	32,967,628	8,040,742	3.1%	89.6%
Kitchen & Bathroom Faucet Aerator	Hot Water	1,204,740	10.0	6,800,660	12,047,403	8,005,400	3.0%	92.7%
Air Sealing	Shell	744,435	20.0	3,092,533	14,888,698	3,836,968	1.5%	94.1%
High Efficiency Boiler	HVAC	-	-	2,828,400	-	2,828,400	1.1%	95.2%
Pipe Insulation	HVAC	-	-	2,669,596	-	2,669,596	1.0%	96.2%
LED Exit Signs, Channels & Traffic Signal	Lighting	2,243,165	7.9	-	17,715,688	2,243,165	0.9%	97.1%
BOC Training	Other	2,187,735	10.2	-	22,333,080	2,187,735	0.8%	97.9%
HVAC Control System & Maintenance	HVAC	156	8.0	1,180,478	1,250	1,180,634	0.4%	98.4%
Other Non-lighting	Other	69,955	18.3	590,806	1,282,545	660,761	0.3%	98.6%
Air Purifier	Appliances	528,354	9.0	-	4,755,186	528,354	0.2%	98.8%
Room & Central Air Conditioner	HVAC	458,237	15.1	3,658	6,936,554	461,895	0.2%	99.0%
Other Non-lighting	HVAC	392,418	18.3	-	7,183,607	392,418	0.1%	99.2%
Programmable/Reprogrammable Thermostat	HVAC	22,309	8.0	282,302	179,185	304,611	0.1%	99.3%
Door Sweep	HVAC	20,094	20.0	245,692	401,880	265,786	0.1%	99.4%
High Efficiency Furnace	HVAC	151,226	20.0	102,015	3,024,517	253,240	0.1%	99.5%
Reduced Infiltration & Thermal Bridging	Shell	232,135	16.6	-	3,846,520	232,135	0.1%	99.6%
Advanced Thermostat	HVAC	69,951	11.0	101,581	769,463	171,532	0.1%	99.6%
Freezer & Refrigerator	Appliances	152,329	15.0	-	2,281,070	152,329	0.1%	99.7%
Bathroom & Kitchen Exhaust Fan	HVAC	108,371	18.8	-	2,037,610	108,371	0.0%	99.7%
Duct Insulation & Sealing	HVAC	23,776	20.0	81,790	475,513	105,566	0.0%	99.8%
Other Lighting	Lighting	82,779	6.3	-	522,799	82,779	0.0%	99.8%
Appliance Recycling	Appliances	77,982	6.5	-	506,881	77,982	0.0%	99.8%
Linear Fluorescent & Other - Delamping	Lighting	67,207	11.0	-	739,273	67,207	0.0%	99.9%
DHW Controls	Hot Water	1,968	15.0	62,621	29,520	64,589	0.0%	99.9%
Shower Timer	Hot Water	1,289	2.0	57,937	2,578	59,226	0.0%	99.9%
Steamers	Food Service Equipment	33,822	12.0	-	405,861	33,822	0.0%	99.9%
Motors/Fans/Pumps	HVAC	31,671	18.2	-	576,682	31,671	0.0%	99.9%
Dehumidifier	Appliances	30,595	12.0	-	367,146	30,595	0.0%	99.9%
Ice Machine, Fryer, Combination & Convection Ove	Food Service Equipment	28,340	11.5	-	326,307	28,340	0.0%	99.9%
Gas Water Heater	Hot Water	-	-	20,344	-	20,344	0.0%	100.0%
Occupancy Sensor & Other Controls	Lighting	19,310	8.0	-	154,482	19,310	0.0%	100.0%
High-Performance Windows	Shell	18,433	25.0	-	460,817	18,433	0.0%	100.0%
Freezer & Refrigerator	Refrigeration	16,231	17.0	-	275,920	16,231	0.0%	100.0%
Pipe Insulation	Hot Water	2,692	15.0	11,571	40,378	14,263	0.0%	100.0%
Advanced Power Strips Tier 2	Consumer Electronics	14,132	7.0	-	98,921	14,132	0.0%	100.0%
Vending Miser	Refrigeration	11,291	5.0	-	56,453	11,291	0.0%	100.0%
ECM Furnace Blower & Motor	HVAC	11,167	6.0	-	67,002	11,167	0.0%	100.0%
Freezer & Refrigerator	Food Service Equipment	10,938	12.0	-	131,258	10,938	0.0%	100.0%
Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	4,441	16.0	-	71,064	4,441	0.0%	100.0%
ENERGY STAR Dishwasher	Food Service Equipment	2,744	10.0	-	27,439.4	2,744	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 CY2020 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	87,443,323	-	87,443,323	34.6%	34.6%
Income Eligible	Carryover Lamps	Lighting	27,163,582	-	27,163,582	10.7%	45.3%
Income Eligible	Specialty LED Lamps	Lighting	26,226,222	-	26,226,222	10.4%	55.6%
Income Eligible	Omni-Directional LED Lamps	Lighting	21,769,392	-	21,769,392	8.6%	64.2%
Income Eligible	Interior & Exterior LED Fixtures	Lighting	16,596,254	-	16,596,254	6.6%	70.8%
Income Eligible	Advanced Power Strips Tier 1	Consumer Electronics	15,857,423	-	15,857,423	6.3%	77.1%
Income Eligible	Low Flow Showerhead	Hot Water	1,792,588	10,600,813	12,393,402	4.9%	82.0%
Income Eligible	Decorative & Directional LED Lamps	Lighting	10,732,946	-	10,732,946	4.2%	86.2%
Income Eligible	Attic/Wall/Basement /Floor/Foundation Insulation	Shell	1,648,381	6,392,361	8,040,742	3.2%	89.4%
Income Eligible	Kitchen & Bathroom Faucet Aerator	Hot Water	1,204,740	6,800,660	8,005,400	3.2%	92.6%
Income Eligible	Air Sealing	Shell	744,435	3,092,533	3,836,968	1.5%	94.1%
Income Eligible	High Efficiency Boiler	HVAC	-	2,828,400	2,828,400	1.1%	95.2%
Income Eligible	Pipe Insulation	HVAC	-	2,669,596	2,669,596	1.1%	96.2%
Income Eligible	LED Exit Signs, Channels & Traffic Signal	Lighting	2,243,165	-	2,243,165	0.9%	97.1%
Income Eligible	BOC Training	Other	1,750,188	-	1,750,188	0.7%	97.8%
Income Eligible	HVAC Control System & Maintenance	HVAC	156	1,180,478	1,180,634	0.5%	98.3%
Income Eligible	Other Non-lighting	Other	69,955	590,806	660,761	0.3%	98.5%
Income Eligible	Air Purifier	Appliances	528,354	-	528,354	0.2%	98.8%
Income Eligible	Room & Central Air Conditioner	HVAC	458,237	3,658	461,895	0.2%	98.9%
Income Eligible	Other Non-lighting	HVAC	392,418	-	392,418	0.2%	99.1%
Income Eligible	Programmable/Reprogrammable Thermostat	HVAC	22,309	282,302	304,611	0.1%	99.2%
Income Eligible	Door Sweep	HVAC	20,094	245,692	265,786	0.1%	99.3%
Income Eligible	High Efficiency Furnace	HVAC	151,226	102,015	253,240	0.1%	99.4%
Income Eligible	Reduced Infiltration & Thermal Bridging	Shell	232,135	-	232,135	0.1%	99.5%
Income Eligible	Advanced Thermostat	HVAC	69,951	101,581	171,532	0.1%	99.6%
Income Eligible	Freezer & Refrigerator	Appliances	150,672	-	150,672	0.1%	99.6%
Income Eligible	Bathroom & Kitchen Exhaust Fan	HVAC	108,371	-	108,371	0.0%	99.7%
Income Eligible	Duct Insulation & Sealing	HVAC	23,776	81,790	105,566	0.0%	99.7%
Income Eligible	Clothes Washer	Appliances	103,975	-	103,975	0.0%	99.8%
Income Eligible	Other Lighting	Lighting	82,779	-	82,779	0.0%	99.8%
Income Eligible	Appliance Recycling	Appliances	77,982	-	77,982	0.0%	99.8%
Income Eligible	Linear Fluorescent & Other - Delamping	Lighting	67,207	-	67,207	0.0%	99.9%
Income Eligible	DHW Controls	Hot Water	1,968	62,621	64,589	0.0%	99.9%
Income Eligible	Shower Timer	Hot Water	1,289	57,937	59,226	0.0%	99.9%
Income Eligible	Motors/Fans/Pumps	HVAC	31,671	-	31,671	0.0%	99.9%
Income Eligible	Dehumidifier	Appliances	30,595	-	30,595	0.0%	99.9%
Income Eligible	Steamers	Food Service Equipment	27,057	-	27,057	0.0%	99.9%
Income Eligible	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	22,672	-	22,672	0.0%	99.9%
Income Eligible	Gas Water Heater	Hot Water	-	20,344	20,344	0.0%	100.0%
Income Eligible	Occupancy Sensor & Other Controls	Lighting	19,310	-	19,310	0.0%	100.0%
Income Eligible	High-Performance Windows	Shell	18,433	-	18,433	0.0%	100.0%
Income Eligible	Freezer & Refrigerator	Refrigeration	16,231	-	16,231	0.0%	100.0%
Income Eligible	Pipe Insulation	Hot Water	2,692	11,571	14,263	0.0%	100.0%
Income Eligible	Advanced Power Strips Tier 2	Consumer Electronics	14,132	-	14,132	0.0%	100.0%
Income Eligible	Vending Miser	Refrigeration	11,291	-	11,291	0.0%	100.0%
Income Eligible	ECM Furnace Blower & Motor	HVAC	11,167	-	11,167	0.0%	100.0%
Income Eligible	Freezer & Refrigerator	Food Service Equipment	8,751	-	8,751	0.0%	100.0%
Income Eligible	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	4,441	-	4,441	0.0%	100.0%
Income Eligible	ENERGY STAR Dishwasher	Food Service Equipment	2,195	-	2,195	0.0%	100.0%
Income Eligible	Hot Water Conservation	Hot Water	-	-	-	-	100.0%
Income Eligible	Water Heater	Hot Water	-	-	-	-	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*	CY2020 Verified Gross Savings (kWh)	NTG†	Lifetime Net Savings (kWh)‡	Verified Net kWh Savings										
						2018	2019	2020	2021	2022	2023	2024	2025	2026		
Business	Incentives - Standard	12.6	288,119,133	0.82	2,928,467,772			235,996,042	235,996,042	235,647,409	235,415,675	234,259,492	230,989,064	222,719,478		
Business	Business Instant Discounts	11.3	273,193,069	0.82	2,197,082,939			223,468,489	223,468,489	223,468,489	223,468,489	165,559,167	160,998,743	157,961,640		
Business	Small Business - Private	12.1	213,945,287	0.97	2,261,617,433			207,526,928	207,496,380	205,971,090	196,736,416	179,980,629	179,305,300	179,164,306		
Business	LED Streetlighting	12.0	79,967,787	0.85	795,880,765			68,131,157	68,131,157	68,131,157	68,131,157	65,419,517	65,419,517	65,419,517		
Business	Industrial Systems	8.2	53,945,823	0.77	339,580,154			41,538,284	41,538,284	41,538,284	41,538,284	20,099,901	19,845,369	19,845,369		
Business	Incentives - Custom	17.5	46,192,018	0.67	524,355,200			31,107,702	31,107,702	31,107,702	31,107,702	31,107,702	31,107,702	31,107,702		
Business	Strategic Energy Management	5.0	33,582,105	1.00	167,910,525			33,582,105	33,582,105	33,582,105	33,582,105	33,582,105	-	-		
Business	Non-residential New Construction	17.4	29,536,638	0.59	303,223,124			17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616		
Business	RetroCommissioning	8.4	28,554,216	0.94	226,269,315			26,840,963	26,840,963	26,840,963	26,840,963	26,840,963	26,840,963	26,840,963		
Business	Virtual Commissioning	7.3	18,548,812	1.00	135,406,324			18,548,812	18,548,812	18,548,812	18,548,812	18,548,812	18,548,812	18,548,812		
Business	Small Business - Public	10.2	11,483,619	0.97	109,806,950			11,139,110	11,074,359	10,864,263	10,822,098	10,645,222	10,393,277	8,846,082		
Business	Industrial Energy Management	5.0	3,945,821	1.00	19,729,105			3,945,821	3,945,821	3,945,821	3,945,821	3,945,821	-	-		
Business	Facility Assessments	4.0	3,903,685	0.94	14,737,480			3,669,464	3,669,464	1,849,638	1,849,638	1,849,638	1,849,638	-		
Residential	Lighting Discount	11.0	328,671,663	0.55	1,410,587,438			180,736,660	180,736,660	180,736,660	180,736,660	98,564,094	94,750,273	91,708,747		
Residential	Appliance Rebates	10.0	43,097,501	0.84	361,121,194			36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091		
Residential	Single-Family Assessment	9.6	15,279,900	0.85	86,872,536			12,923,176	12,923,176	12,923,176	12,923,176	6,336,237	6,336,237	6,301,961		
Residential	Multi-Family Assessments	7.5	10,647,892	0.88	67,771,746			9,336,002	9,259,334	9,144,797	8,773,033	8,305,048	5,767,751	2,795,381		
Residential	Fridge & Freezer Recycling	6.5	5,363,298	0.41	14,360,817			2,220,808	2,220,808	2,220,808	2,220,808	2,191,124	2,191,124	1,095,340		
Residential	Residential HVAC	13.8	5,065,935	0.77	47,758,144			3,886,094	3,886,094	3,886,094	3,886,094	3,783,188	3,783,188	2,464,495		
Residential	Residential Behavior	5.0	-	-	196,098,926			79,014,639	56,890,540	34,561,003	17,856,518	7,776,226	-	-		
Income Eligible	Product Discounts - Lighting Discounts-IE	10.5	67,725,454	0.87	531,087,250			58,595,291	58,595,291	58,595,291	58,595,291	55,830,466	54,666,269	53,069,637		
Income Eligible	Product Discounts - Appliance Rebates-IE	7.1	10,384,943	1.00	73,904,290			10,384,943	10,384,943	10,384,943	10,384,943	10,384,943	10,384,943	10,384,943		
Income Eligible	Single-Family Retrofits - IHWAP	15.3	1,796,493	1.00	21,985,083			1,796,493	1,796,493	1,796,493	1,796,493	1,792,465	1,792,465	1,462,132		
Income Eligible	Multi-Family Retrofits - IEMS	14.2	1,776,974	1.00	24,445,429			1,776,974	1,770,398	1,759,053	1,708,487	1,666,800	1,506,247	1,302,078		
Income Eligible	Single-Family Retrofits - CBA	16.5	1,694,493	1.00	25,427,318			1,694,493	1,694,493	1,694,493	1,694,493	1,694,493	1,694,493	1,692,969		
Income Eligible	Affordable Housing New Construction	13.2	1,669,264	1.00	20,955,910			1,669,264	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382		
Income Eligible	Public Housing Retrofits	8.7	1,186,871	1	10,003,266			1,186,871	1,173,821	1,155,986	1,152,674	1,118,894	925,997	643,252		
Income Eligible	Multi-Family Retrofits - IHWAP	12.1	208,904	1.00	2,094,522			208,904	208,904	202,657	197,410	196,022	144,390	126,062		
Third Party	Food Bank-LED Distribution	10.0	106,409,645	1.00	932,947,775			106,409,645	106,409,645	106,409,645	106,409,645	106,409,645	106,409,645	106,409,645		
Third Party	UIC-ERC Income Eligible Kits	9.3	32,221,357	1.00	273,961,175			32,221,357	32,221,357	32,221,357	32,221,357	32,221,357	32,221,357	32,221,357		
Third Party	Business Telecomm	9.7	10,094,176	0.67	65,575,921			6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098		
Third Party	Public Buildings in Distressed Communities	14.9	10,067,863	0.97	145,168,130			9,765,827	9,765,827	9,765,132	9,705,388	9,705,388	9,705,388	9,705,388		
Third Party	Business Grocery	9.9	9,536,289	0.97	88,388,032			9,250,200	9,250,200	9,250,200	9,250,200	8,768,480	8,542,913	8,542,913		
Third Party	Small Business Kits	8.0	6,432,331	0.97	38,330,023			6,210,289	6,210,289	6,210,289	6,115,152	3,507,944	2,885,780	2,826,494		
Third Party	Elementary Education Kits	9.0	5,134,150	0.96	38,744,132			4,952,625	4,952,625	4,820,490	4,727,533	4,205,189	3,750,027	3,750,027		
Third Party	Agriculture	14.5	4,003,596	0.77	44,910,715			3,100,046	3,100,046	3,087,144	3,081,724	3,081,724	3,081,724	3,081,724		
Third Party	Nonprofit Retrofits	12.6	3,357,628	0.97	39,169,028			3,256,899	3,256,899	3,251,182	3,242,111	2,993,240	2,927,225	2,704,817		
Third Party	Manufactured Housing Retrofit	13.1	68,101	1.00	659,543			68,101	68,101	68,101	68,101	68,101	68,101	53,155		
Pilots	Building Operator Certification Training	10.2	2,187,735	0.80	17,866,464			1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188		
Pilots	Upstream Commercial Food Service Equipment	11.8	84,129	0.80	792,234			67,304	67,304	67,304	67,304	67,304	67,304	67,304		
Pilots	IE Senior Design Pilot	11.1	22,330	1.00	234,068			22,330	22,330	22,330	22,330	22,330	22,330	22,330		
Pilots	Retail Products Platform	14.0	-	-	1,455,647			103,975	103,975	103,975	103,975	103,975	103,975	103,975		
Voltage Optimization	Voltage Optimization	15.0	215,996,316	1.00	3,239,944,743			215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316		
CY2020 Portfolio Total Electric Contribution to CPAS		11.7	1,985,103,241	0.83	17,846,688,584			1,724,332,392	1,701,958,819	1,675,424,026	1,626,976,461	1,442,223,336	1,378,617,224	1,352,579,687		
Historic Portfolio Total Electric Contribution to CPAS§								1,765,460,187	3,230,285,186	3,116,032,678	2,663,310,643	2,566,052,757	2,467,261,757	2,255,766,273	2,125,244,477	1,939,991,846
Portfolio Total Electric CPAS								1,765,460,187	3,230,285,186	4,840,365,070	4,241,476,783	4,094,238,218	3,697,989,609	3,503,861,701	3,292,571,532	
CY2020 Portfolio Incremental Expiring Electric Savings 										22,373,573	26,534,793	48,447,565	184,753,125	63,606,112	26,037,537	
Historic Portfolio Incremental Expiring Electric Savings#										114,252,509	452,722,034	97,257,886	98,791,000	211,495,484	130,521,796	185,252,631
Portfolio Grand Total Incremental Expiring Electric Savings*†										114,252,509	475,095,608	123,792,679	147,238,566	396,248,609	194,127,908	211,290,168

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Standard	214,511,774	207,725,499	204,079,856	194,526,263	145,743,724	95,289,485	85,605,230	82,713,122	9,055,444	9,008,148	9,008,148	9,008,148
Business	Business Instant Discounts	127,158,980	126,248,029	111,266,010	100,178,767	90,334,601	90,093,264	89,212,812	84,196,968	-	-	-	-
Business	Small Business - Private	178,901,702	147,469,386	143,830,981	135,589,370	111,528,673	72,629,625	59,871,561	55,512,340	20,549	20,549	20,549	20,549
Business	LED Streetlighting	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	-	-	-	-	-	-	-
Business	Industrial Systems	19,845,369	19,845,369	19,845,369	19,776,941	19,776,941	19,776,941	5,498,602	5,498,602	651,328	651,328	651,328	651,328
Business	Incentives - Custom	31,107,702	31,107,702	28,431,708	27,983,204	27,983,204	27,983,204	21,909,876	20,960,323	12,198,501	12,088,248	11,839,693	11,505,896
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	17,426,616	6,970,647	-
Business	RetroCommissioning	26,840,963	11,541,614	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	5,564,643	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	6,947,268	6,437,366	6,435,268	6,428,741	4,656,305	1,768,172	1,685,680	1,663,739	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	91,277,794	87,740,150	87,740,150	27,741,101	27,741,101	27,741,101	27,277,931	25,358,356	-	-	-	-
Residential	Appliance Rebates	27,334,162	27,334,162	20,351,311	20,351,227	4,709,371	2,467,398	2,467,398	1,281,391	1,132,380	23,295	23,295	23,295
Residential	Single-Family Assessment	5,864,779	5,026,131	5,026,131	271,977	4,095	4,095	4,095	4,095	-	-	-	-
Residential	Multi-Family Assessments	2,795,277	2,771,602	2,771,602	2,415,688	1,595,196	682,700	682,700	675,633	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	2,464,495	2,461,441	2,461,441	2,460,946	1,860,349	1,860,349	1,860,349	1,860,349	1,348,136	1,259,881	1,259,881	164,780
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	35,190,209	34,178,742	34,178,742	6,106,768	6,106,768	6,024,264	5,677,112	5,677,112	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	558,949	558,949	30,595	30,595	30,595	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	1,154,174	1,134,325	1,134,325	695,856	652,202	651,623	651,623	651,623	649,407	648,996	643,864	577,784
Income Eligible	Multi-Family Retrofits - IEMS	1,221,057	1,213,229	1,213,229	1,098,864	1,047,657	964,737	964,737	856,376	856,376	852,527	850,934	850,934
Income Eligible	Single-Family Retrofits - CBA	1,435,928	1,430,595	1,430,595	946,527	928,072	928,072	928,072	928,072	927,765	927,765	927,765	927,765
Income Eligible	Affordable Housing New Construction	1,611,382	1,592,550	971,836	730,993	730,993	705,951	668,390	668,390	437,905	437,905	437,905	294,858
Income Eligible	Public Housing Retrofits	593,154	592,715	592,715	440,602	250,304	32,747	32,747	19,975	18,162	18,162	18,162	18,162
Income Eligible	Multi-Family Retrofits - IHWAP	112,822	112,822	112,822	94,632	90,765	86,978	86,978	86,978	5,752	5,752	5,752	5,018
Third Party	Food Bank-LED Distribution	62,673,667	62,602,825	62,602,825	20,094	20,094	20,094	20,094	20,094	20,094	20,094	20,094	20,094
Third Party	UIC-ERC Income Eligible Kits	16,997,436	15,707,119	15,707,119	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	6,763,098	6,420,588	5,050,550	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	9,705,388	9,704,608	9,704,608	9,704,608	9,704,608	9,508,659	9,508,659	9,508,659	-	-	-	-
Third Party	Business Grocery	8,542,913	5,646,591	3,860,932	2,280,891	1,738,902	1,236,110	1,113,294	1,113,294	-	-	-	-
Third Party	Small Business Kits	2,644,306	1,343,480	295,029	21,561	19,803	19,803	19,803	-	-	-	-	-
Third Party	Elementary Education Kits	2,878,647	2,527,599	2,179,369	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	3,048,535	3,022,241	3,022,241	3,005,198	3,005,198	3,005,198	3,005,198	2,182,772	-	-	-	-
Third Party	Nonprofit Retrofits	2,556,546	2,529,082	2,500,038	2,359,680	2,144,340	1,821,329	1,821,329	1,804,311	-	-	-	-
Third Party	Manufactured Housing Retrofit	27,759	24,858	24,858	14,001	12,333	12,333	12,333	12,166	12,166	12,166	10,881	10,881
Pilots	Building Operator Certification Training	1,750,188	1,750,188	1,750,188	364,584	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	67,304	63,631	61,436	61,436	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	17,685	13,639	13,639	7,481	2,813	2,813	2,813	2,813	2,813	2,813	2,813	2,813
Pilots	Retail Products Platform	103,975	103,975	103,975	103,975	103,975	103,975	103,975	-	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	-	-	-	-
CY2020 Portfolio Total Electric Contribution to CPAS		1,199,112,477	1,126,828,925	1,077,626,140	864,655,019	761,426,866	598,843,954	554,116,324	536,789,014	44,912,406	44,517,180	32,693,304	24,082,306
Historic Portfolio Total Electric Contribution to CPAS\$		1,842,104,211	1,513,089,986	1,344,939,794	1,025,071,214	829,089,351	772,067,306	534,741,571	84,581,534	70,774,542	46,265,392	35,740,912	15,845,646
Portfolio Total Electric 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
CY2020 Portfolio Incremental Expiring Electric Savings 		153,467,209	72,283,552	49,202,785	212,971,121	103,228,153	162,582,912	44,727,630	17,327,310	491,876,609	395,226	11,823,876	8,610,999
Historic Portfolio Incremental Expiring Electric Savings#		97,887,635	329,014,225	168,150,191	319,868,581	195,981,862	57,022,046	237,325,735	450,160,037	13,806,991	24,509,151	10,524,480	19,895,266
Portfolio Grand Total 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

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Standard	9,008,148	7,082,991	7,082,991	7,082,991	456,303	456,303	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Private	20,549	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	651,328	651,328	651,328	651,328	-	-	-	-	-	-	-	-
Business	Incentives - Custom	11,505,896	8,678,143	8,678,143	8,678,143	3,961,701	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	23,259	23,259	23,259	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	164,780	159,724	159,724	159,724	159,724	159,724	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	504,058	1,096	1,096	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	850,934	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	900,397	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	54,882	54,882	54,882	54,882	54,882	54,882	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	18,162	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	3,101	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	20,094	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	10,881	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	2,813	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization Voltage Optimization													
CY2020 Portfolio Total Electric Contribution to CPAS		23,739,283	16,651,424	16,651,424	16,627,070	4,632,612	670,910	-	-	-	-	-	-
Historic Portfolio Total Electric Contribution to CPAS\$		12,307,568	12,307,568	11,977,051	1,593,795	536,222	-	-	-	-	-	-	-
Portfolio Total Electric CPAS		36,046,852	28,958,993	28,628,475	18,220,864	5,168,834	670,910	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Electric Savings 		343,022	7,087,859	-	24,355	11,994,458	3,961,701	-	-	-	-	-	-
Historic Portfolio Incremental Expiring Electric Savings#		3,538,077	-	330,518	10,383,256	1,057,573	536,222	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Electric Savings*†		3,881,100	7,087,859	330,518	10,407,611	13,052,031	4,497,924	670,910	-	-	-	-	-

Source: Evaluation team analysis

Table A-2. CPAS by Program – Gas
[Table 2-4 in the main body]

Sector	Program	WAML	CY2020 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	14.9	5,016,363	0.78	58,479,445			3,912,763	3,912,763	3,912,763	3,912,763	3,912,763	3,907,023	3,907,023		
Business	Small Business - Private	10.6	442,344	0.97	4,546,132			429,074	429,074	398,601	398,601	398,601	389,626	389,626		
Business	RetroCommissioning	8.6	119,470	0.94	965,792			112,301	112,301	112,301	112,301	112,301	112,301	112,301		
Business	Non-residential New Construction	17.4	70,186	0.59	720,527			41,410	41,410	41,410	41,410	41,410	41,410	41,410		
Business	Facility Assessments	4.6	9,815	0.94	42,282			9,226	9,226	5,958	5,958	5,958	5,958	-		
Business	Small Business - Public	7.1	2,902	0.97	19,899			2,815	2,815	2,815	2,815	2,815	1,063	1,063		
Business	Incentives - Custom	24.0	1,130	0.70	18,984			791	791	791	791	791	791	791		
Business	Business Instant Discounts	-	-	-	-			-	-	-	-	-	-	-		
Business	Industrial Energy Management	-	-	-	-			-	-	-	-	-	-	-		
Business	Industrial Systems	-	-	-	-			-	-	-	-	-	-	-		
Business	LED Streetlighting	-	-	-	-			-	-	-	-	-	-	-		
Business	Strategic Energy Management	-	-	-	-			-	-	-	-	-	-	-		
Business	Virtual Commissioning	-	-	-	-			-	-	-	-	-	-	-		
Residential	Appliance Rebates	11.1	3,343,508	0.99	36,531,825			3,301,626	3,301,626	3,301,626	3,301,626	3,301,626	3,301,626	3,301,626		
Residential	Residential HVAC	13.7	379,411	0.77	3,419,307			290,466	290,466	290,466	290,466	290,466	290,466	246,252		
Residential	Fridge & Freezer Recycling	-	-	-	-			-	-	-	-	-	-	-		
Residential	Lighting Discount	-	-	-	-			-	-	-	-	-	-	-		
Residential	Multi-Family Assessments	-	-	-	-			-	-	-	-	-	-	-		
Residential	Residential Behavior	-	-	-	-			-	-	-	-	-	-	-		
Residential	Single-Family Assessment	-	-	-	-			-	-	-	-	-	-	-		
Income Eligible	Multi-Family Retrofits - IEMS	19.1	303,016	1.00	5,774,614			303,016	303,016	300,515	300,515	300,515	300,265	300,265		
Income Eligible	Single-Family Retrofits - CBA	19.9	266,023	1.00	5,078,421			266,023	266,023	266,023	266,023	266,023	266,023	266,023		
Income Eligible	Multi-Family Retrofits - IHWAP	18.5	21,987	1.00	266,180			21,987	21,987	21,987	21,987	16,964	16,964	16,964		
Income Eligible	Single-Family Retrofits - IHWAP	19.0	16,929	1.00	288,396			16,929	16,929	16,929	16,929	16,697	16,697	15,281		
Income Eligible	Affordable Housing New Construction	-	-	-	-			-	-	-	-	-	-	-		
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-			-	-	-	-	-	-	-		
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-			-	-	-	-	-	-	-		
Income Eligible	Public Housing Retrofits	-	-	-	-			-	-	-	-	-	-	-		
Third Party	UIC-ERC Income Eligible Kits	10.0	577,895	1.00	5,778,947			577,895	577,895	577,895	577,895	577,895	577,895	577,895		
Third Party	Small Business Kits	7.2	151,918	0.97	1,065,472			147,361	147,361	147,361	147,361	147,361	65,734	65,734		
Third Party	Elementary Education Kits	8.8	32,399	1.00	284,038			32,399	32,399	30,299	26,992	26,992	26,992	26,992		
Third Party	Food Bank-LED Distribution	20.0	8,383	1.00	167,650			8,383	8,383	8,383	8,383	8,383	8,383	8,383		
Third Party	Manufactured Housing Retrofit	14.2	2,414	1.00	32,885			2,414	2,414	2,414	2,414	2,414	2,414	2,414		
Third Party	Business Grocery	10.0	92	0.97	895			89	89	89	89	89	89	89		
Third Party	Agriculture	-	-	-	-			-	-	-	-	-	-	-		
Third Party	Business Telecomm	-	-	-	-			-	-	-	-	-	-	-		
Third Party	Nonprofit Retrofits	-	-	-	-			-	-	-	-	-	-	-		
Third Party	Public Buildings in Distressed Communities	-	-	-	-			-	-	-	-	-	-	-		
Pilots	IE Senior Design Pilot	15.9	3,205	1.00	51,053			3,205	3,205	3,205	3,205	3,205	3,205	3,205		
Pilots	Upstream Commercial Food Service Equipment	10.0	57	0.80	456			46	46	46	46	46	46	46		
Pilots	Building Operator Certification Training	-	-	-	-			-	-	-	-	-	-	-		
Pilots	Retail Products Platform	-	-	-	-			-	-	-	-	-	-	-		
Voltage Optimization	Voltage Optimization	-	-	-	-			-	-	-	-	-	-	-		
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)			10,769,444	0.88	123,533,202			9,480,216	9,480,216	9,441,875	9,438,568	9,433,313	9,334,969	9,283,381		
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡			315,652,415	0.88	3,620,758,148			277,865,129	277,865,129	276,741,359	276,644,432	276,490,409	273,607,934	272,095,887		
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§								216,877,650	387,368,187	385,743,580	383,751,393	377,439,558	371,458,114	362,626,924	361,149,300	
Portfolio Total Gas 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
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)#										38,341	3,307	5,255	98,344	51,588		
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)††										1,123,770	96,927	154,023	2,882,475	1,512,047		
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)‡‡								370,378	1,254,229	1,992,187	6,311,835	5,981,444	8,831,190	1,477,623		
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡‡§								370,378	1,254,229	3,115,957	6,408,761	6,135,467	11,713,666	2,989,671		

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Standard	3,907,023	3,907,023	3,907,023	3,885,843	3,873,668	3,873,668	3,873,668	3,873,668	-	-	-	-
Business	Small Business - Private	389,626	389,626	389,626	195,721	86,185	86,185	86,185	86,185	718	718	718	718
Business	RetroCommissioning	112,301	67,381	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	41,410	16,564	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	1,063	1,063	1,063	510	-	-	-	-	-	-	-	-
Business	Incentives - Custom	791	791	791	791	791	791	791	791	791	791	791	791
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	3,301,626	3,301,626	3,301,626	3,301,626	71,313	71,313	71,313	-	-	-	-	-
Residential	Residential HVAC	246,252	244,631	244,631	244,206	106,588	106,588	106,588	106,588	3,475	3,475	3,475	3,475
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	300,265	293,246	293,246	279,301	278,985	278,985	277,170	277,170	182,747	182,747	182,747	182,747
Income Eligible	Single-Family Retrofits - CBA	266,023	265,555	265,555	244,238	242,357	242,357	241,573	241,573	241,405	241,405	241,405	241,405
Income Eligible	Multi-Family Retrofits - IHWAP	12,222	11,539	11,539	10,820	10,820	10,820	10,820	10,820	4,439	4,439	4,439	4,439
Income Eligible	Single-Family Retrofits - IHWAP	15,281	14,989	14,989	13,813	12,918	12,918	12,417	12,417	12,201	12,201	12,201	12,201
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	577,895	577,895	577,895	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	65,734	65,734	65,734	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	26,992	26,992	26,992	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383	8,383
Third Party	Manufactured Housing Retrofit	2,414	2,050	2,050	953	953	953	953	953	942	942	942	942
Third Party	Business Grocery	89	89	89	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	3,205	3,205	3,205	3,205	1,756	1,756	1,756	1,756	1,756	1,756	1,756	1,756
Pilots	Upstream Commercial Food Service Equipment	46	46	46	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization													
Voltage Optimization													
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)		9,278,640	9,223,270	9,155,889	8,230,819	4,736,125	4,736,125	4,733,025	4,661,712	498,266	498,266	473,420	456,856
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†		271,956,925	270,334,044	268,359,111	241,245,303	138,815,831	138,815,831	138,724,972	136,634,782	14,604,179	14,604,179	13,875,949	13,390,463
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		357,434,494	275,898,351	243,764,095	118,837,384	118,745,754	115,720,242	52,702,712	31,720,535	31,066,336	27,253,065	26,645,674	22,639,386
Portfolio Total Gas 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
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)#		4,741	55,370	67,381	925,070	3,494,694	-	3,100	71,313	4,163,446	-	24,846	16,564
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)††		138,962	1,622,881	1,974,933	27,113,808	102,429,472	-	90,858	2,090,191	122,030,603	-	728,229	485,486
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)†††		3,714,806	81,536,143	32,134,256	124,926,710	91,631	3,025,512	63,017,530	20,982,177	654,199	3,813,271	607,391	4,006,288
Portfolio Total 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

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Standard	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Private	718	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	-	-	-	-	-	-	-	-	-	-	-	-
Business	Incentives - Custom	791	791	791	791	791	-	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	-	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	3,475	1,363	1,363	1,363	1,363	1,363	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	182,747	94,881	94,881	94,881	94,881	94,881	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	241,405	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	4,439	4,012	2,934	2,934	2,934	2,934	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	12,201	252	252	252	252	252	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	8,383	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	942	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	1,756	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (Therms)		456,856	101,299	100,221	100,221	100,221	99,430	-	-	-	-	-	-
CY2020 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡		13,390,463	2,969,074	2,937,487	2,937,487	2,937,487	2,914,303	-	-	-	-	-	-
Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§		9,288,464	9,288,464	9,288,464	9,288,464	2,958,318	-	-	-	-	-	-	-
Portfolio Total Gas CPAS (kWh Equivalent) 		22,678,927	12,257,537	12,225,951	12,225,951	5,895,804	2,914,303	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (Therms)#		-	355,557	1,078	-	-	791	99,430	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)*†		-	10,421,390	31,587	-	-	23,184	2,914,303	-	-	-	-	-
Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)†‡		13,350,923	-	-	-	6,330,146	2,958,318	-	-	-	-	-	-
Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)†§		13,350,923	10,421,390	31,587	-	6,330,146	2,981,502	2,914,303	-	-	-	-	-

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	8,383	245,692	8,383	245,692	Door Sweep (20) Duct Insulation & Sealing (20), Air Sealing (20), Belly Insulation (20), Pipe Wrap Insulation (15), Advanced Thermostat (11), Showerhead - Handheld - 1.5 GPM (10), Showerhead 1.5 GPM (10), Kitchen Aerator
Income Eligible	Manufactured Housing Retrofit	2,414	70,754	2,414	70,754	(10), Bath Aerator (10), Programmable Thermostat (8) CA Steam Boiler (25), CA Hydronic Boiler (25), CA Attic Insulation and Air Sealing (20), CA Air Sealing (20), CA Pipe Steam Averaging Controls (20), IU Furnace (20), CA DHW Controls (15), CA Pipe Insulation (15), CA DHW Boiler (15), IU Advanced Thermostat (11), IU Showerhead (10), IU Aerator (10), IU Programmable Thermostat (8), IU AC Cover and Gap Sealer (5), IU Shower Timer (2), IU
Income Eligible	Multi-Family Retrofits - IEMS	303,016	8,881,389	303,016	8,881,389	Reprogram Thermostat (2) Custom Measure - Heating Plant Improvement (24.0238153567277), Air Sealing (20), Custom Measure - DHW Plant Improvement (15.1901604418152), Bathroom Aerator (10), Handheld Showerhead (10),
Income Eligible	Multi-Family Retrofits - IHWAP	21,987	644,435	21,987	644,435	Kitchen Aerator (10), Programmable Thermostat (8) Air Sealing (20), Floor Insulation (20), Wall Insulation (20), Attic Insulation (20), Rim Insulation (20), HW Pipe Insulation (15), Advanced Thermostat (11), Low Flow Faucet Aerator - Bathroom (10), Low Flow
Income Eligible	Single-Family Retrofits - CBA	266,023	7,797,142	266,023	7,797,142	Faucet Aerator - Kitchen (10), Low Flow Showerhead (10), Programmable Thermostat (8) Gas High Efficiency Boiler - ER (25), Gas High Efficiency Boiler - TOS (25), Duct Insulation and Sealing - Distribution Efficiency (20), Gas High Efficiency Furnace - ER (20), Gas High Efficiency Furnace - TOS (20), Air Sealing (20), Basement Sidewall Insulation (20), Floor Insulation (20), Wall Insulation (20), Attic Insulation (20), Rim Insulation (20), HW Pipe Insulation (15), Gas Water Heater - ER (13), Gas Water Heater - TOS (13), Advanced Thermostat (11), Low Flow Faucet Aerator - Bathroom (10), Low Flow
Income Eligible	Single-Family Retrofits - IHWAP	16,929	496,185	16,929	496,185	Faucet Aerator - Kitchen (10), Low Flow Showerhead (10), Programmable Thermostat (8) Low flow showerheads (10), Low flow faucet aerators for kitchen (10), Low flow faucet aerators for
Income Eligible	UIC-ERC Income Eligible Kits	577,895	16,938,095	577,895	16,938,095	bathroom (10)
Business	Incentives - Custom	1,130	33,120	791	23,184	CHP (24)
Business	Incentives - Standard	2,870,992	84,148,790	2,239,374	65,636,056	Building Energy Management System (15)
Business	Non-residential New Construction	70,186	2,057,145	41,410	1,213,715	All Projects (17.4)
Business	Small Business - Private	740	21,701	718	21,050	ENERGY STAR Dishwasher (20)
Residential	Residential HVAC	7,940	232,713	5,520	161,800	Ground Source Heat Pump (25), Duct Sealing (20)
Pilots	IE Senior Design Pilot	1,756	51,464	1,756	51,464	Air Sealing (20)
Total		4,149,390	121,618,625	3,486,215	102,180,962	

Source: Evaluation team analysis

Table A-4. CPAS by Program Counting Toward ComEd Goal – Total Electric + Gas
[Table 2-7 in the main body]

Sector	Program	WAML	CY2020 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 - Standard	13.1	372,267,923	0.81	3,913,008,613			301,632,098	301,632,098	301,283,465	301,051,731	299,895,548	296,625,120	288,355,534		
Business	Business Instant Discounts	11.3	273,193,069	0.82	2,197,082,939			223,468,489	223,468,489	223,468,489	223,468,489	165,559,167	160,998,743	157,961,640		
Business	Small Business - Private	12.1	213,966,988	0.97	2,262,038,435			207,547,978	207,517,430	205,992,140	196,757,467	180,001,679	179,326,350	179,185,357		
Business	LED Streetlighting	12.0	79,967,787	0.85	795,880,765			68,131,157	68,131,157	68,131,157	68,131,157	65,419,517	65,419,517	65,419,517		
Business	Industrial Systems	8.2	53,945,823	0.77	339,580,154			41,538,284	41,538,284	41,538,284	20,099,901	20,099,901	19,845,369	19,845,369		
Business	Incentives - Custom	17.5	46,225,138	0.67	524,911,621			31,130,886	31,130,886	31,130,886	31,130,886	31,130,886	31,130,886	31,130,886		
Business	Strategic Energy Management	5.0	33,582,105	1.00	167,910,525			33,582,105	33,582,105	33,582,105	33,582,105	33,582,105	-	-		
Business	Non-residential New Construction	17.4	31,593,782	0.59	324,341,770			18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332		
Business	RetroCommissioning	8.4	28,554,216	0.94	226,269,315			26,840,963	26,840,963	26,840,963	26,840,963	26,840,963	26,840,963	26,840,963		
Business	Virtual Commissioning	7.3	18,548,812	1.00	135,406,324			18,548,812	18,548,812	18,548,812	18,548,812	18,548,812	18,548,812	18,548,812		
Business	Small Business - Public	10.2	11,483,619	0.97	109,806,950			11,139,110	11,074,359	10,864,263	10,822,098	10,645,222	10,393,277	8,846,082		
Business	Industrial Energy Management	5.0	3,945,821	1.00	19,729,105			3,945,821	3,945,821	3,945,821	3,945,821	3,945,821	-	-		
Business	Facility Assessments	4.0	3,903,685	0.94	14,737,480			3,669,464	3,669,464	1,849,638	1,849,638	1,849,638	1,849,638	-		
Residential	Lighting Discount	11.0	328,671,663	0.55	1,410,587,438			180,736,660	180,736,660	180,736,660	180,736,660	98,564,094	94,750,273	91,708,747		
Residential	Appliance Rebates	10.0	43,097,501	0.84	361,121,194			36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091	36,042,091		
Residential	Single-Family Assessment	9.6	15,279,900	0.85	86,872,536			12,923,176	12,923,176	12,923,176	12,923,176	6,336,237	6,336,237	6,301,961		
Residential	Multi-Family Assessments	7.5	10,647,892	0.88	67,771,746			9,336,002	9,259,334	9,144,797	8,773,033	8,305,048	5,767,751	2,795,381		
Residential	Fridge & Freezer Recycling	6.5	5,363,298	0.41	14,360,817			2,220,808	2,220,808	2,220,808	2,191,124	2,191,124	1,095,340	-		
Residential	Residential HVAC	14.2	5,298,648	0.76	50,499,287			4,047,895	4,047,895	4,047,895	3,944,989	3,944,989	3,944,989	2,626,296		
Residential	Residential Behavior	5.0	-	-	196,098,926			79,014,639	56,890,540	34,561,003	17,856,518	7,776,226	-	-		
Income Eligible	Product Discounts - Lighting Discounts-IE	10.5	67,725,454	0.87	531,087,250			58,595,291	58,595,291	58,595,291	58,595,291	55,830,466	54,666,269	53,069,637		
Income Eligible	Multi-Family Retrofits - IEMS	18.3	10,658,363	1.00	193,699,372			10,658,363	10,651,788	10,567,144	10,516,578	10,474,891	10,307,000	10,102,830		
Income Eligible	Product Discounts - Appliance Rebates-IE	7.1	10,384,943	1.00	73,904,290			10,384,943	10,384,943	10,384,943	10,384,943	10,384,943	10,384,943	10,384,943		
Income Eligible	Single-Family Retrofits - CBA	19.3	9,491,636	1.00	174,275,844			9,491,636	9,491,636	9,491,636	9,491,636	9,491,636	9,491,636	9,490,111		
Income Eligible	Single-Family Retrofits - IHWAP	16.1	2,292,678	1.00	30,437,983			2,292,678	2,292,678	2,292,678	2,292,678	2,281,859	2,281,859	1,910,022		
Income Eligible	Affordable Housing New Construction	13.2	1,669,264	1.00	20,956,910			1,669,264	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382	1,611,382		
Income Eligible	Public Housing Retrofits	8.7	1,186,871	1	10,003,266			1,186,871	1,173,821	1,155,986	1,152,674	1,118,894	925,997	643,252		
Income Eligible	Multi-Family Retrofits - IHWAP	16.9	853,338	1.00	9,896,251			853,338	853,338	847,092	841,844	693,225	641,993	623,264		
Third Party	Food Bank-LED Distribution	10.0	106,655,337	1.00	937,861,606			106,655,337	106,655,337	106,655,337	106,655,337	106,655,337	106,655,337	106,655,337		
Third Party	UIC-ERC Income Eligible Kits	9.5	49,159,452	1.00	443,342,121			49,159,452	49,159,452	49,159,452	49,159,452	49,159,452	49,159,452	49,159,452		
Third Party	Business Telecomm	9.7	10,094,176	0.67	65,575,921			6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098	6,763,098		
Third Party	Public Buildings in Distressed Communities	14.9	10,067,863	0.97	145,168,130			9,765,827	9,765,827	9,765,132	9,705,388	9,705,388	9,705,388	9,705,388		
Third Party	Business Grocery	9.9	9,536,289	0.97	88,388,032			9,250,200	9,250,200	9,250,200	9,250,200	8,768,480	8,542,913	8,542,913		
Third Party	Small Business Kits	8.0	6,432,331	0.97	38,330,023			6,210,289	6,210,289	6,210,289	6,115,152	3,507,944	2,885,780	2,626,494		
Third Party	Elementary Education Kits	9.0	5,134,150	0.96	38,744,132			4,952,625	4,952,625	4,820,490	4,727,533	4,205,189	3,750,027	3,750,027		
Third Party	Agriculture	14.5	4,003,596	0.77	44,910,715			3,100,046	3,100,046	3,087,144	3,081,724	3,081,724	3,081,724	3,081,724		
Third Party	Nonprofit Retrofits	12.6	3,357,628	0.97	39,169,028			3,256,899	3,256,899	3,251,182	3,242,111	2,993,240	2,927,225	2,704,817		
Third Party	Manufactured Housing Retrofit	13.7	138,855	1.00	1,623,411			138,855	138,855	138,855	138,855	138,855	138,855	123,909		
Pilots	Building Operator Certification Training	10.2	2,187,735	0.80	17,866,464			1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188	1,750,188		
Pilots	Upstream Commercial Food Service Equipment	11.8	84,129	0.80	792,234			67,304	67,304	67,304	67,304	67,304	67,304	67,304		
Pilots	IE Senior Design Pilot	17.3	73,793	1.00	1,263,342			73,793	73,793	73,793	73,793	73,793	73,793	73,793		
Pilots	Retail Products Platform	14.0	-	-	1,455,647			103,975	103,975	103,975	103,975	103,975	103,975	103,975		
Voltage Optimization	Voltage Optimization	15.0	215,996,316	1.00	3,239,944,743			215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316		
CY2020 Portfolio Total Contribution to CPAS (kWh)			2,106,721,866		19,366,711,653			1,826,513,354	1,804,139,781	1,777,531,690	1,729,084,125	1,544,176,977	1,480,563,526	1,454,484,484		
Historic Portfolio Total Contribution to CPAS†								1,859,781,075	3,426,787,036	3,312,523,570	2,859,656,363	2,762,325,684	2,663,195,529	2,448,489,197	2,310,589,725	2,125,317,308
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	7,807,825,744	7,290,883,274	6,828,902,594	6,193,486,893	5,756,171,751	5,387,618,812
CY2020 Portfolio Incremental Expiring Savings 																
Historic Portfolio Incremental Expiring Savings#										114,263,467	452,867,207	97,330,680	99,130,154	214,706,333	137,899,472	185,272,417
Legacy Incremental Expiring Savings																
Portfolio Grand Total Incremental Expiring Savings*†									471,604,440.00	550,205,180	393,003,700	393,003,700	314,402,960	235,802,220	235,802,220	157,201,480
Progress towards Applicable Annual Incremental Goal (AAIG)††																
										1,162,044,708						

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business	Incentives - Standard	280,147,831	273,361,555	269,715,913	260,162,319	211,379,780	160,925,541	151,241,286	148,349,178	9,055,444	9,008,148	9,008,148	9,008,148
Business	Business Instant Discounts	127,158,980	126,248,029	111,266,010	100,178,767	90,334,601	90,093,264	89,212,812	84,196,968	-	-	-	-
Business	Small Business - Private	178,922,752	147,490,436	143,852,031	135,610,420	111,549,723	72,650,676	59,892,611	55,533,390	41,599	41,599	41,599	41,599
Business	LED Streetlighting	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	65,419,517	-	-	-	-
Business	Industrial Systems	19,845,369	19,845,369	19,845,369	19,776,941	19,776,941	19,776,941	5,498,602	5,498,602	651,328	651,328	651,328	651,328
Business	Incentives - Custom	31,130,886	31,130,886	28,454,892	28,006,388	28,006,388	28,006,388	21,933,060	20,983,507	12,221,686	12,111,433	11,862,877	11,529,080
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	18,640,332	7,456,133	-
Business	RetroCommissioning	26,840,963	11,541,614	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	5,564,643	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	6,947,268	6,437,366	6,435,268	6,428,741	4,656,305	1,768,172	1,685,680	1,663,739	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	91,277,794	87,740,150	87,740,150	27,741,101	27,741,101	27,741,101	27,277,931	25,358,356	-	-	-	-
Residential	Appliance Rebates	27,334,162	27,334,162	20,351,311	20,351,227	4,709,371	2,467,398	2,467,398	1,281,391	1,281,391	1,132,380	23,295	23,295
Residential	Single-Family Assessment	5,864,779	5,026,131	5,026,131	271,977	4,095	4,095	4,095	4,095	-	-	-	-
Residential	Multi-Family Assessments	2,795,277	2,771,602	2,771,602	2,415,688	1,595,196	682,700	682,700	675,633	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	2,626,296	2,575,727	2,575,727	2,562,792	1,962,194	1,962,194	1,962,194	1,962,194	1,449,981	1,361,727	1,361,727	266,626
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	35,190,209	34,178,742	34,178,742	6,106,768	6,106,768	6,024,264	5,677,112	5,677,112	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	10,021,810	9,808,257	9,808,257	9,285,172	9,224,721	9,141,801	9,088,588	9,088,588	6,212,689	6,212,689	6,208,841	6,207,247
Income Eligible	Product Discounts - Appliance Rebates-IE	558,949	558,949	30,595	30,595	30,595	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	9,233,070	9,214,013	9,214,013	8,105,149	8,031,552	8,031,552	8,008,587	8,008,587	8,003,352	8,003,352	8,003,352	8,003,352
Income Eligible	Single-Family Retrofits - IHWAP	1,602,063	1,573,645	1,573,645	1,100,729	1,030,815	1,030,236	1,015,557	1,015,557	1,007,226	1,006,615	1,001,483	935,403
Income Eligible	Affordable Housing New Construction	1,611,382	1,592,550	971,836	730,993	730,993	705,951	668,390	668,390	437,905	437,905	437,905	294,858
Income Eligible	Public Housing Retrofits	593,154	592,715	592,715	440,602	250,304	32,747	32,747	19,975	18,162	18,162	18,162	18,162
Income Eligible	Multi-Family Retrofits - IHWAP	471,063	451,018	451,018	411,752	407,885	404,098	404,098	404,098	135,856	135,856	135,856	135,122
Third Party	Food Bank-LED Distribution	62,919,358	62,848,516	62,848,516	265,786	265,786	265,786	265,786	265,786	265,786	265,786	265,786	265,786
Third Party	UIC-ERC Income Eligible Kits	33,935,531	32,645,214	32,645,214	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	6,763,098	6,420,588	5,050,550	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	9,705,388	9,704,608	9,704,608	9,704,608	9,704,608	9,508,659	9,508,659	9,508,659	-	-	-	-
Third Party	Business Grocery	8,542,913	5,646,591	3,860,932	2,280,891	1,738,902	1,236,110	1,113,294	1,113,294	-	-	-	-
Third Party	Small Business Kits	2,644,306	1,343,480	295,029	21,561	19,803	19,803	19,803	-	-	-	-	-
Third Party	Elementary Education Kits	2,878,647	2,527,599	2,179,369	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	3,048,535	3,022,241	3,022,241	3,005,198	3,005,198	3,005,198	3,005,198	2,182,772	-	-	-	-
Third Party	Nonprofit Retrofits	2,556,546	2,529,082	2,500,038	2,359,680	2,144,340	1,821,329	1,821,329	1,804,311	-	-	-	-
Third Party	Manufactured Housing Retrofit	98,513	84,931	84,931	41,935	40,267	40,267	40,267	40,267	39,769	39,769	38,485	38,485
Pilots	Building Operator Certification Training	1,750,188	1,750,188	1,750,188	364,584	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	67,304	63,631	61,436	61,436	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	69,149	65,102	65,102	58,945	54,277	54,277	54,277	54,277	54,277	54,277	54,277	54,277
Pilots	Retail Products Platform	103,975	103,975	103,975	103,975	103,975	103,975	103,975	-	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	215,996,316	-	-	-	-
CY2020 Portfolio Total Contribution to CPAS (kWh)		1,300,878,312	1,228,288,502	1,179,085,717	948,042,884	844,724,083	682,141,171	637,322,683	619,995,373	59,516,584	59,121,359	46,569,254	37,472,769
Historic Portfolio Total Contribution to CPAS†		2,026,795,431	1,684,142,642	1,499,452,108	1,143,428,796	947,355,303	887,307,745	587,444,283	116,302,068	101,840,878	73,518,456	62,386,586	38,485,032
Legacy Savings (kWh)§		1,650,615,540	1,414,813,320	1,336,212,580	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		4,978,289,283	4,327,244,464	4,014,750,404	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
CY2020 Portfolio Incremental Expiring Savings 		153,606,171	72,589,810	49,202,785	231,042,832	103,318,801	162,582,912	44,818,488	17,327,310	560,478,789	395,226	12,552,105	9,096,485
Historic Portfolio Incremental Expiring Savings#		98,521,878	342,652,789	184,690,534	356,023,312	196,073,493	60,047,558	299,863,462	471,142,214	14,461,190	28,322,422	11,131,871	23,901,554
Legacy Incremental Expiring Savings		157,201,480	235,802,220	78,600,740	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		409,329,529	651,044,819	312,494,059	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
Progress towards Applicable Annual Incremental Goal (AAIG)††		-	-	-	-	-	-	-	-	-	-	-	-

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business	Incentives - Standard	9,008,148	7,082,991	7,082,991	7,082,991	456,303	456,303	-	-	-	-	-	-
Business	Business Instant Discounts	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Private	41,599	-	-	-	-	-	-	-	-	-	-	-
Business	LED Streetlighting	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Systems	651,328	651,328	651,328	651,328	-	-	-	-	-	-	-	-
Business	Incentives - Custom	11,529,080	8,701,327	8,701,327	8,701,327	3,984,886	-	-	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Non-residential New Construction	-	-	-	-	-	-	-	-	-	-	-	-
Business	RetroCommissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Virtual Commissioning	-	-	-	-	-	-	-	-	-	-	-	-
Business	Small Business - Public	-	-	-	-	-	-	-	-	-	-	-	-
Business	Industrial Energy Management	-	-	-	-	-	-	-	-	-	-	-	-
Business	Facility Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Lighting Discount	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Appliance Rebates	23,259	23,259	23,259	-	-	-	-	-	-	-	-	-
Residential	Single-Family Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Multi-Family Assessments	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Fridge & Freezer Recycling	-	-	-	-	-	-	-	-	-	-	-	-
Residential	Residential HVAC	266,626	199,667	199,667	199,667	199,667	199,667	-	-	-	-	-	-
Residential	Residential Behavior	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IEMS	6,207,247	2,780,974	2,780,974	2,780,974	2,780,974	2,780,974	-	-	-	-	-	-
Income Eligible	Product Discounts - Appliance Rebates-IE	-	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - CBA	7,975,985	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	861,678	8,473	8,473	7,377	7,377	7,377	-	-	-	-	-	-
Income Eligible	Affordable Housing New Construction	54,882	54,882	54,882	54,882	54,882	54,882	-	-	-	-	-	-
Income Eligible	Public Housing Retrofits	18,162	-	-	-	-	-	-	-	-	-	-	-
Income Eligible	Multi-Family Retrofits - IHWAP	133,205	117,595	86,009	86,009	86,009	86,009	-	-	-	-	-	-
Third Party	Food Bank-LED Distribution	265,786	-	-	-	-	-	-	-	-	-	-	-
Third Party	UIC-ERC Income Eligible Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Telecomm	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Public Buildings in Distressed Communities	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Business Grocery	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Small Business Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Elementary Education Kits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Agriculture	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Nonprofit Retrofits	-	-	-	-	-	-	-	-	-	-	-	-
Third Party	Manufactured Housing Retrofit	38,485	-	-	-	-	-	-	-	-	-	-	-
Pilots	Building Operator Certification Training	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	-	-	-	-	-	-	-	-	-	-	-	-
Pilots	IE Senior Design Pilot	54,277	-	-	-	-	-	-	-	-	-	-	-
Pilots	Retail Products Platform	-	-	-	-	-	-	-	-	-	-	-	-
Voltage Optimization	Voltage Optimization	-	-	-	-	-	-	-	-	-	-	-	-
CY2020 Portfolio Total Contribution to CPAS (kWh)		37,129,747	19,620,498	19,588,911	19,564,557	7,570,098	3,585,213	-	-	-	-	-	-
Historic Portfolio Total Contribution to CPAS‡		21,596,032	21,596,032	21,265,514	10,882,258	3,494,540	-	-	-	-	-	-	-
Legacy Savings (kWh)§		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Total CPAS (kWh)		58,725,779	41,216,530	40,854,426	30,446,815	11,064,638	3,585,213	-	-	-	-	-	-
CY2020 Portfolio Incremental Expiring Savings 		343,022	17,509,249	31,587	24,355	11,994,458	3,984,886	3,585,213	-	-	-	-	-
Historic Portfolio Incremental Expiring Savings#		16,889,000	-	330,518	10,383,256	7,387,719	3,494,540	-	-	-	-	-	-
Legacy Incremental Expiring Savings		-	-	-	-	-	-	-	-	-	-	-	-
Portfolio Grand Total Incremental Expiring Savings*†		17,232,022	17,509,249	362,104	10,407,611	19,382,177	7,479,425	3,585,213	-	-	-	-	-
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	372,267,923	13.1
Business	Business Instant Discounts	273,193,069	11.3
Business	Small Business - Private	213,966,988	12.1
Business	LED Streetlighting	79,967,787	12.0
Business	Industrial Systems	53,945,823	8.2
Business	Incentives - Custom	46,225,138	17.5
Business	Strategic Energy Management	33,582,105	5.0
Business	Non-residential New Construction	31,593,782	17.4
Business	RetroCommissioning	28,554,216	8.4
Business	Virtual Commissioning	18,548,812	7.3
Business	Small Business - Public	11,483,619	10.2
Business	Industrial Energy Management	3,945,821	5.0
Business	Facility Assessments	3,903,685	4.0
Business	Subtotal	1,171,178,767	12.0
Residential			
Residential	Lighting Discount	328,671,663	11.0
Residential	Residential Behavior	79,014,639	5.0
Residential	Appliance Rebates	43,097,501	10.0
Residential	Single-Family Assessment	15,279,900	9.6
Residential	Multi-Family Assessments	10,647,892	7.5
Residential	Fridge & Freezer Recycling	5,363,298	6.5
Residential	Residential HVAC	5,298,648	14.2
Residential	Subtotal	487,373,542	9.8
Income Eligible			
Income Eligible	Product Discounts - Lighting Discounts-IE	67,725,454	10.5
Income Eligible	Multi-Family Retrofits - IEMS	10,658,363	18.3
Income Eligible	Product Discounts - Appliance Rebates-IE	10,384,943	7.1
Income Eligible	Single-Family Retrofits - CBA	9,491,636	19.3
Income Eligible	Single-Family Retrofits - IHWAP	2,292,678	16.1
Income Eligible	Affordable Housing New Construction	1,669,264	13.2
Income Eligible	Public Housing Retrofits	1,186,871	8.7
Income Eligible	Multi-Family Retrofits - IHWAP	853,338	16.9
Income Eligible	Subtotal	104,262,548	11.9
Third Party			
Third Party	Food Bank-LED Distribution	106,655,337	10.0
Third Party	UIC-ERC Income Eligible Kits	49,159,452	9.5
Third Party	Business Telecomm	10,094,176	9.7
Third Party	Public Buildings in Distressed Communities	10,067,863	14.9
Third Party	Business Grocery	9,536,289	9.9
Third Party	Small Business Kits	6,432,331	8.0
Third Party	Elementary Education Kits	5,134,150	9.0
Third Party	Agriculture	4,003,596	14.5
Third Party	Nonprofit Retrofits	3,357,628	12.6
Third Party	Manufactured Housing Retrofit	138,855	13.7
Third Party	Subtotal	204,579,675	10.2
Pilots			
Pilots	Building Operator Certification Training	2,187,735	10.2
Pilots	Retail Products Platform	103,975	14.0
Pilots	Upstream Commercial Food Service Equipment	84,129	11.8
Pilots	IE Senior Design Pilot	73,793	17.3
Pilots	Subtotal	2,449,633	10.6
Portfolio	Grand Total	1,969,844,164	11.2
Voltage Optimization			
Voltage Optimization	Voltage Optimization	215,996,316	15.0
Voltage Optimization	Subtotal	215,996,316	15.0
Portfolio	Total Including VO	2,185,840,480	11.6

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	Incentives - Standard	303,923,398	0.95	288,119,133	0.82	235,996,042
Business	Business Instant Discounts	252,855,430	1.08	273,193,069	0.82	223,468,489
Business	Small Business - Private	216,336,050	0.99	213,945,287	0.97	207,526,928
Business	LED Streetlighting	80,287,433	1.00	79,967,787	0.85	68,131,157
Business	Industrial Systems	44,764,106	1.21	53,945,823	0.77	41,538,284
Business	Incentives - Custom	41,277,847	1.12	46,192,018	0.67	31,107,702
Business	Strategic Energy Management	33,403,760	1.01	33,582,105	1.00	33,582,105
Business	Non-residential New Construction	30,586,186	0.97	29,536,638	0.59	17,426,616
Business	RetroCommissioning	29,101,900	0.98	28,554,216	0.94	26,840,963
Business	Virtual Commissioning	18,509,660	1.00	18,548,812	1.00	18,548,812
Business	Small Business - Public	11,488,052	1.00	11,483,619	0.97	11,139,110
Business	Industrial Energy Management	3,935,668	1.00	3,945,821	1.00	3,945,821
Business	Facility Assessments	4,073,438	0.96	3,903,685	0.94	3,669,464
Business	Subtotal	1,070,542,927	1.01	1,084,918,011	0.85	922,921,492
Residential	Lighting Discount	284,196,237	1.16	328,671,663	0.55	180,736,660
Residential	Appliance Rebates	43,012,184	1.00	43,097,501	0.84	36,042,091
Residential	Single-Family Assessment	14,866,529	1.03	15,279,900	0.85	12,923,176
Residential	Multi-Family Assessments	10,717,612	0.99	10,647,892	0.88	9,336,002
Residential	Fridge & Freezer Recycling	5,485,651	0.98	5,363,298	0.41	2,220,808
Residential	Residential HVAC	8,068,210	0.63	5,065,935	0.77	3,886,094
Residential	Residential Behavior	-	-	-	-	79,014,639
Residential	Subtotal	366,346,423	1.11	408,126,189	0.79	324,159,470
Income Eligible	Product Discounts - Lighting Discounts-IE	57,548,317	1.18	67,725,454	0.87	58,595,291
Income Eligible	Product Discounts - Appliance Rebates-IE	10,382,843	1.00	10,384,943	1.00	10,384,943
Income Eligible	Single-Family Retrofits - IHWAP	1,795,836	1.00	1,796,493	1.00	1,796,493
Income Eligible	Multi-Family Retrofits - IEMS	1,812,402	0.98	1,776,974	1.00	1,776,974
Income Eligible	Single-Family Retrofits - CBA	1,861,736	0.91	1,694,493	1.00	1,694,493
Income Eligible	Affordable Housing New Construction	1,768,410	0.94	1,669,264	1.00	1,669,264
Income Eligible	Public Housing Retrofits	1,155,620	1.03	1,186,871	1.00	1,186,871
Income Eligible	Multi-Family Retrofits - IHWAP	195,632	1.07	208,904	1.00	208,904
Income Eligible	Subtotal	76,520,796	1.13	86,443,396	0.89	77,313,232
Third Party	Food Bank-LED Distribution	90,670,123	1.17	106,409,645	1.00	106,409,645
Third Party	UIC-ERC Income Eligible Kits	25,153,813	1.28	32,221,357	1.00	32,221,357
Third Party	Business Telecomm	10,074,332	1.00	10,094,176	0.67	6,763,098
Third Party	Public Buildings in Distressed Communities	10,179,723	0.99	10,067,863	0.97	9,765,827
Third Party	Business Grocery	9,368,231	1.02	9,536,289	0.97	9,250,200
Third Party	Small Business Kits	6,452,843	1.00	6,432,331	0.97	6,210,289
Third Party	Elementary Education Kits	3,161,851	1.62	5,134,150	0.96	4,952,625
Third Party	Agriculture	5,445,709	0.74	4,003,596	0.77	3,100,046
Third Party	Nonprofit Retrofits	3,411,435	0.98	3,357,628	0.97	3,256,899
Third Party	Manufactured Housing Retrofit	68,223	1.00	68,101	1.00	68,101
Third Party	Subtotal	163,986,281	1.14	187,325,135	0.97	181,998,086
Pilots	Building Operator Certification Training	-	-	2,187,735	0.80	1,750,188
Pilots	Upstream Commercial Food Service Equipmen	64,798	1.30	84,129	0.80	67,304
Pilots	IE Senior Design Pilot	22,034	1.01	22,330	1.00	22,330
Pilots	Retail Products Platform	-	-	-	-	103,975
Pilots	Subtotal	86,832	26.42	2,294,194	0.85	1,943,796
Voltage Optimization	Voltage Optimization	216,582,437	1.00	215,996,316	1.00	215,996,316
Voltage Optimization	Subtotal	216,582,437	1.00	215,996,316	1.00	215,996,316
Portfolio	Grand Total	1,894,065,696	1.05	1,985,103,241	0.87	1,724,332,392

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 Savings Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business	Incentives - Standard	303,923,398	1.22	372,267,923	0.81	301,632,098
Business	Business Instant Discounts	252,855,430	1.08	273,193,069	0.82	223,468,489
Business	Small Business - Private	216,357,751	0.99	213,966,988	0.97	207,547,978
Business	LED Streetlighting	80,287,433	1.00	79,967,787	0.85	68,131,157
Business	Industrial Systems	44,764,106	1.21	53,945,823	0.77	41,538,284
Business	Incentives - Custom	41,277,847	1.12	46,225,138	0.67	31,130,886
Business	Strategic Energy Management	33,403,760	1.01	33,582,105	1.00	33,582,105
Business	Non-residential New Construction	32,896,888	0.96	31,593,782	0.59	18,640,332
Business	RetroCommissioning	29,101,900	0.98	28,554,216	0.94	26,840,963
Business	Virtual Commissioning	18,509,660	1.00	18,548,812	1.00	18,548,812
Business	Small Business - Public	11,488,052	1.00	11,483,619	0.97	11,139,110
Business	Industrial Energy Management	3,935,668	1.00	3,945,821	1.00	3,945,821
Business	Facility Assessments	4,073,438	0.96	3,903,685	0.94	3,669,464
Business	Subtotal	1,072,878,330	1.09	1,171,178,767	0.85	989,815,497
Residential	Lighting Discount	284,196,237	1.16	328,671,663	0.55	180,736,660
Residential	Appliance Rebates	43,012,184	1.00	43,097,501	0.84	36,042,091
Residential	Single-Family Assessment	14,866,529	1.03	15,279,900	0.85	12,923,176
Residential	Multi-Family Assessments	10,717,612	0.99	10,647,892	0.88	9,336,002
Residential	Fridge & Freezer Recycling	5,485,651	0.98	5,363,298	0.41	2,220,808
Residential	Residential HVAC	8,281,805	0.64	5,298,648	0.76	4,047,895
Residential	Residential Behavior	-	-	-	-	79,014,639
Residential	Subtotal	366,560,018	1.11	408,358,903	0.79	324,321,270
Income Eligible	Product Discounts - Lighting Discounts-IE	57,548,317	1.18	67,725,454	0.87	58,595,291
Income Eligible	Multi-Family Retrofits - IEMS	10,628,482	1.00	10,658,363	1.00	10,658,363
Income Eligible	Product Discounts - Appliance Rebates-IE	10,382,843	1.00	10,384,943	1.00	10,384,943
Income Eligible	Single-Family Retrofits - CBA	9,573,892	0.99	9,491,636	1.00	9,491,636
Income Eligible	Single-Family Retrofits - IHWAP	2,292,020	1.00	2,292,678	1.00	2,292,678
Income Eligible	Affordable Housing New Construction	1,768,410	0.94	1,669,264	1.00	1,669,264
Income Eligible	Public Housing Retrofits	1,155,620	1.03	1,186,871	1.00	1,186,871
Income Eligible	Multi-Family Retrofits - IHWAP	1,099,887	0.78	853,338	1.00	853,338
Income Eligible	Subtotal	94,449,470	1.10	104,262,548	0.91	95,132,384
Third Party	Food Bank-LED Distribution	90,670,123	1.18	106,655,337	1.00	106,655,337
Third Party	UIC-ERC Income Eligible Kits	41,988,171	1.17	49,159,452	1.00	49,159,452
Third Party	Business Telecomm	10,074,332	1.00	10,094,176	0.67	6,763,098
Third Party	Public Buildings in Distressed Communities	10,179,723	0.99	10,067,863	0.97	9,765,827
Third Party	Business Grocery	9,368,231	1.02	9,536,289	0.97	9,250,200
Third Party	Small Business Kits	6,452,843	1.00	6,432,331	0.97	6,210,289
Third Party	Elementary Education Kits	3,161,851	1.62	5,134,150	0.96	4,952,625
Third Party	Agriculture	5,445,709	0.74	4,003,596	0.77	3,100,046
Third Party	Nonprofit Retrofits	3,411,435	0.98	3,357,628	0.97	3,256,899
Third Party	Manufactured Housing Retrofit	139,175	1.00	138,855	1.00	138,855
Third Party	Subtotal	180,891,591	1.13	204,579,675	0.97	199,252,627
Pilots	Building Operator Certification Training	-	-	2,187,735	0.80	1,750,188
Pilots	Upstream Commercial Food Service Equipmer	64,798	1.30	84,129	0.80	67,304
Pilots	IE Senior Design Pilot	79,275	0.93	73,793	1.00	73,793
Pilots	Retail Products Platform	-	-	-	-	103,975
Pilots	Subtotal	144,073	1.628	2,345,658	0.85	1,995,260
Voltage Optimization	Voltage Optimization	216,582,437	1.00	215,996,316	1.00	215,996,316
Voltage Optimization	Subtotal	216,582,437	1.00	215,996,316	1.00	215,996,316
Portfolio	Grand Total	1,931,505,919	1.09	2,106,721,866	0.87	1,826,513,354

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	57,363	1.08	61,768	0.82	50,529
Business	Small Business - Private	52,517	1.00	52,468	0.97	50,894
Business	Incentives - Standard	48,090	0.97	46,709	0.82	38,516
Business	Industrial Systems	6,930	1.34	9,309	0.78	7,261
Business	Incentives - Custom	6,455	0.81	5,201	0.61	3,182
Business	Non-residential New Construction	5,085	0.87	4,444	0.59	2,622
Business	Virtual Commissioning	-	-	1,673	1.00	1,673
Business	Small Business - Public	985	0.99	975	0.97	946
Business	RetroCommissioning	582	1.00	584	0.94	549
Business	Industrial Energy Management	-	-	95	1.00	95
Business	LED Streetlighting	-	-	64	0.81	52
Business	Facility Assessments	-	-	-	-	-
Business	Strategic Energy Management	-	-	-	-	-
Business	Subtotal	178,008	1.03	183,290	0.85	156,318
Residential	Lighting Discount	-	-	44,030	0.55	24,031
Residential	Appliance Rebates	8,478	0.95	8,028	0.87	7,004
Residential	Residential HVAC	2,142	0.97	2,087	0.81	1,685
Residential	Single-Family Assessment	2,009	1.02	2,042	0.85	1,737
Residential	Multi-Family Assessments	1,181	1.01	1,188	0.89	1,061
Residential	Fridge & Freezer Recycling	-	-	734	0.42	310
Residential	Residential Behavior	-	-	-	-	13,638
Residential	Subtotal	13,810	4.21	58,109	0.85	49,465
Income Eligible	Product Discounts - Lighting Discounts-IE	-	-	8,933	0.86	7,688
Income Eligible	Product Discounts - Appliance Rebates-IE	1,173	1.00	1,174	1.00	1,174
Income Eligible	Single-Family Retrofits - CBA	660	0.94	623	1.00	623
Income Eligible	Single-Family Retrofits - IHWAP	520	1.00	522	1.00	522
Income Eligible	Affordable Housing New Construction	179	1.12	200	1.00	200
Income Eligible	Multi-Family Retrofits - IEMS	142	0.94	133	1.00	133
Income Eligible	Public Housing Retrofits	79	1.16	92	1.00	92
Income Eligible	Multi-Family Retrofits - IHWAP	27	1.02	27	1.00	27
Income Eligible	Subtotal	2,780	4.21	11,703	0.89	10,458
Third Party	Food Bank-LED Distribution	10,863	1.17	12,762	1.00	12,762
Third Party	UIC-ERC Income Eligible Kits	3,209	1.19	3,817	1.00	3,817
Third Party	Public Buildings in Distressed Communities	2,735	0.99	2,703	0.97	2,622
Third Party	Agriculture	2,672	0.85	2,259	0.67	1,516
Third Party	Small Business Kits	1,352	1.07	1,449	0.97	1,398
Third Party	Business Grocery	1,185	1.02	1,204	0.97	1,168
Third Party	Business Telecomm	1,095	1.04	1,142	0.67	765
Third Party	Nonprofit Retrofits	681	0.96	653	0.97	633
Third Party	Elementary Education Kits	336	1.79	600	0.96	576
Third Party	Manufactured Housing Retrofit	9	0.95	9	1.00	9
Third Party	Subtotal	24,137	1.10	26,597	0.95	25,266
Pilots	Building Operator Certification Training	-	-	295	0.80	236
Pilots	Upstream Commercial Food Service Equipment	8	1.51	12	0.80	9
Pilots	IE Senior Design Pilot	4	0.83	3	1.00	3
Pilots	Retail Products Platform	-	-	-	-	12
Pilots	Subtotal	12	26.75	310	0.84	261
Voltage Optimization	Voltage Optimization	46,424	0.97	45,134	1.00	45,134
Voltage Optimization	Subtotal	46,424	0.97	45,134	1.00	45,134
Portfolio	Grand Total	265,171	1.23	325,144	0.88	286,903

Source: Evaluation team analysis

Table A-9. Comparing Electric Net Goals to Actual Achieved by CY2020 Program
 [Table 3-5 in the main body]

Sector	Program	Verified Net Electric Savings (kWh)	2020 Original Plan Savings Goal (kWh)	Implementation Plan Savings Goal (kWh)	Verified Net over Original Plan	Verified Net over Implementation Plan
Business	Incentives - Standard	235,996,042	209,422,000	224,694,696	1.13	1.05
Business	Small Business - Private	207,526,928	156,989,712	165,000,000	1.32	1.26
Business	Business Instant Discounts	202,682,529	210,732,086	213,330,081	0.96	0.95
Business	LED Streetlighting	68,131,157	100,104,000	72,398,784	0.68	0.94
Business	Industrial Systems	41,538,284	28,467,588	30,916,000	1.46	1.34
Business	Strategic Energy Management	33,582,105	27,978,000	27,978,000	1.20	1.20
Business	Incentives - Custom	31,107,702	91,443,000	29,701,038	0.34	1.05
Business	RetroCommissioning	26,840,963	60,326,000	43,966,310	0.44	0.61
Business	Virtual Commissioning	18,548,812	-	-	-	-
Business	Non-residential New Construction	17,426,616	30,669,544	18,949,000	0.57	0.92
Business	Small Business - Public	11,139,110	6,279,588	12,000,000	1.77	0.93
Business	Industrial Energy Management	3,945,821	-	-	-	-
Business	Facility Assessments	3,669,464	1,654,000	3,429,000	2.22	1.07
Business	Subtotal	902,135,531	924,065,518	842,362,809	0.98	1.07
Residential	Lighting Discount	160,915,017	93,402,101	108,121,052	1.72	1.49
Residential	Residential Behavior	79,014,639	97,750,000	126,362,000	0.81	0.63
Residential	Appliance Rebates	36,042,091	32,689,098	42,942,928	1.10	0.84
Residential	Single-Family Assessment	12,923,176	17,889,526	26,905,000	0.72	0.48
Residential	Multi-Family Assessments	9,336,002	9,196,819	12,023,000	1.02	0.78
Residential	Residential HVAC	3,886,094	9,744,638	5,370,160	0.40	0.72
Residential	Fridge & Freezer Recycling	2,220,808	21,702,515	11,949,000	0.10	0.19
Residential	Subtotal	304,337,827	282,374,697	333,673,140	1.08	0.91
Income Eligible	Product Discounts - [Lighting Discounts +Appliance Rebates - IE]	61,173,798	13,584,298	47,358,443	4.50	1.29
Income Eligible	Single Family Retrofits - CBA + IHWAP	3,490,986	6,982,000	4,052,232	0.50	0.86
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	1,985,877	4,877,000	8,650,466	0.41	0.23
Income Eligible	Affordable Housing New Construction	1,669,264	1,479,800	1,141,000	1.13	1.46
Income Eligible	Public Housing Retrofits	1,186,871	1,826,000	2,469,000	0.65	0.48
Income Eligible	Subtotal	69,506,796	28,749,098	63,671,140	2.42	1.09
Third Party	Food Bank-LED Distribution	90,669,565	18,315,990	77,554,000	4.95	1.17
Third Party	UIC-ERC Income Eligible Kits	28,604,291	4,933,800	20,891,400	5.80	1.37
Third Party	Public Buildings in Distressed Communities	9,765,827	32,533,700	19,501,000	0.30	0.50
Third Party	Business Grocery	9,250,200	6,721,279	4,028,786	1.38	2.30
Third Party	Business Telecomm	6,763,098	10,073,000	7,824,845	0.67	0.86
Third Party	Small Business Kits	5,767,397	162,000	6,249,710	35.60	0.92
Third Party	Nonprofit Retrofits	3,256,899	5,003,270	2,999,000	0.65	1.09
Third Party	Elementary Education Kits	3,134,975	2,574,000	10,717,000	1.22	0.29
Third Party	Agriculture	3,100,046	9,002,000	5,305,870	0.34	0.58
Third Party	Manufactured Housing Retrofit	68,101	236,000	1,000,000	0.29	0.07
Third Party	Subtotal	160,380,398	89,555,039	156,071,611	1.79	1.03
Pilots	Building Operator Certification Training	1,750,188	-	-	-	-
Pilots	Retail Products Platform	103,975	-	-	-	-
Pilots	Upstream Commercial Food Service Equipment	67,304	-	-	-	-
Pilots	IE Senior Design Pilot	22,330	-	-	-	-
Pilots	Subtotal	1,943,796	-	-	-	-
Voltage Optimization	Voltage Optimization	215,996,316	210,000,000	208,236,000	1.03	1.04
Voltage Optimization	Subtotal	215,996,316	210,000,000	208,236,000	1.03	1.04
Other	Lighting Carryover	70,031,728	-	20,000,000	-	3.50
Other	Therm Conversion	102,180,962	102,181,000	102,181,000	1.00	1.00
Portfolio	Grand Total	1,826,513,354	1,636,925,352	1,726,195,700	1.12	1.06

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 CY2020 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 - Standard	0.95	288,119,133	46,709	0.82	235,996,042	38,516	2,928,467,772	0.20	0.02	47,856,991	3,561	Projects	13.1
Business	Business Instant Discounts	1.08	273,193,069	61,768	0.82	223,468,489	50,529	2,197,082,939	0.08	0.01	17,262,161	2,502,340	Lamps	11.3
Business	Small Business - Private	1.00	213,945,287	52,468	0.97	207,526,928	50,894	2,261,617,433	0.28	0.03	57,281,054	7,501	Projects	12.1
Business	LED Streetlighting	0.99	799,967,787	64	0.85	68,131,157	52	795,880,765	0.18	0.02	12,017,279	24,025	Lamps	12.0
Business	Industrial Systems	1.21	53,945,823	9,309	0.77	41,538,284	7,261	339,980,154	0.21	0.03	8,643,126	443	Measures	8.2
Business	Incentives - Custom	1.12	46,192,018	5,201	0.67	31,107,702	3,182	524,355,200	0.22	0.01	6,723,202	203	Projects	17.5
Business	Strategic Energy Management	1.01	33,582,105		1.00	33,582,105		167,910,525	0.12	0.02	4,060,034	124	Projects	5.0
Business	Non-residential New Construction	0.97	29,536,638	4,444	0.59	17,426,616	2,622	303,223,124	0.34	0.02	5,965,381	33	Projects	17.4
Business	RetroCommissioning	0.98	28,554,216	584	0.94	26,340,963	549	226,269,315	0.45	0.05	12,181,914	131	Participants	8.4
Business	Virtual Commissioning	1.00	18,549,812	1,673	1.00	18,549,812	1,673	135,406,324				124	Participants	7.3
Business	Small Business - Public	1.00	11,483,619	975	0.97	11,139,110	946	109,806,950	0.33	0.03	3,669,656	195	Projects	10.2
Business	Industrial Energy Management	1.00	3,945,821	95	1.00	3,945,821	95	19,729,105				102	Measures	5.0
Business	Facility Assessments	0.96	3,903,685		0.94	3,689,454		14,737,480	0.35	0.09	1,291,788	178	Measures	4.0
Business	Subtotal	1.01	1,684,918,011	183,290	0.85	922,921,492	156,318	10,024,087,088	0.19	0.02	176,852,597	2,538,960		11.9
Residential	Lighting Discount	1.16	328,671,663	44,030	0.55	180,736,660	24,031	1,410,587,438	0.11	0.01	19,486,666	6,248,090	Lamps	11.0
Residential	Appliance Rebates	1.00	43,097,501	8,028	0.84	36,042,091	7,004	361,121,194	0.42	0.04	15,019,859	148,298	Measures	10.0
Residential	Single-Family Assessment	1.03	15,279,900	2,042	0.85	12,923,176	1,737	86,872,636	0.46	0.07	5,976,346	42,898	Measures	9.6
Residential	Multi-Family Assessments	0.99	10,647,892	1,188	0.88	9,336,002	1,061	67,771,746	0.60	0.08	5,585,524	68,804	Measures	7.5
Residential	Fridge & Freezer Recycling	0.98	5,363,298	734	0.41	2,220,808	310	14,360,817	0.54	0.08	1,197,745	6,477	Measures	6.5
Residential	Residential HVAC	0.63	5,065,935	2,087	0.77	3,886,094	1,685	47,758,144	0.69	0.06	2,676,421	10,970	Measures	14.2
Residential	Residential Behavior					79,014,639	13,838	196,098,926	0.07	0.03	5,668,443	1,922,170	Households	5.0
Residential	Subtotal	1.11	498,126,189	58,109	0.79	324,159,470	49,465	2,184,570,801	0.17	0.03	55,609,004	8,448,597		10.7
Income Eligible	Product Discounts - [Lighting Discounts + Appliance Rebates - IE]	1.15	78,110,398	10,106	0.88	68,980,234	8,862	604,991,539	0.09	0.01	5,991,515	1,287,600	Measures	10.0
Income Eligible	Single Family Retrofits - CBA + IHWAP	0.95	3,490,986	1,145	1.00	3,490,986	1,145	47,412,401	3.17	0.23	11,069,363	2,779	Projects	17.6
Income Eligible	Multi-Family Retrofits - IEMS + IHWAP	0.99	1,985,877	160	1.00	1,985,877	160	26,539,951	3.64	0.27	7,224,653	14,815	Measures	18.1
Income Eligible	Affordable Housing New Construction	0.94	1,669,264	200	1.00	1,669,264	200	20,955,910	1.16	0.09	1,932,250	837	Households	13.2
Income Eligible	Public Housing Retrofits	1.03	1,186,871	92	1.00	1,186,871	92	10,003,266	1.11	0.13	1,315,663	5,118	Measures	8.7
Income Eligible	Subtotal	1.13	86,443,396	11,703	0.89	77,313,232	10,458	709,903,067	0.36	0.04	27,533,444	1,311,149		10.6
Third Party	Food Bank-LED Distribution	1.17	106,409,645	12,762	1.00	106,409,645	12,762	932,947,775	0.08	0.01	8,306,172	2,467,416	Lamps	10.0
Third Party	UIC-ERC Income Eligible Kits	1.28	32,221,357	3,817	1.00	32,221,357	3,817	273,961,175	0.16	0.02	5,026,534	720,000	Measures	9.5
Third Party	Business Telecom	1.00	10,094,176	1,142	0.67	6,763,098	765	65,575,921	0.34	0.03	2,272,023	58	Sites	9.7
Third Party	Public Buildings in Distressed Communities	0.99	10,067,863	2,703	0.97	9,765,827	2,622	145,168,130	0.29	0.02	2,852,836	78,926	Measures	14.9
Third Party	Business Grocery	1.02	9,536,289	1,204	0.97	9,250,200	1,168	88,388,032	0.30	0.03	2,729,462	158	Measures	9.9
Third Party	Small Business Kits	1.00	6,432,331	1,449	0.97	6,210,289	1,398	38,330,023	0.24	0.04	1,492,106	69,277	Measures	8.0
Third Party	Elementary Education Kits	1.62	5,134,150	600	0.96	4,952,625	576	38,744,132	0.13	0.02	636,289	2,469	Kits	9.0
Third Party	Agriculture	0.74	4,003,596	2,259	0.77	3,100,446	1,516	44,910,715	0.43	0.03	1,320,533	469	Measures	14.5
Third Party	Nonprofit Retrofits	0.98	3,357,628	653	0.97	3,256,899	633	39,169,028	0.59	0.05	1,912,644	14,613	Measures	12.6
Third Party	Manufactured Housing Retrofits	1.00	68,101	9	1.00	68,101	9	659,543	5.59	0.58	380,884	117	Participants	13.7
Third Party	Subtotal	1.14	187,325,135	26,597	0.97	181,998,086	25,266	1,667,854,474	0.15	0.02	26,929,484	3,353,503		10.2
Pilots	Building Operator Certification Training		2,187,735	295	0.80	1,750,188	236	17,866,464				17	Participants	10.2
Pilots	Upstream Commercial Food Service Equipment	1.30	84,129	12	0.80	67,304	9	792,234				52	Measures	11.8
Pilots	IE Senior Design Pilot	1.01	22,330	3	1.00	22,330	3	234,068				69	Participants	17.3
Pilots	Retail Products Platform		103,975			103,975		1,455,647				69,397	Measures	14.0
Pilots	Subtotal	26.42	2,254,194	310	0.85	1,943,798	261	20,348,413	-	-	-	69,335		10.3
Voltage Optimization	Voltage Optimization	1.00	215,996,316	45,134	1.00	215,996,316	45,134	3,239,944,743				428	Feeders	15.0
Voltage Optimization	Subtotal	1.00	215,996,316	45,134	1.00	215,996,316	45,134	3,239,944,743				428		15.0
Portfolio	Grand Total	1.05	1,985,103,241	325,144	0.87	1,724,332,392	286,903	17,846,688,584	0.17	0.02	287,024,518	15,722,172		

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	Incentives - Standard	13	288,119,133	46,709	5,016,363	-	-	(2,276,269)	0.82	0.82	0.78	235,996,042	38,516	3,912,763	-	-	(1,889,303)
Business	Business Instant Discounts	11	273,193,069	61,768	-	-	-	(3,730,745)	0.82	0.82	-	223,468,489	50,529	-	-	-	(3,052,337)
Business	Small Business - Private	12	213,520,949	52,468	442,344	24,338	(2,415,539)	(1,999,622)	0.97	0.97	0.97	207,503,321	50,894	429,074	23,607	(2,343,461)	(1,939,627)
Business	LED Streetlighting	12	79,967,787	64	-	-	-	-	0.85	0.81	-	68,131,157	52	-	-	-	-
Business	Industrial Systems	6	53,945,823	9,309	-	-	-	(12,032)	0.77	0.78	-	41,538,284	7,261	-	-	-	(9,265)
Business	Incentives - Custom	17	46,192,018	5,201	1,130	-	-	(1,282)	0.67	0.61	0.70	31,107,702	3,182	791	-	-	(897)
Business	Strategic Energy Management	5	33,582,105	-	-	-	-	-	1.00	-	-	33,582,105	-	-	-	-	-
Business	Non-residential New Construction	17	29,503,492	4,444	70,186	33,146	(308,895)	(51,890)	0.59	0.59	0.59	17,407,060	2,622	41,410	19,556	(182,838)	(30,615)
Business	RetroCommissioning	8	28,554,216	584	119,470	-	-	-	0.94	0.94	0.94	26,840,963	549	-	-	-	-
Business	Virtual Commissioning	7	18,548,812	1,673	-	-	-	-	1.00	1.00	-	18,548,812	1,673	-	-	-	-
Business	Small Business - Public	10	11,483,619	975	2,902	-	(19,231)	(47,978)	0.97	0.97	0.97	11,139,110	946	2,815	-	(18,654)	(46,539)
Business	Industrial Energy Management	5	3,945,821	95	-	-	-	-	1.00	1.00	-	3,945,821	95	-	-	-	-
Business	Facility Assessments	4	3,903,685	-	9,815	-	-	(2,066)	0.94	-	0.94	3,669,464	-	9,228	-	-	(1,942)
Residential	Lighting Discount	11	328,671,663	44,030	-	-	-	(6,849,097)	0.55	0.55	-	180,736,660	24,031	-	-	-	(3,722,641)
Residential	Appliance Rebates	10	42,916,723	8,028	3,343,508	180,778	-	-	0.84	0.87	0.99	35,928,201	7,004	3,301,626	113,890	-	-
Residential	Single-Family Assessment	10	15,276,021	2,042	-	3,880	(158,309)	(264,405)	0.85	0.85	-	12,919,141	1,737	-	4,035	(132,980)	(222,101)
Residential	Multi-Family Assessments	7	10,611,387	1,188	-	36,505	(182,943)	(45,306)	0.88	0.89	-	9,298,402	1,061	-	37,600	(150,542)	(38,510)
Residential	Fridge & Freezer Recycling	6	5,363,298	734	-	-	-	-	0.41	0.42	-	2,220,808	310	-	-	-	-
Residential	Residential HVAC	14	5,066,935	2,087	379,411	-	-	-	0.77	0.81	0.77	3,886,094	1,685	290,466	-	-	-
Residential	Residential Behavior	5	-	-	-	-	-	-	-	-	-	79,014,639	13,638	-	-	-	-
Income Eligible	Product Discounts - Lighting Discounts-IE	10	67,725,454	8,933	-	-	-	(1,303,763)	0.87	0.86	-	58,595,291	7,688	-	-	-	(1,117,289)
Income Eligible	Product Discounts - Appliance Rebates-IE	7	10,384,943	1,174	-	-	-	-	1.00	1.00	-	10,384,943	1,174	-	-	-	-
Income Eligible	Single-Family Retrofits - IHWAP	16	1,795,923	522	16,929	569	(3,268)	(15,622)	1.00	1.00	1.00	1,795,923	522	16,929	569	(3,268)	(15,622)
Income Eligible	Multi-Family Retrofits - IEMS	18	1,764,366	133	303,016	12,608	(46,660)	(7,019)	1.00	1.00	1.00	1,764,366	133	303,016	12,608	(46,660)	(7,019)
Income Eligible	Single-Family Retrofits - CBA	19	1,691,510	623	266,023	2,984	(504)	(11,121)	1.00	1.00	1.00	1,691,510	623	266,023	2,984	(504)	(11,121)
Income Eligible	Affordable Housing New Construction	13	1,669,264	200	-	-	-	-	1.00	1.00	-	1,669,264	200	-	-	-	-
Income Eligible	Public Housing Retrofits	9	1,186,871	92	-	-	-	(5,117)	1.00	1.00	-	1,186,871	92	-	-	-	(5,117)
Income Eligible	Multi-Family Retrofits - IHWAP	17	208,757	27	21,987	147	(735)	(3,255)	1.00	1.00	1.00	208,757	27	21,987	147	(735)	(3,255)
Third Party	Food Bank-LED Distribution	10	106,409,645	12,762	8,383	-	-	(2,045,435)	1.00	1.00	1.00	106,409,645	12,762	8,383	-	(2,045,435)	-
Third Party	UIC-ERC Income Eligible Kits	10	31,731,938	3,817	577,895	489,419	-	(459,472)	1.00	1.00	1.00	31,731,938	3,817	577,895	489,419	-	(459,472)
Third Party	Business Telecomm	10	10,094,176	1,142	-	-	-	-	0.67	0.67	-	6,763,098	765	-	-	-	-
Third Party	Public Buildings in Distressed Communities	15	10,067,863	2,703	-	-	-	-	0.97	0.97	-	9,765,827	2,622	-	-	-	-
Third Party	Business Grocery	10	9,536,289	1,204	-	-	-	(80,614)	0.97	0.97	0.97	9,250,200	1,168	89	-	-	(87,896)
Third Party	Small Business Kits	8	6,314,512	1,449	151,918	117,818	(90,911)	(80,914)	0.97	0.97	0.97	6,096,005	1,398	147,361	114,284	(88,184)	(78,039)
Third Party	Elementary Education Kits	9	5,072,484	600	32,399	61,667	(29,724)	(5,816)	0.96	0.96	1.00	4,890,958	576	32,399	61,667	(29,724)	(5,816)
Third Party	Agriculture	15	4,003,596	2,259	-	-	-	-	0.77	0.67	-	3,100,046	1,516	-	-	-	-
Third Party	Nonprofit Retrofits	13	3,357,628	653	-	-	(1,446)	(41,408)	0.97	0.97	-	3,256,899	633	-	-	(1,402)	(40,166)
Third Party	Manufactured Housing Retrofit	14	67,482	9	2,414	619	(972)	(437)	1.00	1.00	1.00	67,482	9	2,414	619	(972)	(437)
Plots	Building Operator Certification Training	10	2,187,735	295	-	-	-	-	0.80	0.80	-	1,750,188	236	-	-	-	-
Plots	Upstream Commercial Food Service Equipment	12	83,851	12	57	278	-	-	0.80	0.80	0.80	67,081	9	46	223	-	-
Plots	IE Senior Design Pilot	17	22,330	3	3,205	-	-	(302)	1.00	1.00	1.00	22,330	3	3,205	-	-	(302)
Plots	Retail Products Platform	14	-	-	-	-	-	-	-	-	-	96,923	12	-	-	-	-
Voltage Optimization	Voltage Optimization	15	215,996,316	45,134	-	-	-	-	1.00	1.00	-	215,996,316	45,134	-	-	-	-
Total		12	1,984,138,487	325,144	10,769,445	964,755	(3,259,802)	(19,348,668)	0.89	0.88	0.92	1,723,444,133	286,903	9,480,217	881,207	(2,999,189)	(14,628,443)

Source: Evaluation team analysis