

# ComEd Summary Impact Evaluation Report

**Energy Efficiency/Demand Response Plan:  
Program Year 2022 (CY2022)  
(1/1/2022-12/31/2022)**

**Prepared for:**

**ComEd**

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# 1. Introduction

This report presents the results of the impact evaluation of ComEd's Program Year 2022 (CY2022) 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. CY2022 covers January 1, 2022 through December 31, 2022.

In CY2022, ComEd's portfolio evaluation included 20 programs, including 7 Business, 8 Residential/Income Eligible (RES/IE), 3 Pilot programs, one Market Transformation program, and one cross-cutting program, Voltage Optimization, as listed in Table 1-1.

This summary report contains program savings that ComEd can claim for CY2022: including

- Savings from efficient measures, including direct efficiency kWh savings from non-fuel switching and fuel switching measures,
- Net electrification savings from increase in kWh consumption and decrease in gas consumption from fuel switching (kWh equivalent) that ComEd can claim toward its goal
- Reduction in water usage that produces secondary kWh savings from water supply and wastewater treatment,
- Gas savings in therms converted to kWh that ComEd can claim toward its goal,
- Electric heating penalties, wherever applicable.
- The portion of savings realized from the income eligible sector (non-fuel switching and fuel switching measures).

Process evaluation findings and results of net-to-gross research are presented in separate reports.

Four programs had carryover savings from measures sold or incented in CY2020 and CY2021 that were installed in CY2022. The programs are Midstream/Upstream, Small Business, Retail Online, and Product Distribution.

This report includes five programs that ComEd implemented jointly or coordinated with Nicor Gas Company, Peoples Gas Light and Coke Company (PGL) and North Shore Gas Company (NSG). This included Single-family Upgrades, Multi-family Upgrades, New Construction (Business/Public), Income Eligible New Construction, and Targeted Systems (Coordinated Retrocommissioning and Building Operator Certification projects with the gas utilities).

**Table 1-1. ComEd CY2022 Energy Efficiency Programs**

Sector	Program
Voltage Optimization	Voltage Optimization
<b>Business</b>	
Business	Assessments
Business	Behavior - Business/Public
Business	Incentives
Business	Midstream/Upstream
Business	New Construction - Business/Public
Business	Small Business
Business	Targeted Systems
<b>Residential (Res) &amp; Income Eligible (IE)</b>	
Res & IE	Behavior-Residential/IE
Res & IE	Contractor/Midstream Rebates
Res & IE	Multifamily Upgrades
Res & IE	Electric Home New Construction
Res & IE	New Construction IE
Res & IE	Product Distribution
Res & IE	Retail Online
Res & IE	Single Family Upgrades
<b>Pilots &amp; Market Transformation</b>	
Pilot	Upstream Commercial Food Service Equipment
Pilot	Heat Pump Water Heater
Pilot	VHSP as AC Replacement
Market Transformation	ENERGY STAR Retail Products Platform

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 CY2022 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 CY2022. This table includes primary kWh savings from efficient measures, legacy savings, electrification (fuel switch) savings capped at 5% per year of the applicable annual total savings (AATS), according to 220 ILCS 5/8-103B(b-27) of the Illinois Public Utilities Act. These electrification savings are in addition to the 10% cap of AATS that ComEd can claim from non-electricity energy savings (include gas savings converted to electricity) allowed under Section 8-103B(b-25). The table presents the applicable annual incremental goal achieved in CY2022. 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	1,581,972,681	219,604
Portfolio Gross Realization Rate	1.08	1.24
Verified Gross Savings - Direct†	1,700,832,365	271,736
Portfolio Net-to-Gross Ratio (NTG)	0.92	0.93
Verified Net Savings (excl. Electrification Savings)	1,565,939,616	254,027
Verified Net Savings (incl. Electrification Savings)	1,578,345,946	254,027
Verified IE Net Savings (excl. Electrification Savings)	259,260,808	33,588
Verified IE Net Savings (incl. Electrification Savings)	263,544,784	33,588
Legacy Savings‡	2,933,997,266	
Gas Savings Eligible for Claiming (Therms)	10,060,083	
Gas Savings Counted Toward Goal (Therms)	4,960,634	
Gas Savings Counted Toward Goal (kWh)§	145,396,174	
Electrification Savings (from Fuel Switch) Eligible for Claiming	12,406,329	
Electrification Savings (from Fuel Switch) Counted Toward Goal	12,406,329	
Total Net Savings (Electric-Direct + Gas Savings Counted + Electrification Savings Counted)	1,723,742,120	254,027
Historic Portfolio Total Savings (Electric + Gas Savings Counted + Electrification)#	6,359,514,308	
Grand Total Net Savings (Plus Legacy, Total Net Savings, Historic Savings)	11,017,253,694	254,027
Historic Incremental Expiring Savings*†	154,158,999	
Legacy Incremental Expiring Savings	210,032,331.00	
CPAS Statutory Goal†‡	10,981,532,624	
CPAS Achieved as Percent of Goal	100.3%	
Applicable Annual Incremental Goal (AAIG)†§	1,089,770,413	
Applicable Annual Total Savings (AAIG + Legacy Expiring + Historic Expiring Savings)‡§	1,453,961,743	
Applicable Annual Incremental Savings Achieved‡	1,359,550,790	
AAIG Achieved as Percent of Goal	124.8%	

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 the summary Table 1 excludes carryover gross savings from the verified gross savings.

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

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

† Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency savings from fuel switching measures but excludes the fuel switching savings), secondary kWh savings from wastewater treatment, and electric heating penalties.

‡ Legacy Savings are estimated by multiplying statutory 2022 CPAS Legacy Savings percent (3.5%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 83,828,493.

§ 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).

|| Electrification savings from fuel switching measures excluding direct efficiency savings. Calculated from net electric savings from increase in kWh consumption and decrease in gas consumption from fuel switching (kWh equivalent).

# Historical savings go back to CY2018.

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

†‡ Estimated by multiplying statutory 2022 CPAS Goal percent (13.1%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 83,828,493.

†§ Applicable Annual Incremental Goal (AAIG) is equal to CPAS Yn Goal - CPAS Yn-1 Goal

‡§ Applicable Annual Total Savings (AATS) is the savings needed to achieve 100% AAIG (it is sum of AAIG, Legacy Expiring Savings and Historic Expiring Savings).

‡|| Estimated as new incremental savings from 2022 after *offsetting incremental expiring savings in 2022*.

Source: ComEd tracking data and evaluation team analysis\*

Table 2-2 summarizes the incremental energy savings (kWh direct) and demand savings achieved in CY2022.

**Table 2-2. Total Annual Incremental Savings**

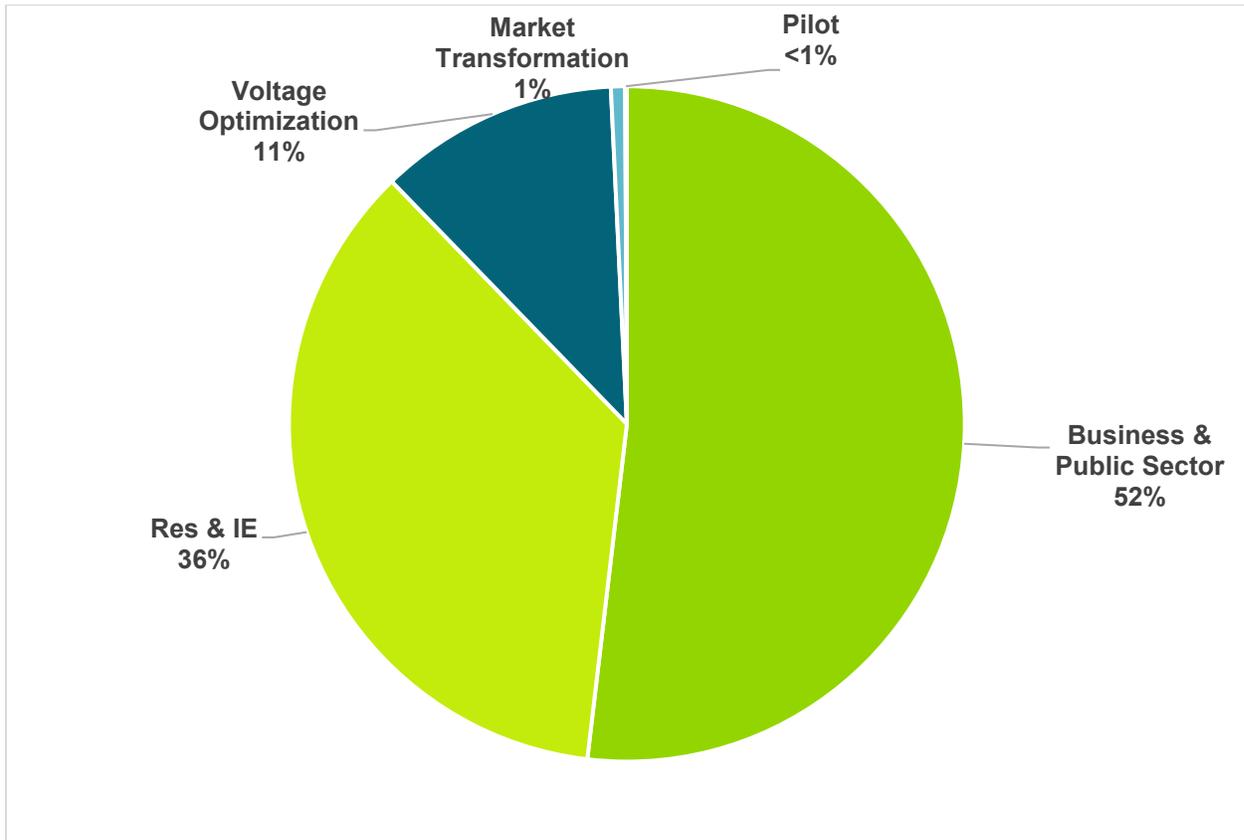
Savings Type	Portfolio	Ex Ante Gross Savings	Verified Gross Realization Rate	Verified Gross Savings	NTG*	Verified Net Savings
Energy (kWh)	Business & Public Sector	889,517,278	1.04	926,640,310	0.88	812,481,895
Energy (kWh)	Res & IE	509,200,532	1.14	582,017,081	0.96	561,600,765
Energy (kWh)	Pilot	1,297,451	1.23	1,590,091	0.80	1,272,073
Energy (kWh)	Market Transformation	2,878,616	3.68	10,602,500	1.00	10,602,500
Energy (kWh)	Voltage Optimization	179,078,803	1.01	179,982,384	1.00	179,982,384
Energy (kWh)	Total	1,581,972,681	1.08	1,700,832,365	0.92	1,565,939,616
Peak Demand (kW)	Business & Public Sector	142,005	1.07	152,002	0.88	133,195
Peak Demand (kW)	Res & IE	41,822	1.97	82,181	1.01	83,320
Peak Demand (kW)	Pilot	108	1.86	201	0.80	161
Peak Demand (kW)	Market Transformation	0		1,572	1.00	1,572
Peak Demand (kW)	Voltage Optimization	35,669	1.00	35,780	1.00	35,780
Peak Demand (kW)	Total	219,604	1.24	271,736	0.93	254,027

\* 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.

Figure 2-1 provides the percent net electric (kWh direct) savings by the sectors. Further detail on the savings by program are shown in subsequent sections.

**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. The CPAS savings are presented in tables at the end of this section.

### 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.<sup>1</sup> 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 total savings (AATS) as defined in paragraph (7.5) of subsection (g) of this Section be

<sup>1</sup> For 2022, 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 CY2022, ComEd’s savings target (AATS) is 1,453,962 MWh<sup>2</sup> and so ComEd can claim up to 145,396 MWh in gas savings.<sup>3</sup>

The Clean Energy Jobs Act (CEJA) specifies that ComEd shall prioritize other fuels (which in CY2022 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 the tables at the end of this section.

## 2.2.2 Electrification Savings (Fuel Switching)

CEJA authorizes claimed savings from measures that electrify space heating, water heating, cooling, drying, cooking, industrial processes, and other building and industrial end uses that would otherwise be served by combustion of fossil fuel at the premises, provided that the electrification measures reduce total consumption on the premises. In CY2022, the key electrification measures included a family of heat pumps, heat pump water heaters, and C&I Forklifts. According to Section 8-103B(b-27) of the Illinois Public Utilities Act, “In no event shall electrification savings counted toward each year’s applicable annual total savings requirement, as defined in paragraph (7.5) of subsection (g) of this Section, be greater than 5% per year for each year from 2022 through 2025.” For CY2022, ComEd’s savings target (AATS) is 1,453,962 MWh<sup>4</sup> and so ComEd can claim up to 72,698 MWh in energy efficient electrification savings.

To calculate the EE electrification savings eligible for claiming, the evaluation team used a data set containing all measure-level electrification 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 electrification savings from the top of the data set until the cumulative total reached the maximum ComEd can claim, with at least 25% of savings coming from electrification of end uses in income eligible housing. Only those savings above that point are included in the tables at the end of this section.

## 2.2.3 Legacy Savings

CEJA 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 2,933,997 MWh toward ComEd verified CPAS in CY2022.<sup>5</sup>

## 2.2.4 Historical Savings

CEJA requires that historical savings be included in CPAS. This means that the CPAS tables shown in this report include savings from measures installed in 2018 through 2021 that have not

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<sup>2</sup> ComEd-CY2022-Q3-Statewide-Quarterly-Report.

<sup>3</sup> CEJA Statute: 220 ILCS 5/8-103B(g)(7.5). Section 8-103B. The 2022 applicable annual total savings is estimated as the summary of applicable annual incremental goal which is the difference in the 2022 CPAS Statutory Goal (10,981,533 MWh) and the 2021 CPAS Statutory Goal (9,891,762 MWh), plus the expiring legacy savings and expiring historic savings; ComEd-CY2022-Q3-Statewide-Quarterly-Report.

<sup>4</sup> ComEd-CY2022-Q4-Statewide-Quarterly-Report

<sup>5</sup> For CY2022, legacy savings are estimated by multiplying statutory 2022 CPAS Legacy Savings percent (3.5%) by ComEd Baseline - 2014-2016 Average Annual Sales Less Exempt Customers MWh value of 83,828,493.

reached the end of their EUL. It also means that the CPAS tables account for expiring savings. The evaluation applied the historical contribution to CPAS of 6,359,514 MWh (electric 5,951,093 MWh plus counted gas converted of 408,421 MWh) toward ComEd verified total CPAS in CY2022.

### 2.2.5 Expiring Savings

CEJA 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 CY2022 is estimated as CY2022 incremental expiring savings plus the legacy incremental expiring savings in CY2022 and historical expiring savings since CY2018, given a value of 364,191 MWh (in CY2022, there were no incremental expiring savings, but from legacy incremental expiring savings of 210,032 MWh, and historical incremental expiring savings<sup>6</sup> of 154,159 MWh).

### 2.2.6 Total Savings

As shown in the tables below, ComEd's CY2022 energy efficiency programs achieved total electric CPAS of 1,565,940 MWh. They achieved 10,060,083 therms of gas savings, which converts to 294,861 MWh.<sup>7</sup> From those gas savings, ComEd can claim 145,396 MWh toward their annual incremental goal. ComEd achieved 12,406 MWh from EE electrification measures. Since ComEd did not achieve 72,698 MWh from which they can claim toward their annual incremental goal, evaluation counted all the 12,406 MWh towards ComEd goal. Adding the current year electric savings to the allowable converted gas savings and electrification savings gives 1,723,742 MWh total savings.

Adding the legacy savings of 2,933,997 MWh and historical savings since CY2018, the grand total CY2022 CPAS that ComEd can claim is 11,017,254 MWh (which is 100.3% of the CPAS goal of 10,981,533 MWh).

### 2.2.7 Applicable Annual Incremental Goal (AAIG)

Per CEJA,<sup>8</sup> the AAIG is estimated as the difference between the statutory CPAS goal for current year (CY2022) and the CPAS goal for the immediately preceding year (CY2021). We calculate progress toward AAIG that ComEd achieved in CY2022 as the difference in verified CY2022 CPAS and the incremental expiring savings (both expiring legacy savings and post 2017 expiring programmatic savings).

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

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

<sup>6</sup> Historic incremental expiring savings are equal to Historic CPAS  $Y_{n-1}$  – Historic CPAS  $Y_n$ .

<sup>7</sup> 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).

<sup>8</sup> CEJA Statute: 220 ILCS 5/8-103B(g)(7.5). Section 8-103B.

### Equation 2-3. Applicable Annual Incremental Goal Achieved

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

In CY2022, the AAIG is estimated as 1,089,770 MWh. The estimated progress toward goal that ComEd achieved is 1,359,551 MWh, which is the difference between the CPAS that ComEd can claim against their goal (rounded 1,723,742 MWh) and the grand total incremental expiring savings (364,191 MWh). The AAIG achieved as percent of goal (1,089,770 MWh) is 124.8%.

### 2.2.8 Applicable Annual Total Savings (AATS)

Per CEJA, the AATS is estimated as the total amount of new annual savings that the utility must achieve in any given year to achieve the AAIG. This is equal to the AAIG plus the total new annual savings that are required to replace savings that expired in or at the end of the previous year (expiring legacy savings and expiring historic savings). For CY2022, ComEd's savings target (AATS) is 1,453,962 MWh.

### Equation 2-4. Applicable Annual Incremental Goal (AATS)

$$\text{AATS} = \text{AAIG} + \text{Legacy Expiring Savings} + \text{Historic Expiring Savings}$$

Table 2-3. CPAS by Program – Electric Direct

Sector	Program	WAML *	Verified Gross Savings (kWh) NTG†	Lifetime Net Savings (kWh)‡	CPAS Verified Net kWh Savings									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	
Business & Public Sector	Incentives	14	265,103,071	1	3,151,873,525	0	0	0	0	230,272,621	230,240,227	229,376,344	227,798,618	226,352,583
Business & Public Sector	Small Business	13	259,368,247	1	3,004,333,958	0	0	0	0	251,591,666	251,542,199	250,176,766	243,036,118	231,359,810
Business & Public Sector	Midstream/Upstream	12	222,354,690	1	1,810,104,179	0	0	0	0	180,047,539	180,047,539	180,047,539	180,047,539	133,447,600
Business & Public Sector	Targeted Systems	7	106,079,922	1	616,666,397	0	0	0	0	90,144,532	90,144,532	90,144,532	57,922,234	56,970,346
Business & Public Sector	Behavior Bus/Pub	7	47,468,176	1	322,308,914	0	0	0	0	46,044,131	46,044,131	46,044,131	46,044,131	46,044,131
Business & Public Sector	New Construction - Bus/Pub	17	22,410,491	0	187,172,422	0	0	0	0	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036
Business & Public Sector	Assessments	4	3,855,713	1	15,471,718	0	0	0	0	3,624,370	3,624,370	3,337,032	2,944,961	1,938,253
Res & IE	Retail/Online*	10	351,948,577	1	1,867,253,824	0	0	0	0	227,020,791	227,020,791	227,020,791	227,020,791	158,367,197
Res & IE	Product Distribution	10	180,428,663	1	1,719,686,916	0	0	0	0	179,037,503	179,037,503	176,934,808	176,934,808	176,825,960
Res & IE	Multifamily Upgrades	10	26,400,181	1	249,057,324	0	0	0	0	25,517,724	24,903,416	23,680,158	23,578,331	23,363,328
Res & IE	Single-Family Upgrades	12	17,055,718	1	151,210,528	0	0	0	0	15,364,723	15,318,833	15,318,833	15,196,980	12,661,892
Res & IE	Contractor / Midstream Rebates	16	4,491,603	1	48,880,253	0	0	0	0	3,599,994	3,599,994	3,599,994	3,580,619	3,580,619
Res & IE	New Construction - IE	15	1,606,864	1	23,522,619	0	0	0	0	1,606,864	1,606,864	1,606,864	1,606,864	1,606,864
Res & IE	Electric Home New Construction	15	85,475	1	1,002,161	0	0	0	0	68,380	68,380	68,380	68,380	68,380
Res & IE	Behavior - Res/IE	10	0	1	355,391,073	0	0	0	0	109,384,787	76,617,480	53,807,081	37,229,207	26,318,673
Pilot	Upstream Commercial Food Service Equipment	12	1,543,903	1	15,308,260	0	0	0	0	1,235,122	1,235,122	1,235,122	1,235,122	1,235,122
Pilot	VHSP as AC Replacement	16	32,247	1	297,925	0	0	0	0	25,798	25,798	25,798	25,798	25,798
Pilot	Heat Pump Water Heater Pilot	15	13,941	1	167,297	0	0	0	0	11,153	11,153	11,153	11,153	11,153
Market Transformation	ENERGY STAR Retail Products Platform	15	10,602,500	1	159,282,455	0	0	0	0	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500
Voltage Optimization	Voltage Optimization	15	179,982,384	1	2,699,735,756	0	0	0	0	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384
<b>CY2022 Portfolio Total Electric Contribution to CPAS</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,565,939,616</b>	<b>1,532,430,250</b>	<b>1,503,777,245</b>	<b>1,445,623,573</b>	<b>1,301,519,628</b>
<b>Historic Portfolio Total Electric Contribution to CPAS§</b>						<b>1,765,460,187</b>	<b>3,230,285,186</b>	<b>4,840,365,070</b>	<b>6,105,105,588</b>	<b>5,951,092,681</b>	<b>5,770,669,795</b>	<b>5,321,661,622</b>	<b>4,950,573,287</b>	<b>4,691,487,505</b>
<b>Portfolio Total Electric CPAS</b>						<b>1,765,460,187</b>	<b>3,230,285,186</b>	<b>4,840,365,070</b>	<b>6,105,105,588</b>	<b>7,517,032,298</b>	<b>7,303,100,045</b>	<b>6,825,438,867</b>	<b>6,396,196,860</b>	<b>5,993,007,134</b>
<b>CY2022 Portfolio Incremental Expiring Electric Savings  </b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33,509,366</b>	<b>28,653,005</b>	<b>58,153,671</b>	<b>144,103,945</b>
<b>Historic Portfolio Incremental Expiring Electric Savings#</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154,012,907</b>	<b>180,422,886</b>	<b>449,008,172</b>	<b>371,088,336</b>	<b>259,085,781</b>
<b>Portfolio Grand Total Incremental Expiring Electric Savings*†</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154,012,907</b>	<b>213,932,253</b>	<b>477,661,178</b>	<b>429,242,007</b>	<b>403,189,726</b>

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business & Public Sector	Incentives	224,518,869	221,090,132	217,600,980	216,085,065	215,516,901	203,058,603	162,855,081	134,296,163	117,523,302	105,307,668	31,352,006	30,988,612
Business & Public Sector	Small Business	225,614,624	223,087,509	219,771,180	217,548,031	212,555,644	187,848,424	161,068,897	126,121,371	112,716,841	90,286,257	1,724	1,724
Business & Public Sector	Midstream/Upstream	127,652,843	125,429,413	101,549,950	101,538,282	101,505,518	88,394,647	79,177,737	79,133,565	78,727,838	73,356,628	0	0
Business & Public Sector	Targeted Systems	56,646,406	56,646,406	38,475,824	22,890,910	11,266,253	11,226,250	11,226,250	11,226,250	2,803,871	2,803,871	1,376,847	971,224
Business & Public Sector	Behavior Bus/Pub	46,044,131	46,044,131	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036
Business & Public Sector	Assessments	2,732	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	154,101,949	152,806,715	134,315,077	127,838,621	115,954,522	45,127,623	18,032,755	14,479,027	13,660,300	12,851,140	3,134,660	2,931,808
Res & IE	Product Distribution	176,825,960	173,146,756	140,767,213	137,276,051	137,276,051	6,852,180	6,852,180	6,852,180	6,852,180	6,852,180	6,272,681	6,272,681
Res & IE	Multifamily Upgrades	19,972,874	15,089,242	13,869,146	13,863,001	13,862,426	6,849,403	6,705,662	6,659,035	6,658,811	6,658,811	3,778,003	3,667,394
Res & IE	Single-Family Upgrades	12,500,585	12,290,738	10,505,318	10,137,542	10,028,674	2,886,632	2,240,535	2,220,274	2,214,287	2,214,287	2,171,312	2,161,428
Res & IE	Contractor / Midstream Rebates	3,580,619	2,850,989	2,832,509	2,816,121	2,816,121	2,815,956	2,409,308	2,409,308	2,409,308	2,409,308	1,712,212	821,722
Res & IE	New Construction - IE	1,606,864	1,606,864	1,606,864	1,576,241	1,576,241	1,554,294	1,460,738	1,454,529	1,454,529	587,999	206,276	206,276
Res & IE	Electric Home New Construction	68,380	68,380	68,380	68,380	68,380	55,933	49,851	47,843	45,134	42,839	19,470	14,667
Res & IE	Behavior - Res/IE	18,524,078	13,192,976	9,271,794	6,475,833	4,569,163	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	1,235,031	1,235,031	1,235,031	1,235,031	1,225,289	1,219,223	1,219,223	78,252	78,252	78,252	58,807	58,807
Pilot	VHSP as AC Replacement	25,798	14,314	14,314	14,314	14,314	14,314	14,314	14,314	14,314	14,314	14,314	0
Pilot	Heat Pump Water Heater Pilot	11,153	11,153	11,153	11,153	11,153	11,153	11,153	11,153	11,153	11,153	0	0
Market Transformation	ENERGY STAR Retail Products Platform	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	3,615,821	3,615,821	3,615,821
Voltage Optimization	Voltage Optimization	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	0	0
<b>CY2022 Portfolio Total Electric Contribution to CPAS</b>		<b>1,270,274,814</b>	<b>1,245,952,668</b>	<b>1,093,236,652</b>	<b>1,060,716,495</b>	<b>1,029,588,569</b>	<b>759,256,553</b>	<b>654,665,605</b>	<b>586,345,183</b>	<b>546,512,038</b>	<b>497,829,947</b>	<b>64,471,168</b>	<b>62,469,201</b>
<b>Historic Portfolio Total Electric Contribution to CPAS</b>		<b>4,419,825,969</b>	<b>3,865,829,752</b>	<b>3,616,592,174</b>	<b>3,044,559,358</b>	<b>2,488,771,522</b>	<b>2,164,690,167</b>	<b>1,786,014,162</b>	<b>1,288,664,109</b>	<b>760,250,367</b>	<b>184,802,786</b>	<b>159,836,021</b>	<b>118,941,534</b>
<b>Portfolio Total Electric CPAS</b>		<b>5,690,100,784</b>	<b>5,111,782,419</b>	<b>4,709,828,826</b>	<b>4,105,275,854</b>	<b>3,518,360,090</b>	<b>2,923,946,720</b>	<b>2,440,679,767</b>	<b>1,875,009,291</b>	<b>1,306,762,404</b>	<b>682,632,733</b>	<b>224,307,189</b>	<b>181,410,735</b>
<b>CY2022 Portfolio Incremental Expiring Electric Savings</b>		<b>31,244,814</b>	<b>24,322,146</b>	<b>152,716,016</b>	<b>32,520,156</b>	<b>31,127,927</b>	<b>270,332,016</b>	<b>104,590,948</b>	<b>68,320,422</b>	<b>39,833,145</b>	<b>48,682,091</b>	<b>433,358,779</b>	<b>2,001,967</b>
<b>Historic Portfolio Incremental Expiring Electric Savings</b>		<b>271,661,536</b>	<b>553,996,218</b>	<b>249,237,578</b>	<b>572,032,816</b>	<b>555,787,837</b>	<b>324,081,355</b>	<b>378,676,005</b>	<b>497,350,053</b>	<b>528,413,742</b>	<b>575,447,580</b>	<b>24,966,765</b>	<b>40,894,487</b>
<b>Portfolio Grand Total Incremental Expiring Electric Savings</b>		<b>302,906,350</b>	<b>578,318,364</b>	<b>401,953,594</b>	<b>604,552,972</b>	<b>586,915,763</b>	<b>594,413,371</b>	<b>483,266,953</b>	<b>565,670,475</b>	<b>568,246,887</b>	<b>624,129,671</b>	<b>458,325,544</b>	<b>42,896,454</b>

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business & Public Sector	Incentives	30,567,227	30,546,434	30,546,434	10,863,934	10,863,934	10,863,934	1,816,569	1,571,284	0	0	0	0
Business & Public Sector	Small Business	1,724	1,724	1,724	0	0	0	0	0	0	0	0	0
Business & Public Sector	Midstream/Upstream	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Targeted Systems	808,054	644,883	644,883	560,679	560,679	560,679	0	0	0	0	0	0
Business & Public Sector	Behavior Bus/Pub	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	4,302,814	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Assessments	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	1,995,422	1,995,422	1,577,377	523	523	0	0	0	0	0	0	0
Res & IE	Product Distribution	6,272,681	6,272,681	6,272,681	0	0	0	0	0	0	0	0	0
Res & IE	Multifamily Upgrades	3,470,523	3,455,105	3,454,933	0	0	0	0	0	0	0	0	0
Res & IE	Single-Family Upgrades	2,158,283	2,001,354	1,617,023	499	499	0	0	0	0	0	0	0
Res & IE	Contractor / Midstream Rebates	821,722	35,957	35,957	28,383	28,383	28,383	28,383	28,383	0	0	0	0
Res & IE	New Construction - IE	206,276	206,276	116,338	56,028	5,664	0	0	0	0	0	0	0
Res & IE	Electric Home New Construction	14,667	14,667	13,290	0	0	0	0	0	0	0	0	0
Res & IE	Behavior - Res/IE	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	58,807	58,807	58,807	0	0	0	0	0	0	0	0	0
Pilot	VHSP as AC Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Heat Pump Water Heater Pilot	0	0	0	0	0	0	0	0	0	0	0	0
Market Transformation	ENERGY STAR Retail Products Platform	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	Voltage Optimization	0	0	0	0	0	0	0	0	0	0	0	0
<b>CY2022 Portfolio Total Electric Contribution to CPAS</b>		<b>50,678,200</b>	<b>45,233,310</b>	<b>44,339,446</b>	<b>11,510,046</b>	<b>11,459,682</b>	<b>11,452,997</b>	<b>1,844,952</b>	<b>1,599,667</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Total Electric Contribution to CPAS§</b>		<b>107,291,280</b>	<b>98,084,312</b>	<b>33,164,784</b>	<b>22,757,173</b>	<b>9,676,112</b>	<b>2,772,616</b>	<b>2,025,203</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>
<b>Portfolio Total Electric CPAS</b>		<b>157,969,480</b>	<b>143,317,622</b>	<b>77,504,230</b>	<b>34,267,219</b>	<b>21,135,794</b>	<b>14,225,612</b>	<b>3,870,155</b>	<b>2,043,637</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>
<b>CY2022 Portfolio Incremental Expiring Electric Savings  </b>		<b>11,791,001</b>	<b>5,444,891</b>	<b>893,863</b>	<b>32,829,400</b>	<b>50,364</b>	<b>6,685</b>	<b>9,608,045</b>	<b>245,285</b>	<b>1,599,667</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Incremental Expiring Electric Savings#</b>		<b>11,650,254</b>	<b>9,206,967</b>	<b>64,919,529</b>	<b>10,407,611</b>	<b>13,081,061</b>	<b>6,903,496</b>	<b>747,412</b>	<b>1,581,233</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Grand Total Incremental Expiring Electric Savings*†</b>		<b>23,441,255</b>	<b>14,651,858</b>	<b>65,813,392</b>	<b>43,237,011</b>	<b>13,131,425</b>	<b>6,910,182</b>	<b>10,355,457</b>	<b>1,826,518</b>	<b>1,599,667</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: Verified gross savings include carryover savings, which is different from the program level reports where carryover savings are excluded from Table 1. This table is Electric Energy Savings - Direct which includes primary kWh savings from efficient measures (includes efficiency savings from fuel switching measures but excludes the fuel switching savings), secondary kWh savings from wastewater treatment, and electric heating penalties.

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

† The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>.

‡ 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	Verified Gross		Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings									
			Savings (Therms)	NTG*		2018	2019	2020	2021	2022	2023	2024	2025	2026	
Business & Public Sector	Incentives	15	1,612,696	1	21,652,549	0	0	0	0	1,436,412	1,436,412	1,436,412	1,436,412	1,436,412	
Business & Public Sector	Small Business	10	838,345	1	8,053,222	0	0	0	0	818,107	818,107	800,727	800,727	800,727	
Business & Public Sector	Targeted Systems	9	219,628	1	1,790,600	0	0	0	0	207,423	207,423	207,423	207,423	200,618	
Business & Public Sector	New Construction - Bus/Pub	17	8,382	0	70,008	0	0	0	0	4,023	4,023	4,023	4,023	4,023	
Business & Public Sector	Assessments	5	449	1	2,005	0	0	0	0	422	422	422	422	317	
Business & Public Sector	Behavior Bus/Pub		0		0	0	0	0	0	0	0	0	0	0	
Res & IE	Retail/Online*	12	3,978,038	1	47,997,740	0	0	0	0	3,960,321	3,960,321	3,960,321	3,960,321	3,960,321	
Res & IE	Single-Family Upgrades	18	1,230,018	1	17,971,147	0	0	0	0	1,217,130	1,176,205	1,176,205	1,105,993	1,106,074	
Res & IE	Multifamily Upgrades	14	1,195,630	1	14,888,614	0	0	0	0	1,193,276	1,182,023	1,161,753	1,112,779	1,112,779	
Res & IE	Product Distribution	16	1,058,182	1	16,770,571	0	0	0	0	1,058,182	1,058,182	973,797	973,797	973,797	
Res & IE	Contractor / Midstream Rebates	11	133,986	1	1,354,165	0	0	0	0	120,516	120,516	120,516	120,516	120,516	
Res & IE	New Construction - IE	15	44,278	1	684,539	0	0	0	0	44,278	44,278	44,278	44,278	44,278	
Res & IE	Behavior - Res/IE		0		0	0	0	0	0	0	0	0	0	0	
Res & IE	Electric Home New Construction		0		0	0	0	0	0	0	0	0	0	0	
Pilot	Upstream Commercial Food Service Equipment		0		0	0	0	0	0	0	0	0	0	0	
Pilot	Heat Pump Water Heater Pilot	15	-9	1	-104	0	0	0	0	-7	-7	-7	-7	-7	
Market Transformation	ENERGY STAR Retail Products Platform		0		0	0	0	0	0	0	0	0	0	0	
Voltage Optimization	Voltage Optimization		0		0	0	0	0	0	0	0	0	0	0	
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>			<b>10,319,624</b>	<b>1</b>	<b>131,235,057</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,060,083</b>	<b>10,007,905</b>	<b>9,885,871</b>	<b>9,766,684</b>	<b>9,759,855</b>	
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)‡</b>			<b>302,468,176</b>	<b>1</b>	<b>3,846,499,519</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>294,861,028</b>	<b>293,331,683</b>	<b>289,754,867</b>	<b>286,261,507</b>	<b>286,061,351</b>	
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§</b>						<b>216,877,650</b>	<b>387,368,187</b>	<b>664,862,938</b>	<b>988,871,000</b>	<b>985,755,043</b>	<b>978,571,583</b>	<b>972,221,380</b>	<b>960,384,310</b>	<b>952,228,470</b>	
<b>Portfolio Total Gas CPAS (kWh Equivalent)</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,115,957</b>	<b>7,183,460</b>	<b>6,350,203</b>	<b>11,837,070</b>	<b>8,155,840</b>	
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,178</b>	<b>122,034</b>	<b>119,187</b>	<b>6,829</b>	
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)  </b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,529,345</b>	<b>3,576,816</b>	<b>3,493,359</b>	<b>200,156</b>	
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#</b>						<b>216,877,650</b>	<b>387,368,187</b>	<b>664,862,938</b>	<b>988,871,000</b>	<b>1,280,616,071</b>	<b>1,271,903,265</b>	<b>1,261,976,247</b>	<b>1,246,645,818</b>	<b>1,238,289,821</b>	
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,115,957</b>	<b>8,712,805</b>	<b>9,927,019</b>	<b>15,330,429</b>	<b>8,355,996</b>	

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business & Public Sector	Incentives	1,436,399	1,436,399	1,436,399	1,436,399	1,436,399	1,405,590	1,405,570	1,405,570	1,405,570	1,405,570	52,126	52,126
Business & Public Sector	Small Business	771,489	771,489	771,489	771,489	771,489	157,382	0	0	0	0	0	0
Business & Public Sector	Targeted Systems	200,618	200,618	199,128	122,341	9,397	9,397	9,397	9,397	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023
Business & Public Sector	Assessments	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Behavior Bus/Pub	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	3,960,321	3,960,321	3,960,321	3,960,321	3,960,321	3,960,321	512,767	512,767	512,767	482,651	482,651	482,651
Res & IE	Single-Family Upgrades	1,094,212	1,072,256	1,072,256	1,069,040	1,054,991	806,973	732,826	703,667	665,833	665,833	647,200	642,587
Res & IE	Multifamily Upgrades	1,088,485	800,606	800,785	800,788	800,789	747,213	701,460	630,916	629,769	629,673	330,151	291,343
Res & IE	Product Distribution	973,797	973,797	973,797	973,797	973,797	689,437	689,437	689,437	689,437	689,437	683,330	683,330
Res & IE	Contractor / Midstream Rebates	120,516	120,524	120,524	120,524	120,524	120,524	3,161	3,161	3,161	3,161	3,161	3,161
Res & IE	New Construction - IE	44,278	44,278	44,278	44,278	42,969	33,601	31,462	31,462	31,231	31,157	17,641	17,009
Res & IE	Behavior - Res/IE	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Electric Home New Construction	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Heat Pump Water Heater Pilot	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	0	0
Market Transformation	ENERGY STAR Retail Products Platform	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	Voltage Optimization	0	0	0	0	0	0	0	0	0	0	0	0
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>		<b>9,694,131</b>	<b>9,384,304</b>	<b>9,382,992</b>	<b>9,302,993</b>	<b>9,174,692</b>	<b>7,934,454</b>	<b>4,090,095</b>	<b>3,990,391</b>	<b>3,941,783</b>	<b>3,911,497</b>	<b>2,220,283</b>	<b>2,176,230</b>
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†</b>		<b>284,134,984</b>	<b>275,053,939</b>	<b>275,015,497</b>	<b>272,670,725</b>	<b>268,910,211</b>	<b>232,558,839</b>	<b>119,880,683</b>	<b>116,958,361</b>	<b>115,533,664</b>	<b>114,645,980</b>	<b>65,076,482</b>	<b>63,785,290</b>
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§</b>		<b>946,753,471</b>	<b>863,519,147</b>	<b>828,636,302</b>	<b>674,948,068</b>	<b>544,897,147</b>	<b>368,127,998</b>	<b>304,900,313</b>	<b>281,614,652</b>	<b>156,525,937</b>	<b>85,854,005</b>	<b>84,303,044</b>	<b>79,075,629</b>
<b>Portfolio Total Gas CPAS (kWh Equivalent)</b>		<b>5,474,999</b>	<b>83,234,324</b>	<b>34,882,846</b>	<b>153,688,234</b>	<b>130,050,921</b>	<b>176,769,149</b>	<b>63,227,685</b>	<b>23,285,661</b>	<b>125,088,715</b>	<b>70,671,932</b>	<b>1,550,961</b>	<b>5,227,415</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)</b>		<b>65,724</b>	<b>309,828</b>	<b>1,312</b>	<b>79,999</b>	<b>128,301</b>	<b>1,240,238</b>	<b>3,844,359</b>	<b>99,704</b>	<b>48,608</b>	<b>30,286</b>	<b>1,691,215</b>	<b>44,053</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)  </b>		<b>1,926,367</b>	<b>9,081,046</b>	<b>38,441</b>	<b>2,344,773</b>	<b>3,760,513</b>	<b>36,351,373</b>	<b>112,678,156</b>	<b>2,922,322</b>	<b>1,424,697</b>	<b>887,684</b>	<b>49,569,498</b>	<b>1,291,192</b>
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#</b>		<b>1,230,888,455</b>	<b>1,138,573,086</b>	<b>1,103,651,799</b>	<b>947,618,792</b>	<b>813,807,358</b>	<b>600,686,837</b>	<b>424,780,996</b>	<b>398,573,013</b>	<b>272,059,601</b>	<b>200,499,985</b>	<b>149,379,526</b>	<b>142,860,919</b>
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†</b>		<b>7,401,366</b>	<b>92,315,369</b>	<b>34,921,287</b>	<b>156,033,007</b>	<b>133,811,434</b>	<b>213,120,521</b>	<b>175,905,841</b>	<b>26,207,983</b>	<b>126,513,412</b>	<b>71,559,615</b>	<b>51,120,459</b>	<b>6,518,607</b>

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business & Public Sector	Incentives	52,126	52,126	52,126	0	0	0	0	0	0	0	0	0
Business & Public Sector	Small Business	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Targeted Systems	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	1,609	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Assessments	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Behavior Bus/Pub	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	482,651	482,651	482,651	0	0	0	0	0	0	0	0	0
Res & IE	Single-Family Upgrades	642,587	642,587	642,587	6,996	6,996	6,996	6,996	6,996	0	0	0	0
Res & IE	Multifamily Upgrades	291,343	291,343	291,343	0	0	0	0	0	0	0	0	0
Res & IE	Product Distribution	683,330	683,330	683,330	0	0	0	0	0	0	0	0	0
Res & IE	Contractor / Midstream Rebates	3,161	3,161	3,161	0	0	0	0	0	0	0	0	0
Res & IE	New Construction - IE	17,009	17,009	10,591	3,909	991	0	0	0	0	0	0	0
Res & IE	Behavior - Res/IE	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Electric Home New Construction	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Heat Pump Water Heater Pilot	0	0	0	0	0	0	0	0	0	0	0	0
Market Transformation	ENERGY STAR Retail Products Platform	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	Voltage Optimization	0	0	0	0	0	0	0	0	0	0	0	0
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>		<b>2,173,816</b>	<b>2,172,206</b>	<b>2,165,788</b>	<b>10,905</b>	<b>7,986</b>	<b>6,996</b>	<b>6,996</b>	<b>6,996</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†</b>		<b>63,714,533</b>	<b>63,667,362</b>	<b>63,479,246</b>	<b>319,622</b>	<b>234,078</b>	<b>205,045</b>	<b>205,045</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent)§</b>		<b>65,234,279</b>	<b>54,812,890</b>	<b>16,768,909</b>	<b>16,510,558</b>	<b>10,180,412</b>	<b>7,198,910</b>	<b>4,284,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Total Gas CPAS (kWh Equivalent)</b>		<b>13,841,350</b>	<b>10,421,390</b>	<b>38,043,981</b>	<b>258,351</b>	<b>6,330,146</b>	<b>2,981,502</b>	<b>2,914,303</b>	<b>4,284,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)</b>		<b>2,414</b>	<b>1,609</b>	<b>6,418</b>	<b>2,154,883</b>	<b>2,919</b>	<b>991</b>	<b>0</b>	<b>0</b>	<b>6,996</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)  </b>		<b>70,757</b>	<b>47,171</b>	<b>188,116</b>	<b>63,159,624</b>	<b>85,544</b>	<b>29,033</b>	<b>0</b>	<b>0</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent)#</b>		<b>128,948,812</b>	<b>118,480,252</b>	<b>80,248,155</b>	<b>16,830,180</b>	<b>10,414,490</b>	<b>7,403,954</b>	<b>4,489,652</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)*†</b>		<b>13,912,107</b>	<b>10,468,561</b>	<b>38,232,097</b>	<b>63,417,975</b>	<b>6,415,690</b>	<b>3,010,535</b>	<b>2,914,303</b>	<b>4,284,607</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here:

<https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>.

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

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

§ Historic savings go back to CY2018. || Incremental expiring savings are equal to CPAS Yn-1 - CPAS Yn.

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

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

Source: Evaluation team analysis

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

Sector	Verified Gross Lifetime Net Savings		CPAS Verified Net Therms Savings									
	Savings (Therms)	(Therms)	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Income Eligible Gas (Therms)	4,886,809	67,414,347	0	0	0	0	4,886,823	4,856,981	4,754,290	4,635,104	4,635,185	
All Other Gas (Therms)	80,688	1,476,241	0	0	0	0	73,811	73,811	73,811	73,811	73,811	
Income Eligible Gas (kWh Equivalent)	143,232,371	1,975,914,497	0	0	0	0	143,232,779	142,358,121	139,348,244	135,854,884	135,857,258	
All Other Gas (kWh Equivalent)	2,364,977	43,268,623	0	0	0	0	2,163,396	2,163,396	2,163,396	2,163,396	2,163,396	
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>	<b>4,967,497</b>	<b>68,890,588</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,960,634</b>	<b>4,930,792</b>	<b>4,828,101</b>	<b>4,708,914</b>	<b>4,708,995</b>	
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†</b>	<b>145,597,348</b>	<b>2,019,183,120</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>145,396,174</b>	<b>144,521,516</b>	<b>141,511,639</b>	<b>138,018,280</b>	<b>138,020,654</b>	
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)§</b>			<b>94,320,888</b>	<b>196,501,850</b>	<b>298,671,854</b>	<b>408,567,718</b>	<b>408,421,627</b>	<b>407,902,518</b>	<b>404,322,910</b>	<b>396,930,483</b>	<b>396,442,069</b>	
<b>Portfolio Total Gas CPAS (kWh Equivalent)‡</b>			<b>94,320,888</b>	<b>196,501,850</b>	<b>298,671,854</b>	<b>408,567,718</b>	<b>553,817,801</b>	<b>552,424,034</b>	<b>545,834,549</b>	<b>534,948,763</b>	<b>534,462,723</b>	
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)  </b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,842</b>	<b>102,691</b>	<b>119,187</b>	<b>-81</b>	
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)†  </b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>874,658</b>	<b>3,009,877</b>	<b>3,493,359</b>	<b>-2,374</b>	
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)‡§  </b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>146,091</b>	<b>519,109</b>	<b>3,579,608</b>	<b>7,392,427</b>	<b>488,414</b>	
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡  </b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>146,091</b>	<b>1,393,767</b>	<b>6,589,485</b>	<b>10,885,786</b>	<b>486,040</b>	
Sector	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Income Eligible Gas (Therms)	4,599,028	4,289,406	4,289,585	4,286,373	4,271,016	3,694,328	2,313,088	2,227,694	2,188,060	2,187,889	1,864,053	1,850,496
All Other Gas (Therms)	73,811	73,811	73,811	73,811	73,811	73,813	73,813	73,813	73,813	73,813	73,813	73,813
Income Eligible Gas (kWh Equivalent)	134,797,516	125,722,498	125,727,749	125,633,599	125,183,479	108,280,744	67,796,596	65,293,713	64,132,041	64,127,040	54,635,403	54,238,028
All Other Gas (kWh Equivalent)	2,163,396	2,163,396	2,163,396	2,163,396	2,163,396	2,163,467	2,163,467	2,163,467	2,163,467	2,163,467	2,163,467	2,163,467
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>	<b>4,672,839</b>	<b>4,363,217</b>	<b>4,363,396</b>	<b>4,360,184</b>	<b>4,344,827</b>	<b>3,768,141</b>	<b>2,386,901</b>	<b>2,301,507</b>	<b>2,261,873</b>	<b>2,261,703</b>	<b>1,937,867</b>	<b>1,924,309</b>
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†</b>	<b>136,960,912</b>	<b>127,885,894</b>	<b>127,891,145</b>	<b>127,796,994</b>	<b>127,346,875</b>	<b>110,444,211</b>	<b>69,960,063</b>	<b>67,457,180</b>	<b>66,295,508</b>	<b>66,290,507</b>	<b>56,798,870</b>	<b>56,401,495</b>
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)§</b>	<b>394,045,275</b>	<b>380,100,453</b>	<b>363,557,227</b>	<b>308,726,278</b>	<b>290,453,770</b>	<b>286,693,313</b>	<b>223,945,430</b>	<b>202,749,960</b>	<b>133,493,581</b>	<b>85,854,005</b>	<b>84,303,044</b>	<b>79,075,629</b>
<b>Portfolio Total Gas CPAS (kWh Equivalent)‡</b>	<b>531,006,187</b>	<b>507,986,347</b>	<b>491,448,372</b>	<b>436,523,272</b>	<b>417,800,645</b>	<b>397,137,524</b>	<b>293,905,493</b>	<b>270,207,140</b>	<b>199,789,089</b>	<b>152,144,512</b>	<b>141,101,914</b>	<b>135,477,125</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)  </b>	<b>36,156</b>	<b>309,622</b>	<b>-179</b>	<b>3,212</b>	<b>15,357</b>	<b>576,686</b>	<b>1,381,240</b>	<b>85,393</b>	<b>39,634</b>	<b>171</b>	<b>323,836</b>	<b>13,558</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)†  </b>	<b>1,059,742</b>	<b>9,075,018</b>	<b>-5,251</b>	<b>94,151</b>	<b>450,119</b>	<b>16,902,664</b>	<b>40,484,149</b>	<b>2,502,882</b>	<b>1,161,672</b>	<b>5,002</b>	<b>9,491,637</b>	<b>397,374</b>
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)‡§  </b>	<b>2,396,794</b>	<b>13,944,822</b>	<b>16,543,226</b>	<b>54,830,949</b>	<b>18,272,508</b>	<b>3,760,456</b>	<b>62,747,883</b>	<b>21,195,470</b>	<b>69,256,379</b>	<b>47,639,575</b>	<b>1,550,961</b>	<b>5,227,415</b>
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡  </b>	<b>3,456,536</b>	<b>23,019,840</b>	<b>16,537,975</b>	<b>54,925,100</b>	<b>18,722,627</b>	<b>20,663,120</b>	<b>103,232,032</b>	<b>23,698,352</b>	<b>70,418,051</b>	<b>47,644,577</b>	<b>11,042,598</b>	<b>5,624,789</b>
Sector	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Income Eligible Gas (Therms)	1,850,496	1,850,496	1,844,078	10,905	7,986	6,996	6,996	6,996	0	0	0	0
All Other Gas (Therms)	73,813	73,813	73,813	0	0	0	0	0	0	0	0	0
Income Eligible Gas (kWh Equivalent)	54,238,028	54,238,028	54,049,913	319,622	234,078	205,045	205,045	205,045	0	0	0	0
All Other Gas (kWh Equivalent)	2,163,467	2,163,467	2,163,467	0	0	0	0	0	0	0	0	0
<b>CY2022 Portfolio Total Gas Contribution to CPAS (Therms)</b>	<b>1,924,309</b>	<b>1,924,309</b>	<b>1,917,891</b>	<b>10,905</b>	<b>7,986</b>	<b>6,996</b>	<b>6,996</b>	<b>6,996</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Total Gas Contribution to CPAS (kWh Equivalent)†</b>	<b>56,401,495</b>	<b>56,401,495</b>	<b>56,213,380</b>	<b>319,622</b>	<b>234,078</b>	<b>205,045</b>	<b>205,045</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Total Gas Contribution to CPAS (kWh Equivalent Counted)§</b>	<b>65,234,279</b>	<b>54,812,890</b>	<b>16,768,909</b>	<b>16,510,558</b>	<b>10,180,412</b>	<b>7,198,910</b>	<b>4,284,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Total Gas CPAS (kWh Equivalent)‡</b>	<b>121,635,775</b>	<b>111,214,385</b>	<b>72,982,288</b>	<b>16,830,180</b>	<b>10,414,490</b>	<b>7,403,954</b>	<b>4,489,652</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (Therms)  </b>	<b>0</b>	<b>0</b>	<b>6,418</b>	<b>1,906,986</b>	<b>2,919</b>	<b>991</b>	<b>0</b>	<b>0</b>	<b>6,996</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>CY2022 Portfolio Incremental Expiring Gas Savings (kWh Equivalent)†  </b>	<b>0</b>	<b>0</b>	<b>188,116</b>	<b>55,893,758</b>	<b>85,544</b>	<b>29,033</b>	<b>0</b>	<b>0</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Historic Portfolio Incremental Expiring Gas Savings (kWh Equivalent Counted)‡§  </b>	<b>13,841,350</b>	<b>10,421,390</b>	<b>38,043,981</b>	<b>258,351</b>	<b>6,330,146</b>	<b>2,981,502</b>	<b>2,914,303</b>	<b>4,284,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent)‡  </b>	<b>13,841,350</b>	<b>10,421,390</b>	<b>38,232,097</b>	<b>56,152,109</b>	<b>6,415,690</b>	<b>3,010,535</b>	<b>2,914,303</b>	<b>4,284,607</b>	<b>205,045</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: The gray cells are blank, indicating values irrelevant to the CY2022 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 CY2022 equivalent kWh CPAS and historic equivalent kWh CPAS.

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

# Portfolio Total Incremental Expiring Gas Savings (kWh Equivalent) is the sum of CY2022 portfolio incremental equivalent kWh counted and historic portfolio incremental expiring equivalent kWh savings counted.

Source: Evaluation team analysis

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

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

Sector	Program	Verified Gross Savings (Therms)	Verified Gross Savings (kWh Equivalent)	Verified Net Savings (Therms)	Verified Net Savings (kWh Equivalent)	Counted Measures (EUL)
Income Eligible	Multifamily Upgrades	1,097,953	32,181,009	1,097,967	32,181,417	High Efficiency Boiler (25), Attic Insulation (20), Air Sealing (20), Steam Boiler Averaging Controls (20), Linkageless Controls (20), Crawl Space Ceiling Insulation (20), Wall Insulation (20), Foundation Insulation (20), IU Programmable Thermostat (16), Boiler Reset Controls (16), CA Pipe Insulation (15), Controls for Domestic Hot Water (15), DHW Storage Tank Insulation (15), Central Water Heater (15), Thermostatic Radiator Valve (15), Exhaust/Shut Off Damper (15), CA Water Heater (15), IU Pipe Insulation (15), Modulating Gas Clothes Dryer (14), Advanced Thermostat (11), CA Pipe Insulation (10), Low Flow Showerhead (Gas) (10), Low Flow Faucet Aerator (Gas) (10), Interior LED Lighting (8.40336134453782), Clothes Washer (7), Linear LED Lighting (6.84102622610197), Steam Traps (6), Prescriptive Savings - Steam Trap (6), High Efficiency Furnace (5.5), Covers and Gap Sealers for Room AC (5), Boiler Tune Up (3), Shower Timer (2), IU Reprogram Thermostat (2), Prescriptive Savings - Other (1)
Income Eligible	New Construction - IE	44,278	1,297,780	44,278	1,297,780	Reduced Thermal Bridging (21.2834728046982), High-Performance Windows (20.230637193596), Reduced Infiltration (19.5223909338705), High-Performance HVAC Equipment (19.4024280583987), High-Performance Water Heating Equipment (15.1179933226886), Efficient Ventilation (15), Efficient Appliances (13.2427204101853), Advanced HVAC Controls (10.9446720689428), Hot Water Conservation (9.87594407430786)
Income Eligible	Product Distribution	1,058,182	31,015,306	1,058,182	31,015,306	Closed-Cell Foam Weatherstripping (17' Roll) IE (20), Air Sealing (Outlet Gasket) IE (20), Air Sealing (Switch Gasket) IE (20), Closed-Cell Foam Weatherstripping (17' Roll) IE (20), Window Insulation Kit IE (20), DHW Pipe Wrap IE (15), Low Flow Showerheads IE (10), Low Flow Aerators(Kitchen) IE (10), Low Flow Aerators (Bathroom) IE (10), Low Flow Showerheads IE (10), Residential Water Savings Kit IE (10), Low Flow Aerators(Kitchen) IE (10), Low Flow Aerators (Bathroom) IE (10), Shower Timer IE (2), Shower Timer IE (2)
Income Eligible	Retail/Online*	1,538,142	45,082,936	1,538,142	45,082,936	Closed Cell Foam w-Adhesive Strip (20), Door Sweep (20), Switch and Outlet Gasket (20), V-Seal Weatherstripping (20), Smart Thermostat (11)
Income Eligible	Single-Family Upgrades	1,148,255	33,655,340	1,148,255	33,655,340	Natural Gas Boiler (25), Natural Gas Boiler (25), Air Sealing (20), Attic Insulation (20), Wall Insulation (20), Air Sealing (20), Natural Gas Furnace (20), Attic Insulation (20), Duct Insulation and Sealing (20), Basement/Sidewall Insulation (20), Duct Insulation and Sealing (20), Floor Insulation Above Crawlspace (20), Wall Insulation (20), Basement/Sidewall Insulation (20), Rim Joist Insulation (20), Rim Joist Insulation (20), Floor Insulation Above Crawlspace (20), Air Sealing - Sealing Tape (20), Natural Gas Furnace (20), Air Sealing - Weatherstripping (20), Air Sealing - Door Sweep (20), Programmable Thermostat (16), Domestic Hot Water Pipe Insulation (15), Domestic Hot Water Pipe Insulation (15), Domestic Hot Water Pipe Insulation (15), Boiler Pipe Insulation (15), Boiler Pipe Insulation (15), Leave Behind Kits (13.882), Leave Behind Kits (13.73913), Natural Gas Water Heater (13), Natural Gas Water Heater (13), Advanced Thermostat - Manual (11), Advanced Thermostat - Programmable (11), Advanced Thermostat - Programmable (11), Advanced Thermostat - Manual (11), Advanced Thermostat - Manual (11), Advanced Thermostat - Manual (11), Advanced Thermostat - Programmable (11), Advanced Thermostat - Blended (11), Advanced Thermostat - Blended (11), Kitchen Aerator (10), Handheld Showerhead (10), Showerhead (10), Bathroom Aerator (10), Kitchen Aerator (10), Showerhead (10), Handheld Showerhead (10), Bathroom Aerator (10), Kitchen Aerator (10), Showerhead (10), Bathroom Aerator (10), Handheld Showerhead (10), Programmable Thermostat (8), Programmable Thermostat (8), Furnace Tune-Up (3), Furnace Tune-Up (3)
Business & Public Sector	Incentives	58,568	1,716,633	52,126	1,527,803	Food Service Equipment (20)
Market Rate (Residential)	Contractor / Midstream Rebates	3,592	105,274	3,161	92,641	Duct Sealing (20)
Market Rate (Residential)	Multifamily Upgrades	18,528	543,070	18,524	542,951	Air Sealing (20), Air Sealing (20)
Total		4,967,497	145,597,348	4,960,634	145,396,174	

Note: This table shows only gross and net gas savings counted towards ComEd's goal in CY2022. 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 from Electrification Counting Toward ComEd Goal – Program Level**

Sector	Program	WAML *	Verified Gross Savings (kWh) NTG†	Lifetime Net Savings (kWh)‡	CPAS Verified Net kWh Savings									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	
Income Eligible	New Construction - IE	14	3,572,849	1	48,649,162					3,572,849	3,572,849	3,572,849	3,572,849	3,572,849
Income Eligible	Single-Family Upgrades	16	711,126	1	11,167,503					711,126	711,126	711,126	711,126	711,126
Market Rate (Residential)	Contractor / Midstream Rebates	16	9,263,163	1	109,024,232					7,366,052	7,366,052	7,366,052	7,366,052	7,366,052
Market Rate (Residential)	Electric Home New Construction	15	544,458	1	6,641,204					435,567	435,567	435,567	435,567	435,567
Pilot	VHSP as AC Replacement	16	383,883	1	4,122,241					307,107	307,107	307,107	307,107	307,107
Pilot	Heat Pump Water Heater Pilot	15	17,036	1	204,436					13,629	13,629	13,629	13,629	13,629
<b>CY2022 Portfolio Total Electrification Contribution to CPAS</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>
<b>Historic Portfolio Total Electrification Contribution to CPAS§</b>						<b>0</b>								
<b>Portfolio Total Electrification CPAS</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>	<b>12,406,329</b>
<b>CY2022 Portfolio Incremental Expiring Electric Savings  </b>						<b>0</b>								
<b>Historic Portfolio Incremental Expiring Electric Savings#</b>						<b>0</b>								
<b>Portfolio Grand Total Incremental Expiring Electric Savings*†</b>						<b>0</b>								
Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
Income Eligible	New Construction - IE	3,572,849	3,572,849	3,572,849	3,572,849	3,572,849	3,572,849	3,572,849	3,572,849	2,176,949	12,589	12,589		
Income Eligible	Single-Family Upgrades	711,126	711,126	711,126	711,126	711,126	711,126	711,126	711,126	711,126	711,126	500,606		
Market Rate (Residential)	Contractor / Midstream Rebates	7,366,052	7,366,052	6,892,876	6,473,268	6,473,268	6,473,268	6,473,268	6,473,268	6,473,268	6,473,268	4,131,432	124,965	
Market Rate (Residential)	Electric Home New Construction	435,567	435,567	435,567	435,567	435,567	435,567	435,567	435,567	435,567	434,797	108,474		
Pilot	VHSP as AC Replacement	307,107	227,960	227,960	227,960	227,960	227,960	227,960	227,960	227,960	227,960	227,960		
Pilot	Heat Pump Water Heater Pilot	13,629	13,629	13,629	13,629	13,629	13,629	13,629	13,629	13,629	13,629			
<b>CY2022 Portfolio Total Electrification Contribution to CPAS</b>		<b>12,406,329</b>	<b>12,327,183</b>	<b>11,854,007</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>10,038,499</b>	<b>7,873,369</b>	<b>4,981,062</b>	<b>124,965</b>	
<b>Historic Portfolio Total Electrification Contribution to CPAS§</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Portfolio Total Electrification CPAS</b>		<b>12,406,329</b>	<b>12,327,183</b>	<b>11,854,007</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>11,434,399</b>	<b>10,038,499</b>	<b>7,873,369</b>	<b>4,981,062</b>	<b>124,965</b>	
<b>CY2022 Portfolio Incremental Expiring Electric Savings  </b>		<b>0</b>	<b>79,147</b>	<b>473,175</b>	<b>419,608</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,395,900</b>	<b>2,165,129</b>	<b>2,892,307</b>	<b>4,856,097</b>	
<b>Historic Portfolio Incremental Expiring Electric Savings#</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Portfolio Grand Total Incremental Expiring Electric Savings*†</b>		<b>0</b>	<b>79,147</b>	<b>473,175</b>	<b>419,608</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,395,900</b>	<b>2,165,129</b>	<b>2,892,307</b>	<b>4,856,097</b>	
Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Income Eligible	New Construction - IE													
Income Eligible	Single-Family Upgrades													
Market Rate (Residential)	Contractor / Midstream Rebates	124,965	124,965	124,965	124,965	124,965	124,965	124,965	124,965					
Market Rate (Residential)	Electric Home New Construction													
Pilot	VHSP as AC Replacement													
Pilot	Heat Pump Water Heater Pilot													
<b>CY2022 Portfolio Total Electrification Contribution to CPAS</b>		<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Historic Portfolio Total Electrification Contribution to CPAS§</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Portfolio Total Electrification CPAS</b>		<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>124,965</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>CY2022 Portfolio Incremental Expiring Electric Savings  </b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>124,965</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Historic Portfolio Incremental Expiring Electric Savings#</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Portfolio Grand Total Incremental Expiring Electric Savings*†</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>124,965</b>	<b>0</b>	<b>0</b>	<b>0</b>	

\* WAML is the weighted average measure life across all measures and electrification 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.ilsaq.info/evaluator-ntg-recommendations-for-2022>.

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

§ Historical electrification savings go back to CY2018.

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

# Historic incremental expiring electrification 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



Below is the list of programs and measures with electrification (fuel switch) savings which were counted towards ComEd CPAS goal.

**Table 2-9. Measure List and Savings from Electrification Counting Toward ComEd Goal**

Program	Component	IE	End Use Type	Savings Category	Quantity	Increase in Electricity Consumption (kWh)	Average Increase in Electricity Consumption (kWh)	Decrease in Gas Consumption (therms)	Average Decrease in Gas Consumption (therms)	Decrease in Gas Consumption (kWh)	Net Change in Electricity Consumption (kWh)	Ex Ante Gross Savings (kWh)	Program Gross Realization Rate	Verified Gross Savings (kWh)	Program Net-to-Gross Ratio (NTG)	Verified Net Savings (kWh)	EUL
Contractor / Midstream Rebates	Contractor / Midstream Rebates	FALSE	HVAC	Midstream ASHP - Electrification	295.35	2,439,099	8,258	281,352	953	8,245,956	5,806,857	5,806,857	1.00	5,806,857	0.80	4,645,485	16.0
Contractor / Midstream Rebates	Contractor / Midstream Rebates	FALSE	HVAC	Midstream DMSHP - Electrification	342.65	1,015,924	2,965	145,366	424	4,260,425	3,244,502	3,244,833	1.00	3,244,502	0.80	2,595,601	15.0
Contractor / Midstream Rebates	Contractor / Midstream Rebates	FALSE	HVAC	Ground Source Heat Pump - Electrification	8.00	47,707	5,963	8,855	1,107	259,512	211,805	207,311	1.02	211,805	0.59	124,965	25.0
Electric Home New Construction	EHNC	FALSE	HVAC	Ductless Mini Split Heat Pumps	17.00	79,322	4,666	13,186	776	386,347	307,025	255,064	1.20	307,025	0.80	245,620	15.0
Electric Home New Construction	EHNC	FALSE	HVAC	Central Air Source Heat Pumps	7.00	31,897	4,557	3,933	562	115,237	83,340	70,842	1.18	83,340	0.80	66,672	16.0
Electric Home New Construction	EHNC	FALSE	HVAC	Variable Refrigerant Flow Systems	1	7,724	7,724	1,402	1,402	41,088	33,363	267,266	0.12	33,363	0.80	26,691	16.0
Electric Home New Construction	EHNC	FALSE	Hot Water	High-Performance Water Heating Equipment-Electrification	28	18,993	678	4,642	166	136,004	117,011	111,098	1.05	117,011	0.80	93,609	15.0
Electric Home New Construction	EHNC	FALSE	Appliances	Efficient Appliances-Electrification	26	9,701	373	458	18	13,421	3,720	5,095	0.73	3,720	0.80	2,976	14.7
Heat Pump Water Heater Pilot	Heat Pump Water Heater Pilot	FALSE	Hot Water	Heat Pump Water Heater - Electrification	4	3,420	855	698	174	20,457	17,036	524	32.48	17,036	0.80	13,629	15.0
New Construction - IE	Affordable Housing New Construction	TRUE	HVAC	High Performance HVAC Equipment-Air Source Heat Pump-Residential	28	77,813	2,779	9,750	348	285,784	207,971	209,639	0.99	207,971	1.00	207,971	15.0
New Construction - IE	Affordable Housing New Construction	TRUE	HVAC	High Performance HVAC Equipment-Air Source Heat Pump-Commercial	36	553,532	15,376	109,103	3,031	3,197,798	2,644,266	2,403,333	1.10	2,644,266	1.00	2,644,266	15.0
New Construction - IE	Affordable Housing New Construction	TRUE	HVAC	High Performance HVAC Equipment-PTHP	130	322,447	2,480	35,158	270	1,030,470	708,023	759,528	0.93	708,023	1.00	708,023	8.0
New Construction - IE	Affordable Housing New Construction	TRUE	Appliances	Efficient Appliances-Electrification	88	32,850	373	1,550	18	45,440	12,589	18,029	0.70	12,589	1.00	12,589	16.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	HVAC	Air source Heat Pump	28	184,552	6,591	23,195	828	679,858	495,307	496,711	1.00	495,307	1.00	495,307	15.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	Hot Water	HPWH	31	41,381	1,335	3,974	128	116,484	75,103	75,064	1.00	75,103	1.00	75,103	15.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	HVAC	Mini Split Heat Pump	6	32,391	5,399	5,420	903	158,850	126,459	126,405	1.00	126,459	1.00	126,459	16.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	Appliances	Induction Stove	8	3,115	389	214	27	6,282	3,168	3,165	1.00	3,168	1.00	3,168	16.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	HVAC	Ductless Mini Split Heat Pump	1	2,886	2,886	404	404	11,844	8,958	8,943	1.00	8,958	1.00	8,958	16.0
Single-Family Upgrades	IE Whole Home Electrification	TRUE	Appliances	HP Clothes Dryer	5	2,259	452	150	30	4,391	2,132	2,130	1.00	2,132	1.00	2,132	15.0
VHSP as AC Replacement	VSHP AS AC REPLACEMENT	FALSE	HVAC	High Performance HVAC Equipment - Electrification	24	123,467	5,144	17,311	721	507,350	383,883	859,856	0.45	383,883	0.80	307,107	16.0
<b>Total</b>	-	-	-	-	<b>1,114</b>	<b>5,030,481</b>	<b>79,245</b>	<b>666,121</b>	<b>12,290</b>	<b>19,522,998</b>	<b>14,492,517</b>	<b>14,931,693</b>	<b>0.97</b>	<b>14,492,517</b>	<b>0.86</b>	<b>12,406,329</b>	<b>15.2</b>

Note: This table shows only gross and net electrification (fuel switch) savings counted towards ComEd's goal in CY2022. Results shown for programs in sectors other than Income Eligible may be different from program specific reports.

Source: Evaluation team analysis

**Table 2-10. Total CPAS Counting Toward ComEd Goal – Electric Direct + Gas Counted + Electrification Counted**

Sector	Program	WAML	Verified Gross Savings (kWh)	NTG*	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings									
						2018	2019	2020	2021	2022	2023	2024	2025	2026	
Business & Public Sector	Incentives	14	266,819,704	1	3,182,429,589	0	0	0	0	231,800,424	231,768,031	230,904,147	229,326,421	227,880,386	
Business & Public Sector	Small Business	13	259,368,247	1	3,004,333,958	0	0	0	0	251,591,666	251,542,199	250,176,766	243,036,118	231,359,810	
Business & Public Sector	Midstream/Upstream	12	222,354,690	1	1,810,104,179	0	0	0	0	180,047,539	180,047,539	180,047,539	180,047,539	133,447,600	
Business & Public Sector	Targeted Systems	7	106,079,922	1	616,666,397	0	0	0	0	90,144,532	90,144,532	90,144,532	57,922,234	56,970,346	
Business & Public Sector	Behavior Bus/Pub	7	47,468,176	1	322,308,914	0	0	0	0	46,044,131	46,044,131	46,044,131	46,044,131	46,044,131	
Business & Public Sector	New Construction - Bus/Pub	17	22,410,491	0	187,172,422	0	0	0	0	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	
Business & Public Sector	Assessments	4	3,855,713	1	15,471,718	0	0	0	0	3,624,370	3,624,370	3,337,032	2,944,961	1,938,253	
Res & IE	Retail/Online*	10	397,031,513	1	2,428,911,667	0	0	0	0	272,103,728	272,103,728	272,103,728	272,103,728	203,450,134	
Res & IE	Product Distribution	11	211,443,968	1	2,211,232,358	0	0	0	0	210,052,808	210,052,808	205,476,791	205,476,791	205,367,943	
Res & IE	Multifamily Upgrades	12	59,124,260	1	652,354,094	0	0	0	0	58,242,092	57,297,946	55,538,136	54,000,852	53,785,849	
Res & IE	Single-Family Upgrades	16	51,422,185	1	672,588,361	0	0	0	0	49,731,190	49,140,478	49,140,478	46,960,722	44,428,008	
Res & IE	Contractor / Midstream Rebates	16	13,860,041	1	159,757,311	0	0	0	0	11,058,686	11,058,686	11,058,686	11,039,312	11,039,312	
Res & IE	New Construction - IE	14	6,477,493	1	92,235,628	0	0	0	0	6,477,493	6,477,493	6,477,493	6,477,493	6,477,493	
Res & IE	Electric Home New Construction	15	629,933	1	7,643,365	0	0	0	0	503,947	503,947	503,947	503,947	503,947	
Res & IE	Behavior - Res/IE	10	0		355,391,073	0	0	0	0	109,384,787	76,617,480	53,807,081	37,229,207	26,318,673	
Pilot	Upstream Commercial Food Service Equipment	12	1,543,903	1	15,308,260	0	0	0	0	1,235,122	1,235,122	1,235,122	1,235,122	1,235,122	
Pilot	VHSP as AC Replacement	16	416,130	1	4,420,166	0	0	0	0	332,904	332,904	332,904	332,904	332,904	
Pilot	Heat Pump Water Heater Pilot	15	30,978	1	371,733	0	0	0	0	24,782	24,782	24,782	24,782	24,782	
Market Transformation	ENERGY STAR Retail Products Platform	15	10,602,500	1	159,282,455	0	0	0	0	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	
Voltage Optimization	Voltage Optimization	15	179,982,384	1	2,699,735,756	0	0	0	0	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	
CY2022 Portfolio Total Contribution to CPAS (kWh)			1,860,922,230		18,597,719,403	0	0	0	0	1,723,742,120	1,689,358,096	1,657,695,214	1,596,048,183	1,451,946,612	
<b>Historic Portfolio Total Contribution to CPAS#</b>						<b>1,859,781,075</b>	<b>3,426,787,036</b>	<b>5,139,036,924</b>	<b>6,513,673,306</b>	<b>6,359,514,308</b>	<b>6,178,572,313</b>	<b>5,725,984,533</b>	<b>5,347,503,770</b>	<b>5,087,929,575</b>	
<b>Legacy Savings (kWh)§</b>						<b>0</b>	<b>4,087,238,480</b>	<b>3,537,033,300</b>	<b>3,144,029,597</b>	<b>2,933,997,266</b>	<b>2,573,016,371</b>	<b>2,324,014,787</b>	<b>2,075,013,202</b>	<b>1,909,012,146</b>	
<b>Portfolio Total CPAS (kWh)</b>						<b>1,859,781,075</b>	<b>7,514,025,516</b>	<b>8,676,070,224</b>	<b>9,657,702,903</b>	<b>11,017,253,69</b>	<b>10,440,946,77</b>	<b>9,707,694,533</b>	<b>9,018,565,155</b>	<b>8,448,888,333</b>	
<b>CY2022 Portfolio Incremental Expiring Savings  </b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,384,024</b>	<b>31,662,882</b>	<b>61,647,031</b>	<b>144,101,571</b>	
<b>Historic Portfolio Incremental Expiring Savings#</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154,158,999</b>	<b>180,941,995</b>	<b>452,587,780</b>	<b>378,480,763</b>	<b>259,574,195</b>	
<b>Legacy Incremental Expiring Savings</b>						<b>0-4,087,238,480</b>	<b>210,032,331</b>	<b>393,003,703</b>	<b>210,032,331</b>	<b>360,980,895</b>	<b>249,001,584</b>	<b>249,001,584</b>	<b>249,001,584</b>	<b>166,001,056</b>	
<b>Portfolio Grand Total Incremental Expiring Savings*†</b>						<b>0-4,087,238,480</b>	<b>210,032,331</b>	<b>393,003,703</b>	<b>364,191,330</b>	<b>576,306,914</b>	<b>733,252,247</b>	<b>689,129,378</b>	<b>569,676,822</b>		
<b>Progress towards Applicable Annual Incremental Goal (AAIG)†‡</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,359,550,790</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Sector	Program	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Business & Public Sector	Incentives	226,046,672	222,617,936	219,128,783	217,612,868	217,044,705	204,586,406	164,382,884	135,823,966	119,051,105	106,835,471	32,879,809	32,516,415
Business & Public Sector	Small Business	225,614,624	223,087,509	219,771,180	217,548,031	212,555,644	187,848,424	161,068,897	126,121,371	112,716,841	90,286,257	1,724	1,724
Business & Public Sector	Midstream/Upstream	127,652,843	125,429,413	101,549,950	101,538,282	101,505,518	88,394,647	79,177,737	79,133,565	78,727,838	73,356,628	0	0
Business & Public Sector	Targeted Systems	56,646,406	56,646,406	38,475,824	22,890,910	11,266,253	11,226,250	11,226,250	11,226,250	2,803,871	2,803,871	1,376,847	971,224
Business & Public Sector	Behavior Bus/Pub	46,044,131	46,044,131	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036	10,757,036
Business & Public Sector	Assessments	2,732	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	199,184,886	197,889,651	179,398,013	172,921,558	161,037,459	90,210,559	25,337,815	21,784,087	20,965,360	20,156,201	10,439,720	10,236,868
Res & IE	Product Distribution	205,367,943	201,688,739	169,309,196	165,818,034	165,818,034	27,059,578	27,059,578	27,059,578	27,059,578	27,059,578	26,301,076	26,301,076
Res & IE	Multifamily Upgrades	49,683,337	36,361,974	35,147,129	35,141,087	35,140,542	26,896,736	25,721,991	23,607,710	23,573,886	23,571,052	12,136,494	11,782,226
Res & IE	Single-Family Upgrades	43,919,017	43,071,883	41,286,463	40,824,434	40,303,783	26,099,022	23,840,351	23,384,861	22,257,569	22,257,569	21,641,348	20,995,648
Res & IE	Contractor / Midstream Rebates	11,039,312	10,309,682	9,818,026	9,382,030	9,382,030	9,381,866	8,975,218	8,975,218	8,975,218	8,975,218	5,936,285	1,039,329
Res & IE	New Construction - IE	6,477,493	6,477,493	6,477,493	6,446,869	6,408,502	6,111,978	5,955,728	5,949,519	4,546,853	1,513,795	735,914	704,820
Res & IE	Electric Home New Construction	503,947	503,947	503,947	503,947	503,947	491,499	485,417	483,409	480,700	477,635	127,945	14,667
Res & IE	Behavior - Res/IE	18,524,078	13,192,976	9,271,794	6,475,833	4,569,163	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	1,235,031	1,235,031	1,235,031	1,235,031	1,225,289	1,219,223	1,219,223	78,252	78,252	78,252	58,807	58,807
Pilot	VHSP as AC Replacement	332,904	242,274	242,274	242,274	242,274	242,274	242,274	242,274	242,274	242,274	242,274	0
Pilot	Heat Pump Water Heater Pilot	24,782	24,782	24,782	24,782	24,782	24,782	24,782	24,782	24,782	24,782	0	0
Market Transformation	ENERGY STAR Retail Products Platform	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	10,602,500	3,615,821	3,615,821	3,615,821
Voltage Optimization	Voltage Optimization	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	179,982,384	0	0
CY2022 Portfolio Total Contribution to CPAS (kWh)		1,419,642,055	1,386,165,744	1,232,981,804	1,199,947,889	1,168,369,843	881,135,163	736,060,066	665,236,762	622,846,045	571,993,823	126,251,100	118,995,661
<b>Historic Portfolio Total Contribution to CPAS*</b>		<b>4,813,871,245</b>	<b>4,245,930,205</b>	<b>3,980,149,401</b>	<b>3,353,285,636</b>	<b>2,779,225,291</b>	<b>2,451,383,480</b>	<b>2,009,959,592</b>	<b>1,491,414,069</b>	<b>893,743,947</b>	<b>270,656,792</b>	<b>244,139,065</b>	<b>198,017,163</b>
<b>Legacy Savings (kWh)§</b>		<b>1,743,011,090</b>	<b>1,494,009,506</b>	<b>1,411,008,978</b>	<b>1,245,007,921</b>	<b>1,079,006,865</b>	<b>913,005,809</b>	<b>747,004,753</b>	<b>581,003,697</b>	<b>415,002,640</b>	<b>332,002,112</b>	<b>249,001,584</b>	<b>166,001,056</b>
<b>Portfolio Total CPAS (kWh)</b>		<b>7,976,524,390</b>	<b>7,126,105,455</b>	<b>6,624,140,183</b>	<b>5,798,241,446</b>	<b>5,026,601,999</b>	<b>4,245,524,452</b>	<b>3,493,024,411</b>	<b>2,737,654,527</b>	<b>1,931,592,632</b>	<b>1,174,652,727</b>	<b>619,391,749</b>	<b>483,013,881</b>
<b>CY2022 Portfolio Incremental Expiring Savings  </b>		<b>32,304,557</b>	<b>33,476,311</b>	<b>153,183,940</b>	<b>33,033,915</b>	<b>31,578,046</b>	<b>287,234,679</b>	<b>145,075,097</b>	<b>70,823,304</b>	<b>42,390,717</b>	<b>50,852,222</b>	<b>445,742,723</b>	<b>7,255,438</b>
<b>Historic Portfolio Incremental Expiring Savings#</b>		<b>274,058,330</b>	<b>567,941,040</b>	<b>265,780,804</b>	<b>626,863,765</b>	<b>574,060,345</b>	<b>327,841,811</b>	<b>441,423,888</b>	<b>518,545,523</b>	<b>597,670,121</b>	<b>623,087,156</b>	<b>26,517,727</b>	<b>46,121,901</b>
<b>Legacy Incremental Expiring Savings</b>		<b>166,001,056</b>	<b>249,001,584</b>	<b>83,000,528</b>	<b>166,001,056</b>	<b>166,001,056</b>	<b>166,001,056</b>	<b>166,001,056</b>	<b>166,001,056</b>	<b>166,001,056</b>	<b>83,000,528</b>	<b>83,000,528</b>	<b>83,000,528</b>
<b>Portfolio Grand Total Incremental Expiring Savings*†</b>		<b>472,363,943</b>	<b>850,418,935</b>	<b>501,965,272</b>	<b>825,898,736</b>	<b>771,639,447</b>	<b>781,077,547</b>	<b>752,500,041</b>	<b>755,369,884</b>	<b>806,061,895</b>	<b>756,939,906</b>	<b>555,260,978</b>	<b>136,377,868</b>
<b>Progress towards Applicable Annual Incremental Goal (AAIG)†‡</b>		<b>0</b>	<b>0</b>	<b>0</b>									

Sector	Program	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Business & Public Sector	Incentives	32,095,030	32,074,237	32,074,237	10,863,934	10,863,934	10,863,934	1,816,569	1,571,284	0	0	0	0
Business & Public Sector	Small Business	1,724	1,724	1,724	0	0	0	0	0	0	0	0	0
Business & Public Sector	Midstream/Upstream	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Targeted Systems	808,054	644,883	644,883	560,679	560,679	560,679	0	0	0	0	0	0
Business & Public Sector	Behavior Bus/Pub	0	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	New Construction - Bus/Pub	4,302,814	0	0	0	0	0	0	0	0	0	0	0
Business & Public Sector	Assessments	0	0	0	0	0	0	0	0	0	0	0	0
Res & IE	Retail/Online*	9,300,482	9,300,482	8,882,437	523	523	0	0	0	0	0	0	0
Res & IE	Product Distribution	26,301,076	26,301,076	26,301,076	0	0	0	0	0	0	0	0	0
Res & IE	Multifamily Upgrades	11,585,355	11,569,936	11,569,764	0	0	0	0	0	0	0	0	0
Res & IE	Single-Family Upgrades	20,992,502	20,835,573	20,451,242	205,543	205,543	205,045	205,045	205,045	0	0	0	0
Res & IE	Contractor / Midstream Rebates	1,039,329	253,563	253,563	153,348	153,348	153,348	153,348	153,348	0	0	0	0
Res & IE	New Construction - IE	704,820	704,820	426,766	170,606	34,697	0	0	0	0	0	0	0
Res & IE	Electric Home New Construction	14,667	14,667	13,290	0	0	0	0	0	0	0	0	0
Res & IE	Behavior - Res/IE	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Upstream Commercial Food Service Equipment	58,807	58,807	58,807	0	0	0	0	0	0	0	0	0
Pilot	VHSP as AC Replacement	0	0	0	0	0	0	0	0	0	0	0	0
Pilot	Heat Pump Water Heater Pilot	0	0	0	0	0	0	0	0	0	0	0	0
Market Transformation	ENERGY STAR Retail Products Platform	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	Voltage Optimization	0	0	0	0	0	0	0	0	0	0	0	0
CY2022 Portfolio Total Contribution to CPAS (kWh)		107,204,661	101,759,770	100,677,791	11,954,633	11,818,725	11,783,006	2,174,962	1,929,677	0	0	0	0
<b>Historic Portfolio Total Contribution to CPAS†</b>		<b>172,525,559</b>	<b>152,897,202</b>	<b>49,933,693</b>	<b>39,267,731</b>	<b>19,856,524</b>	<b>9,971,526</b>	<b>6,309,810</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>
<b>Legacy Savings (kWh)§</b>		<b>83,000,528</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Portfolio Total CPAS (kWh)</b>		<b>362,730,748</b>	<b>254,656,972</b>	<b>150,611,484</b>	<b>51,222,364</b>	<b>31,675,249</b>	<b>21,754,532</b>	<b>8,484,772</b>	<b>2,373,647</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>	<b>443,970</b>
CY2022 Portfolio Incremental Expiring Savings		11,791,001	5,444,891	1,081,979	88,723,158	135,908	35,719	9,608,045	245,285	1,929,677	0	0	0
Historic Portfolio Incremental Expiring Savings#		25,491,604	19,628,357	102,963,510	10,665,962	19,411,207	9,884,998	3,661,715	5,865,840	0	0	0	0
Legacy Incremental Expiring Savings		83,000,528	83,000,528	0	0	0	0	0	0	0	0	0	0
Portfolio Grand Total Incremental Expiring Savings*†		120,283,133	108,073,776	104,045,488	99,389,120	19,547,115	9,920,717	13,269,760	6,111,125	1,929,677	0	0	0
Progress towards Applicable Annual Incremental Goal (AAIG)†‡		0	0	0	0	0	0	0	0	0	0	0	0

Note: The green highlighted cell shows program total first year electric savings (including direct electric savings and those converted from gas and electrification). The gray cells are blank, indicating values irrelevant to the CY2022 contribution to CPAS. Verified gross savings include carryover savings. This is different from the program level reports where carryover savings are excluded from Table 1.

\* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>.

† 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 CEJA.

|| 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 and legacy incremental expiring savings.

†‡ AAIG is equal to CPAS Yn - CPAS Yn-1.

Source: Evaluation team analysis

## 2.3 Weighted Average Measure Life

Guidehouse calculated the weighted average measure life (WAML) for the CY2022 programs as 11.5 years excluding Voltage Optimization and 11.8 years including Voltage Optimization.

The equation to calculate the portfolio level WAML is shown in Equation 2-5 where the summation occurs across all programs with savings during CY2022, except for Voltage Optimization. The WAML calculation includes the electric-equivalent of the portion of gas savings and electrification savings that ComEd can claim toward goal, as discussed in the previous section.

### Equation 2-5. Portfolio Level WAML Calculation

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

Where

*Program Level WAML*

is the program level WAML

*Program Level Verified Gross Savings*

is the gross verified savings for the program that occurred during CY2022 including electric and claimable gas savings.

The program level WAML is calculated as shown in Equation 2-6 where the summation occurs across all the measures<sup>9</sup> in the program.

### Equation 2-6. Program Level WAML Calculation

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

Where

*Measure Level EUL*

is the effective useful life (EUL) for each measure in the program<sup>10</sup>

*Measure Level Verified Gross Savings*

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

Table 2-11 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.

<sup>9</sup> 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.).

<sup>10</sup> EUL values are either provided in the TRM or through Guidehouse research.

**Table 2-11. WAML and Verified Gross Savings by Program**

Sector	Program	First Year Verified Gross Savings (kWh)	WAML
<b>Business</b>			
Business & Public Sector	Incentives	266,819,704	13.9
Business & Public Sector	Small Business	259,368,247	12.7
Business & Public Sector	Midstream/Upstream	222,354,690	11.6
Business & Public Sector	Targeted Systems	106,079,922	6.8
Business & Public Sector	Behavior Bus/Pub	47,468,176	7.0
Business & Public Sector	New Construction - Bus/Pub	22,410,491	17.4
Business & Public Sector	Assessments	3,855,713	4.3
Business & Public Sector	Subtotal	928,356,943	11.9
<b>Res &amp; IE</b>			
Res & IE	Retail/Online*	397,031,513	10.3
Res & IE	Product Distribution	211,443,968	11.0
Res & IE	Behavior - Res/IE	109,384,787	10.0
Res & IE	Multifamily Upgrades	59,124,260	11.8
Res & IE	Single-Family Upgrades	51,422,185	16.0
Res & IE	Contractor / Midstream Rebates	13,860,041	15.9
Res & IE	New Construction - IE	6,477,493	14.2
Res & IE	Electric Home New Construction	629,933	15.2
Res & IE	Subtotal	849,374,180	11.0
<b>Pilot</b>			
Pilot	Upstream Commercial Food Service Equipment	1,543,903	12.4
Pilot	VHSP as AC Replacement	416,130	16.0
Pilot	Heat Pump Water Heater Pilot	30,978	15.0
Pilot	Subtotal	1,991,011	13.2
<b>Market Transformation</b>			
Market Transformation	ENERGY STAR Retail Products Platform	10,602,500	15.0
Market Transformation	Subtotal	10,602,500	15.0
Portfolio	Grand Total	1,790,324,633	11.5
<b>Voltage Optimization</b>			
Voltage Optimization	Voltage Optimization	179,982,384	15.0
Voltage Optimization	Subtotal	179,982,384	15.0
Portfolio	Total Including VO	1,970,307,016	11.8

Note: Verified Gross Savings include both electric savings and converted kWh equivalents from gas counted towards goal, electrification savings, 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. Table 3-1 shows the direct electric savings which includes primary kWh savings from efficient measures (includes efficiency savings from fuel switching measures but excludes the fuel switching savings), and secondary kWh savings from water supply and wastewater treatment from measures claimed by ComEd. It also includes carryover savings, and applicable electric heating penalties. It does not include gas savings and electrification (fuel switch) converted to electricity. Table 3-2 includes savings from gas and electrification converted to electricity, counting only those savings that ComEd can claim within the 10% limit for gas and 5% limit for electrification, as 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 & Public Sector	Incentives	267,418,285	0.99	265,103,071	0.87	230,272,621
Business & Public Sector	Small Business	255,344,923	1.02	259,368,247	0.97	251,591,666
Business & Public Sector	Midstream/Upstream	190,634,910	1.17	222,354,690	0.81	180,047,539
Business & Public Sector	Targeted Systems	108,656,206	0.98	106,079,922	0.85	90,144,532
Business & Public Sector	Behavior Bus/Pub	39,733,351	1.19	47,468,176	0.97	46,044,131
Business & Public Sector	New Construction - Bus/Pub	23,680,102	0.95	22,410,491	0.48	10,757,036
Business & Public Sector	Assessments	4,049,502	0.95	3,855,713	0.94	3,624,370
Business & Public Sector	<b>Subtotal</b>	<b>889,517,278</b>	<b>1.04</b>	<b>926,640,310</b>	<b>0.88</b>	<b>812,481,895</b>
Res & IE	Retail/Online*	304,236,946	1.16	351,948,577	0.65	227,020,791
Res & IE	Product Distribution	156,329,137	1.15	180,428,663	0.99	179,037,503
Res & IE	Multifamily Upgrades	25,297,170	1.04	26,400,181	0.97	25,517,724
Res & IE	Single-Family Upgrades	17,008,264	1.00	17,055,718	0.90	15,364,723
Res & IE	Contractor / Midstream Rebates	4,585,595	0.98	4,491,603	0.80	3,599,994
Res & IE	New Construction - IE	1,645,040	0.98	1,606,864	1.00	1,606,864
Res & IE	Electric Home New Construction	98,380	0.87	85,475	0.80	68,380
Res & IE	Behavior - Res/IE	0		0		109,384,787
Res & IE	<b>Subtotal</b>	<b>509,200,532</b>	<b>1.14</b>	<b>582,017,081</b>	<b>0.96</b>	<b>561,600,765</b>
Pilot	Upstream Commercial Food Service Equipment	1,280,868	1.21	1,543,903	0.80	1,235,122
Pilot	VHSP as AC Replacement	0		32,247	0.80	25,798
Pilot	Heat Pump Water Heater Pilot	16,583	0.84	13,941	0.80	11,153
Pilot	<b>Subtotal</b>	<b>1,297,451</b>	<b>1.23</b>	<b>1,590,091</b>	<b>0.80</b>	<b>1,272,073</b>
Market Transformation	ENERGY STAR Retail Products Platform	2,878,616	3.68	10,602,500	1.00	10,602,500
Market Transformation	<b>Subtotal</b>	<b>2,878,616</b>	<b>3.68</b>	<b>10,602,500</b>	<b>1.00</b>	<b>10,602,500</b>
Voltage Optimization	Voltage Optimization	179,078,803	1.01	179,982,384	1.00	179,982,384
Voltage Optimization	<b>Subtotal</b>	<b>179,078,803</b>	<b>1.01</b>	<b>179,982,384</b>	<b>1.00</b>	<b>179,982,384</b>
Portfolio	<b>Grand Total</b>	<b>1,581,972,681</b>	<b>1.08</b>	<b>1,700,832,365</b>	<b>0.92</b>	<b>1,565,939,616</b>

Note: Programs that verified gross and net kWh savings include carryover savings are Midstream/Upstream, Small Business, Retail Online, and Product Distribution.

\* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>. 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.

Source: Evaluation team analysis

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

Sector	Program	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business & Public Sector	Incentives	332,197,137	0.99	266,819,704	0.87	231,800,424
Business & Public Sector	Small Business	279,999,256	1.02	259,368,247	0.97	251,591,666
Business & Public Sector	Midstream/Upstream	190,634,910	1.17	222,354,690	0.81	180,047,539
Business & Public Sector	Targeted Systems	120,100,965	0.98	106,079,922	0.85	90,144,532
Business & Public Sector	Behavior Bus/Pub	39,733,351	1.19	47,468,176	0.97	46,044,131
Business & Public Sector	New Construction - Bus/Pub	23,933,106	0.95	22,410,491	0.48	10,757,036
Business & Public Sector	Assessments	4,062,662	0.95	3,855,713	0.94	3,624,370
Business & Public Sector	<b>Subtotal</b>	<b>990,661,387</b>	<b>1.04</b>	<b>928,356,943</b>	<b>0.88</b>	<b>814,009,698</b>
Res & IE	Retail/Online	419,092,156	1.31	397,031,513	0.69	272,103,728
Res & IE	Product Distribution	186,609,324	1.35	211,443,968	0.99	210,052,808
Res & IE	Multifamily Upgrades	64,066,147	2.34	59,124,260	0.99	58,242,092
Res & IE	Single-Family Upgrades	53,711,732	2.90	51,422,185	0.97	49,731,190
Res & IE	Contractor / Midstream Rebates	17,923,923	1.00	13,860,041	0.80	11,058,686
Res & IE	New Construction - IE	6,297,074	1.29	6,477,493	1.00	6,477,493
Res & IE	Electric Home New Construction	807,744	0.78	629,933	0.80	503,947
Res & IE	Behavior - Res/IE	-	-	-	-	109,384,787
Res & IE	<b>Subtotal</b>	<b>748,508,100</b>	<b>1.41</b>	<b>739,989,393</b>	<b>0.97</b>	<b>717,554,730</b>
Pilot	Upstream Commercial Food Service Equipment	1,280,868	1.21	1,543,903	0.80	1,235,122
Pilot	VHSP as AC Replacement	859,856	0.48	416,130	0.80	332,904
Pilot	Heat Pump Water Heater Pilot	17,107	1.81	30,978	0.80	24,782
Pilot	<b>Subtotal</b>	<b>2,157,831</b>	<b>0.92</b>	<b>1,991,011</b>	<b>0.80</b>	<b>1,592,809</b>
Market Transformation	ENERGY STAR Retail Products Platform	2,878,616	3.68	10,602,500	1.00	10,602,500
Market Transformation	<b>Subtotal</b>	<b>2,878,616</b>	<b>3.68</b>	<b>10,602,500</b>	<b>1.00</b>	<b>10,602,500</b>
Voltage Optimization	Voltage Optimization	179,078,803	1.01	179,982,384	1.00	179,982,384
Voltage Optimization	<b>Subtotal</b>	<b>179,078,803</b>	<b>1.01</b>	<b>179,982,384</b>	<b>1.00</b>	<b>179,982,384</b>
Portfolio	<b>Grand Total</b>	<b>1,923,284,737</b>	<b>1.16</b>	<b>1,860,922,230</b>	<b>0.93</b>	<b>1,723,742,120</b>

Note: Programs that verified gross and net kWh savings include carryover savings are Midstream/Upstream, Small Business, Retail Online, and Product Distribution.

\* The ex ante are direct electric savings plus total converted gas and electrification (fuel switch) savings. The verified savings are direct electric savings plus counted converted gas and electrification savings.

† The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>. 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.

Source: *Evaluation team analysis*

Table 3-3 breaks down the Res/IE programs and show IE programs savings, including savings from electric, gas counted and electrification savings.

**Table 3-3. Energy Savings by IE Program – Total Electric + Converted Gas + Electrification**

Sector	Program	Ex Ante Gross Savings (kWh)*	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG†	Verified Net Savings (kWh)
Res & IE	Product Distribution	184,765,021	1.34	208,852,509	1.00	207,831,465
Res & IE	Retail/Online*	91,883,548	0.34	104,913,297	0.94	99,018,506
Res & IE	Multifamily Upgrades	51,596,136	1.96	49,592,443	1.00	49,592,851
Res & IE	Single-Family Upgrades	44,492,437	2.47	43,857,248	1.00	43,857,248
Res & IE	New Construction - IE	6,297,074	1.29	6,477,493	1.00	6,477,493
Res & IE	Behavior - Res/IE	-	-	-	-	-
Res & IE	Contractor / Midstream Rebates	-	-	-	-	-
Res & IE	Electric Home New Construction	-	-	-	-	-
Res & IE	Subtotal	379,034,218	0.79	413,692,990	0.98	406,777,562

Note: Programs that verified gross and net kWh savings include carryover savings are Midstream/Upstream, Retail Online, and Product Distribution.

\* The ex ante are direct electric savings plus total converted gas and electrification (fuel switch) savings. The verified savings are direct electric savings plus counted converted gas and electrification savings.

† The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>. Guidehouse calculated the portfolio NTG ratio by dividing the total net savings by the total verified gross savings.

Source: Evaluation team analysis

Table 3-4 breaks down the programs that had carryover electric and peak demand savings from measures sold or incented in CY2020 and CY2021 that were installed in CY2022.

**Table 3-4. Carryover Energy Savings by Program**

Savings Type	Sector	Program	Verified Gross Carryover	NTG*	Verified Net Carryover
Energy (kWh)	Business & Public Sector	Midstream/Upstream	31,727,742	0.79	24,930,098
Energy (kWh)	Business & Public Sector	Small Business	4,043,437	0.97	3,922,134
Energy (kWh)	Res & IE	Product Distribution	22,556,725	1.00	22,520,013
Energy (kWh)	Res & IE	Retail/Online*	54,498,155	0.66	35,859,700
Energy (kWh)	Portfolio	Total	112,826,059	0.77	87,231,944
Peak Demand (kW)	Business & Public Sector	Midstream/Upstream	7,242	0.79	5,693
Peak Demand (kW)	Business & Public Sector	Small Business	1,015	0.97	985
Peak Demand (kW)	Res & IE	Product Distribution	2,630	1.00	2,626
Peak Demand (kW)	Res & IE	Retail/Online*	7,108	0.65	4,626
Peak Demand (kW)	Portfolio	Total	17,995	0.77	13,930

\* The program-level NTG values shown are calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>.

Source: Evaluation team analysis

Table 3-5 shows total summer peak demand savings by program.

**Table 3-5. Summer Peak Demand Savings by Program**

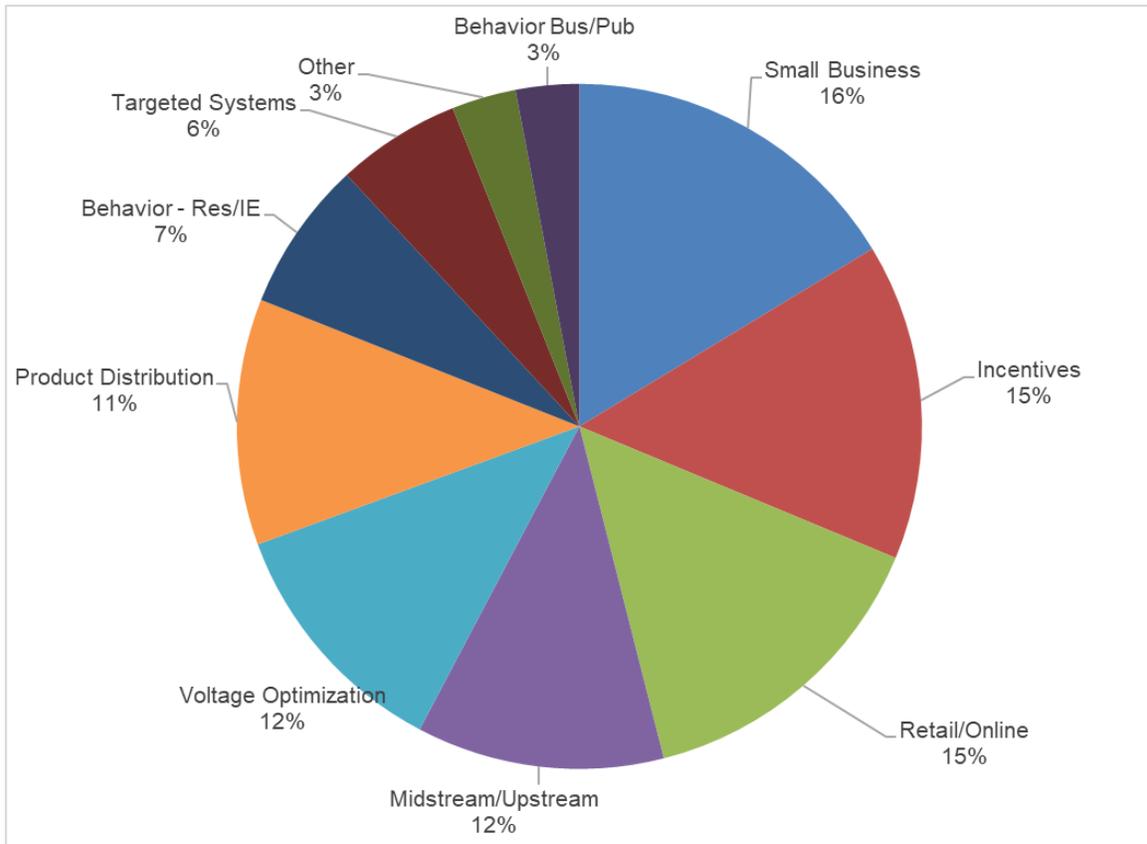
Sector	Program	Ex Ante Gross Savings (kW)	Verified Gross Realization Rate	Verified Gross Savings (kW)	NTG*	Verified Net Savings (kW)
Business & Public Sector	Midstream/Upstream	43,315	1.17	50,609	0.81	40,965
Business & Public Sector	Small Business	45,308	1.02	46,317	0.97	44,927
Business & Public Sector	Incentives	39,834	1.00	39,762	0.90	35,830
Business & Public Sector	Targeted Systems	10,073	1.19	11,959	0.82	9,863
Business & Public Sector	New Construction - Bus/Pub	3,475	0.97	3,354	0.48	1,610
Business & Public Sector	Assessments	0	0.00	0	0.00	0
Business & Public Sector	Behavior Bus/Pub	0	0.00	0	0.00	0
Business & Public Sector	<b>Subtotal</b>	<b>142,005</b>	<b>1.07</b>	<b>152,002</b>	<b>0.88</b>	<b>133,195</b>
Res & IE	Retail/Online*	13,051	3.91	51,022	0.67	34,339
Res & IE	Product Distribution	19,321	1.12	21,608	0.99	21,463
Res & IE	Multifamily Upgrades	3,683	1.05	3,881	0.92	3,584
Res & IE	Single-Family Upgrades	3,600	1.00	3,599	0.93	3,352
Res & IE	Contractor / Midstream Rebates	1,902	0.96	1,822	0.80	1,455
Res & IE	New Construction - IE	242	0.96	232	1.00	232
Res & IE	Electric Home New Construction	21	0.84	18	0.80	14
Res & IE	Behavior - Res/IE	0	0.00	0	0.00	18,880
Res & IE	<b>Subtotal</b>	<b>41,822</b>	<b>1.97</b>	<b>82,181</b>	<b>1.01</b>	<b>83,320</b>
Pilot	Upstream Commercial Food Service Equipment	108	1.70	185	0.80	148
Pilot	VHSP as AC Replacement	0	0.00	16	0.80	13
Pilot	Heat Pump Water Heater Pilot	0	0.00	1	0.80	1
Pilot	<b>Subtotal</b>	<b>108</b>	<b>1.86</b>	<b>201</b>	<b>0.80</b>	<b>161</b>
Market Transformation	ENERGY STAR Retail Products Platform	0	0.00	1,572	1.00	1,572
Market Transformation	<b>Subtotal</b>	<b>0</b>	<b>0.00</b>	<b>1,572</b>	<b>1.00</b>	<b>1,572</b>
Voltage Optimization	Voltage Optimization	35,669	1.00	35,780	1.00	35,780
Voltage Optimization	<b>Subtotal</b>	<b>35,669</b>	<b>1.00</b>	<b>35,780</b>	<b>1.00</b>	<b>35,780</b>
Portfolio	<b>Grand Total</b>	<b>219,604</b>	<b>1.24</b>	<b>271,736</b>	<b>0.93</b>	<b>254,027</b>

\* The program-level NTG values shown in this table is calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values, which are listed here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>. 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.

Source: Evaluation team analysis

Figure 3-1 shows energy savings for the CY2022 programs with highest net savings impact.

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



Source: Evaluation team analysis

Table 3-6 shows the total net savings compared to goal by CY2022 programs.

**Table 3-6. Comparing Electric Net Goals to Actual Achieved by CY2022 Program**

Sector	Program	Verified Net Electric Savings (kWh)	2022 Original Plan Savings Goal (kWh)	Implementation Plan Savings Goal (kWh)	Verified Net over Original Plan	Verified Net over Implementation Plan
Business & Public Sector	Small Business	247,669,532	264,235,879	263,680,000	0.94	0.94
Business & Public Sector	Incentives	230,272,621	291,048,786	287,923,483	0.79	0.80
Business & Public Sector	Midstream/Upstream	155,117,442	192,926,143	192,874,000	0.80	0.80
Business & Public Sector	Targeted Systems	90,144,532	91,982,999	94,982,017	0.98	0.95
Business & Public Sector	Behavior Bus/Pub	46,044,131	38,895,000	38,895,000	1.18	1.18
Business & Public Sector	New Construction - Bus/Pub	10,757,036	10,539,014	10,382,000	1.02	1.04
Business & Public Sector	Assessments	3,624,370	4,051,001	3,729,000	0.89	0.97
Business & Public Sector	Subtotal	783,629,663	893,678,821	892,465,500	0.88	0.88
Res & IE	Retail/Online*	191,161,091	159,942,460	169,083,601	1.20	1.13
Res & IE	Product Distribution	156,517,490	129,311,958	137,218,000	1.21	1.14
Res & IE	Behavior - Res/IE	109,384,787	89,923,000	89,923,000	1.22	1.22
Res & IE	Multifamily Upgrades	25,517,724	22,144,000	26,653,000	1.15	0.96
Res & IE	Single-Family Upgrades	15,364,723	31,766,118	32,077,000	0.48	0.48
Res & IE	Contractor / Midstream Rebates	3,599,994	4,101,134	5,151,000	0.88	0.70
Res & IE	New Construction - IE	1,606,864	1,876,000	1,876,000	0.86	0.86
Res & IE	Electric Home New Construction	68,380	239,000	239,000	0.29	0.29
Res & IE	Subtotal	503,221,052	439,303,670	462,220,601	1.15	1.09
Pilot	Upstream Commercial Food Service Equipment	1,235,122	-	-	-	-
Pilot	VHSP as AC Replacement	25,798	-	-	-	-
Pilot	Heat Pump Water Heater Pilot	11,153	-	-	-	-
Pilot	Subtotal	1,272,073	-	-	-	-
Market Transformation	ENERGY STAR Retail Products Platform	10,602,500	-	-	-	-
Market Transformation	Subtotal	10,602,500	-	-	-	-
Voltage Optimization	Voltage Optimization	179,982,384	165,000,000	165,000,000	1.09	1.09
Voltage Optimization	Subtotal	179,982,384	165,000,000	165,000,000	1.09	1.09
Other	Lighting Carryover	87,231,944	76,919,196	76,919,000	1.13	1.13
Other	Therm Conversion	145,396,174	145,396,000	145,396,174	1.00	1.00
Other	Electrification	12,406,329	4,950,694	-	2.51	-
Portfolio	Grand Total	1,723,742,120	1,725,248,381	1,742,001,275	1.00	0.99

Note: Carryover and therms 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 - CY2022 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.

**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	1,009,799,953	1,111,184,513	934,922,945
Voltage Optimization	179,078,803	179,982,384	179,982,384
Other	191,870,852	196,152,851	154,960,629
Behavior	-	-	109,384,787
HVAC	55,649,767	62,318,890	56,750,105
Compressed Air	61,383,471	60,061,352	46,726,045
Appliances	23,165,252	30,178,913	26,699,666
Shell	15,903,493	17,290,596	17,287,249
Consumer Electronics	15,953,565	16,129,394	13,967,553
Refrigeration	13,569,655	13,564,259	12,440,197
Hot Water	6,305,490	6,769,103	6,760,247
EMS & BAS	6,982,251	4,605,480	3,941,749
Food Service Equipment	1,605,175	1,898,584	1,559,223
Telecomm	704,954	696,046	556,837
<b>Grand Total</b>	<b>1,581,972,681</b>	<b>1,700,832,365</b>	<b>1,565,939,616</b>

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.

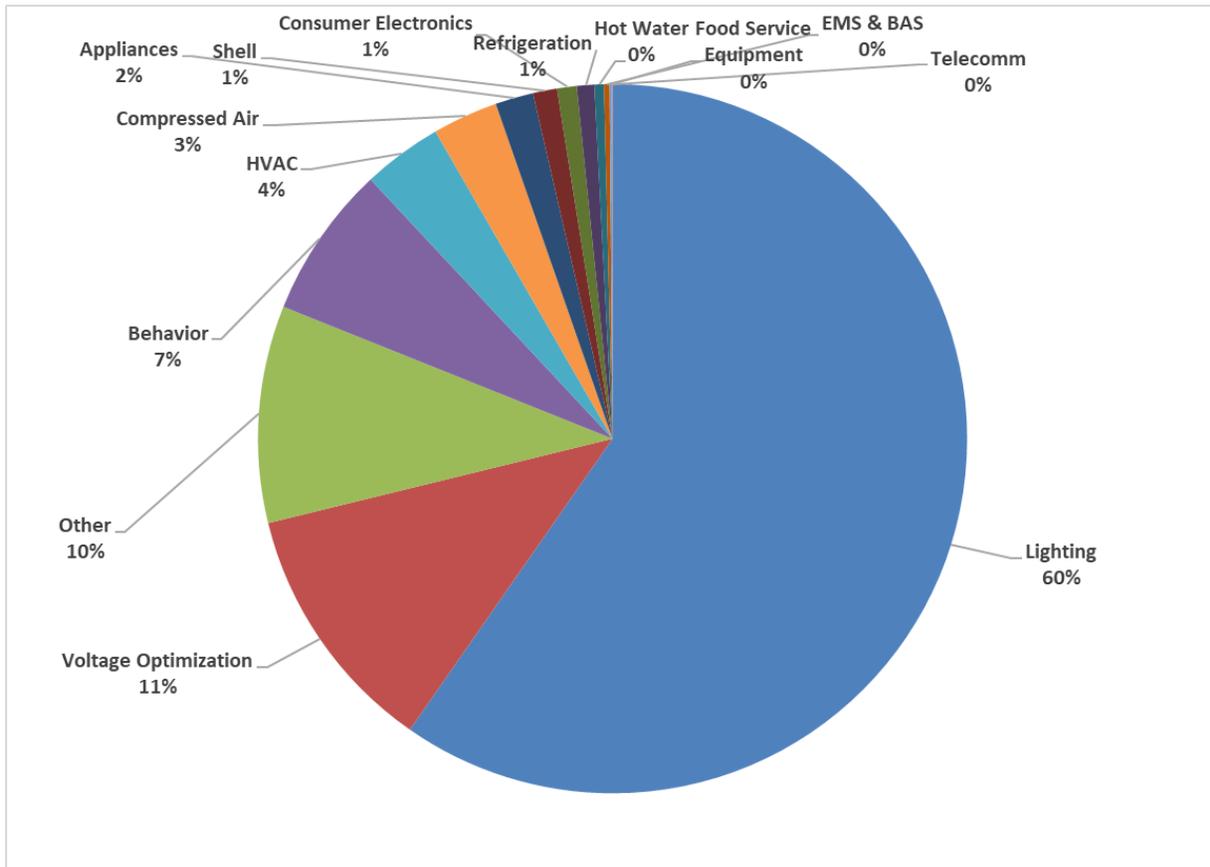
Source: Evaluation team analysis

**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	136,666	185,924	157,918
Voltage Optimization	35,669	35,780	35,780
Behavior	-	-	18,880
Other	12,699	14,278	10,000
HVAC	13,078	13,075	11,920
Compressed Air	9,472	9,213	7,177
Appliances	2,992	4,501	3,919
Shell	3,621	3,826	3,826
Consumer Electronics	1,710	1,725	1,479
Refrigeration	1,670	1,634	1,486
Hot Water	1,681	1,335	1,334
Food Service Equipment	151	227	186
EMS & BAS	98	109	35
Telecomm	97	109	87
<b>Grand Total</b>	<b>219,604</b>	<b>271,736</b>	<b>254,027</b>

Source: Evaluation team analysis

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



Source: Evaluation team analysis

Table 4-3 shows the end use measure savings by magnitude of impact in the respective portfolio sector.

**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 (kWh from Electrification)	Verified Net Savings Total (kWh)	Percent Impact
Business & Public Sector	Lighting	574,516,143	523,002,180			523,002,180	0.64
Business & Public Sector	Other	193,824,199	152,639,616			154,906,016	0.19
Business & Public Sector	Compressed Air	59,922,503	46,595,527			46,595,527	0.06
Business & Public Sector	HVAC	23,802,909	19,267,602			19,267,602	0.02
Business & Public Sector	Refrigeration	13,564,259	12,440,197			12,440,197	0.02
Business & Public Sector	EMS & BAS	4,605,480	3,941,749			3,941,749	0.00
Business & Public Sector	Food Service Equipment	425,622	380,972	1,527,803		1,908,775	0.00
Business & Public Sector	Consumer Electronics	929,361	889,669			889,669	0.00
Business & Public Sector	Telecomm	696,046	556,837			556,837	0.00
Business & Public Sector	Hot Water	37,319	36,200			36,200	0.00
Business & Public Sector	Appliances	13,347	12,947			12,947	0.00
Business & Public Sector	BOC Training	2,266,400	2,266,400				
Business & Public Sector	Subtotal	926,640,310	812,481,895	1,527,803		814,009,698	1.00
Res & IE	Lighting	485,418,907	362,208,785	(6,862)		362,201,924	0.50
Res & IE	Behavior	-	109,384,787			109,384,787	0.15
Res & IE	HVAC	34,394,637	33,433,279	45,674,681	11,274,252	90,382,213	0.13
Res & IE	Shell	10,793,441	10,790,119	52,793,139		63,583,258	0.09
Res & IE	Hot Water	6,387,741	6,381,567	12,203,467	93,609	18,678,642	0.03
Res & IE	Appliances	19,294,599	15,830,075	8,934	15,565	15,854,574	0.02
Res & IE	Consumer Electronics	14,342,849	12,220,701			12,220,701	0.02
Res & IE	Other	11,384,253	11,351,048	33,195,012	702,168	45,248,228	0.06
Res & IE	Food Service Equipment	654	404			404	0.00
Res & IE	Subtotal	582,017,081	561,600,765	143,868,371	12,085,594	717,554,730	1.00
Pilot	Food Service Equipment	1,472,308	1,177,847			1,177,847	0.74
Pilot	HVAC	32,247	25,798		307,107	332,904	0.21
Pilot	Appliances	71,594	57,275			57,275	0.04
Pilot	Hot Water	13,941	11,153		13,629	24,782	0.02
Pilot	Subtotal	1,590,091	1,272,073		320,736	1,592,809	1.00
Market Transformation	Appliances	10,602,500	10,602,500			10,602,500	1.00
Market Transformation	Subtotal	10,602,500	10,602,500			10,602,500	1.00
Voltage Optimization	Voltage Optimization	179,982,384	179,982,384			179,982,384	1.00
Voltage Optimization	Subtotal	179,982,384	179,982,384			179,982,384	1.00
	Total	1,700,832,365	1,565,939,616	145,396,174	12,406,329	1,723,742,120	1.00

Note: The verified kWh savings (direct) 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 electrification savings and converted kWh that ComEd can claim towards goal.

Source: Evaluation team analysis

Ten (10) 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.

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

Sector	Program	End Use Type	Savings Category	Ex Ante Annual Water Savings (gallons)	Verified Annual Water Savings (gallons)	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate (RRwater)	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Business & Public Sector	New Construction - Bus/Pub	Other	Whole Building	10,925,789	12,075,279	54,738	1.11	60,497	0.48	29,039
Business & Public Sector	Small Business	Other	Small Business Kits	3,179,137	3,179,250	15,927	1.00	15,928	0.94	14,972
Business & Public Sector	Small Business	Hot Water	Kitchen & Bathroom Faucet Aerator	389,613	389,613	1,952	1.00	1,952	0.97	1,893
Business & Public Sector	Small Business	Food Service Equipment	High Efficiency Pre-Rinse Spray Valve	119,434	119,434	598	1.00	598	0.97	580
Business & Public Sector	Small Business	Hot Water	Low Flow Showerhead	8,101	8,101	41	1.00	41	0.97	39
Business & Public Sector		Subtotal		14,622,073	15,771,676	73,257	1.08	79,016	0.59	46,524
Res & IE	Product Distribution	Hot Water	Low Flow Showerhead	141,103,387	142,606,883	0		714,460	1.00	714,460
Res & IE	Product Distribution	Hot Water	Shower Timer	63,324,536	63,324,541	0		317,256	1.00	317,256
Res & IE	Product Distribution	Hot Water	Kitchen & Bathroom Faucet Aerator	37,116,804	37,427,580	0		187,512	1.00	187,512
Res & IE	Multifamily Upgrades			95,968	24,493,697	24,384	5.01	122,233	1.01	122,901
Res & IE	Retail/Online	Appliances	Clothes Washer	25,182,246	25,260,270	126,163	1.00	126,554	0.63	79,729
Res & IE	Product Distribution	Hot Water	Residential Water Savings Kit	10,005,842	10,420,445	0		52,206	1.00	52,206
Res & IE	Single-Family Upgrades	Hot Water	Kitchen & Bathroom Faucet Aerator	5,779,769	5,784,701	0		28,981	1.01	29,375
Res & IE	Single-Family Upgrades	Hot Water	Low Flow Showerhead	4,446,053	4,445,547	0		22,272	1.02	22,632
Res & IE	New Construction - IE			4,346,269	4,329,484	10,274	1.00	10,274	1.00	10,274
Res & IE	Electric Home New Construction	Hot Water	Hot Water Conservation	132,065	133,409	662	1.01	668	0.80	535
Res & IE	Electric Home New Construction	Appliances	Freezer & Refrigerator	58,532	58,532	293	1.00	293	0.80	234
Res & IE	Retail/Online	Food Service Equipment	ENERGY STAR Dishwasher	0	6,982	0		35	0.62	22
Res & IE		Subtotal		291,591,471	318,292,071	161,776	9.79	1,582,745	0.97	1,537,137
Pilot	Upstream Commercial Food Service Equipment	Food Service Equipment	Steamers	0	1,038,230	0		3,667	0.80	2,934
Pilot	Upstream Commercial Food Service Equipment	Food Service Equipment	Dishwashers	0	298,595	1,564	0.96	1,496	0.80	1,197
Pilot	Upstream Commercial Food Service Equipment	Food Service Equipment	High Efficiency Pre-Rinse Spray Valve	0	22,864	42	2.73	115	0.80	92
Pilot		Subtotal		0	1,359,688	1,606	3.29	5,278	0.80	4,222
Market Transformation	ENERGY STAR Retail Products Platform	Appliances	Clothes Washer	0	34,965,796	0		175,179	1.00	175,179
Market Transformation		Subtotal		0	34,965,796	0		175,179	1.00	175,179
Portfolio		Total		306,213,545	370,389,232	236,639	7.79	1,842,218	0.96	1,763,062

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

\* A deemed value. Source is to be found on the IL SAG web site here: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2022>.

Source: ComEd tracking data and evaluation team analysis

## **5. Total Resource Cost Savings and Lifetime 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 and electrification savings). It includes the total cost by program and cost per unit. Table 5-2 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 CY2022 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 & Public Sector	Incentives	0.99	265,103,071	39,762	0.87	230,272,621	35,830	3,151,873,525	0.27	0.02	62,693,319	2,879	Projects	13.9
Business & Public Sector	Small Business	1.02	259,368,247	46,317	0.97	251,591,666	44,927	3,004,333,958	0.34	0.03	85,369,758	8,688	Projects	12.7
Business & Public Sector	Midstream/Upstream	1.17	222,354,690	50,609	0.81	180,047,539	40,965	1,810,104,179	0.08	0.01	14,844,634	1,791,294	Measures	11.6
Business & Public Sector	Targeted Systems	0.98	106,079,922	11,959	0.85	90,144,532	9,863	616,666,397	0.27	0.04	24,678,072	682	Measures	6.8
Business & Public Sector	Behavior Bus/Pub	1.19	47,468,176		0.97	46,044,131		322,308,914	0.13	0.02	6,025,147	110	Projects	7.0
Business & Public Sector	New Construction - Bus/Pub	0.95	22,410,491	3,354	0.48	10,757,036	1,610	187,172,422	0.32	0.02	3,457,431	65	Projects	17.4
Business & Public Sector	Assessments	0.95	3,855,713		0.94	3,624,370		15,471,718	0.22	0.05	787,198	44	Measures	4.3
Business & Public Sector	Subtotal	1.04	926,640,310	152,002	0.88	812,481,895	133,195	9,107,931,113	0.24	0.02	197,855,559	1,803,762		11.9
Res & IE	Retail/Online	1.16	351,948,577	51,022	0.65	227,020,791	34,339	1,867,253,824	0.18	0.02	40,061,037	6,996,363	Measures	10.3
Res & IE	Product Distribution	1.15	180,428,663	21,608	0.99	179,037,503	21,463	1,719,686,916	0.09	0.01	16,335,362	4,836,982	Measures	11.0
Res & IE	Multifamily Upgrades	1.04	26,400,181	3,881	0.97	25,517,724	3,584	249,057,324	1.31	0.13	33,315,153	4,528,164	Measures	11.8
Res & IE	Single-Family Upgrades	1.00	17,055,718	3,599	0.90	15,364,723	3,352	151,210,528	1.96	0.20	30,124,732	5,007,508	Measures	16.0
Res & IE	Contractor / Midstream Rebates	0.98	4,491,603	1,822	0.80	3,599,994	1,455	48,880,253	0.95	0.07	3,426,348	6,620	Measures	15.9
Res & IE	New Construction - IE	0.98	1,606,864	232	1.00	1,606,864	232	23,522,619	1.62	0.11	2,606,424	697,626	Measures	14.2
Res & IE	Electric Home New Construction	0.87	85,475	18	0.80	68,380	14	1,002,161	3.50	0.24	239,525	220	Measure	15.2
Res & IE	Behavior - Res/IE					109,384,787	18,880	355,391,073	0.06	0.02	6,189,296	1,602,354	Household	10.0
Res & IE	Subtotal	1.14	582,017,081	82,181	0.96	561,600,765	83,320	4,416,004,699	0.23	0.03	132,297,876	23,675,837		10.8
Pilot	Upstream Commercial Food Service Equipment	1.21	1,543,903	185	0.80	1,235,122	148	15,308,260				345	Measures	12.4
Pilot	VHSP as AC Replacement		32,247	16	0.80	25,798	13	297,925				24	Measures	16.0
Pilot	Heat Pump Water Heater Pilot	0.84	13,941	1	0.80	11,153	1	167,297				4	Measures	15.0
Pilot	Subtotal	1.23	1,590,091	201	0.80	1,272,073	161	15,773,482	0.00	0.00	0	373		12.5
Market Transformation	ENERGY STAR Retail Products Platform	3.68	10,602,500	1,572	1.00	10,602,500	1,572	159,282,455				38,912	Measures	15.0
Market Transformation	Subtotal	3.68	10,602,500	1,572	1.00	10,602,500	1,572	159,282,455	0.00	0.00	0	38,912		15.0
Voltage Optimization	Voltage Optimization	1.01	179,982,384	35,780	1.00	179,982,384	35,780	2,699,735,756						15.0
Voltage Optimization	Subtotal	1.01	179,982,384	35,780	1.00	179,982,384	35,780	2,699,735,756	0.00	0.00	0	0		15.0
Portfolio	Grand Total		1,700,832,365	271,736		1,565,939,616	254,027	16,398,727,505	0.21	0.02	330,153,436	25,518,884		11.6

Note: The lifetime net savings are equal to values from the electric CPAS Table 2-3.

Source: Cost values are from the ComEd - CY2022 Q4 Statewide Quarterly Report; Evaluation team analysis.

**Table 5-2. Total Resource Cost Savings Summary**

Sector	Program	WAML (years)	Verified Electric Energy Savings (kWh)	Gross Peak Demand Reduction (kW)	Verified Gross Gas Savings (Therms)	Verified Gross Electrification (Fuel Switch, kWh)	Gross Secondary Savings due to Water Reduction (kWh)	Gross Heating Penalty (kWh)*	Gross Heating Penalty (Therms)†	NTG (kWh)	NTG (kW)	NTG (Therms)	Verified Electric Energy Savings (kWh)	Verified Net Peak Demand Reduction (kW)	Verified Net Gas Savings (Therms)	Verified Net Electrification (Fuel Switch, kWh)	Net Secondary Savings due to Water Reduction (kWh)	Net Heating Penalty (kWh)	Net Heating Penalty (Therms)
Business & Public Sector	Incentives	13.9	265,103,071	39,762	1,612,696	-	-	(1,860,953)	0.87	0.90	0.89	230,272,621	35,830	1,436,412	-	-	-	(1,839,970)	
Business & Public Sector	Small Business	12.7	259,349,728	46,317	838,345	-	18,519	(1,750,089)	0.97	0.97	0.98	251,574,180	44,927	818,107	-	-	17,486	(1,697,586)	(2,184,838)
Business & Public Sector	Midstream/Upstream	11.6	222,354,690	50,609	-	-	-	(3,062,833)	0.81	0.81	0.81	180,047,539	40,965	-	-	-	-	-	(2,480,363)
Business & Public Sector	Targeted Systems	6.8	106,079,922	11,959	219,628	-	-	-	0.85	0.82	0.94	90,144,532	9,863	207,423	-	-	-	-	-
Business & Public Sector	Behavior Bus/Pub	7.0	47,468,176	-	-	-	-	-	0.97	-	-	46,044,131	-	-	-	-	-	-	-
Business & Public Sector	New Construction - Bus/Pub	17.4	22,349,994	3,354	8,382	-	60,497	(9,633)	0.48	0.48	0.48	10,727,997	1,610	4,023	-	-	29,039	(4,624)	(3,846)
Business & Public Sector	Assessments	4.3	3,855,713	-	449	-	-	-	0.94	-	0.94	3,624,370	-	422	-	-	-	-	-
Res & IE	Retail/Online*	10.3	351,820,112	51,022	3,978,038	-	128,464	(6,456,549)	0.65	0.67	1.00	226,939,884	34,339	3,960,321	-	-	80,907	-	(3,770,589)
Res & IE	Product Distribution	11.0	179,157,228	21,608	1,058,182	-	1,271,435	(2,295,734)	0.99	0.99	1.00	177,766,068	21,463	1,058,182	-	-	1,271,435	-	(2,268,697)
Res & IE	Single-Family Upgrades	11.8	26,277,948	3,881	1,195,630	-	122,233	(79,898)	0.97	0.92	1.00	25,394,823	3,584	1,193,276	-	-	122,901	-	(78,463)
Res & IE	Contractor / Midstream Rebates	16.0	17,004,465	3,599	1,230,018	711,126	51,254	(237,917)	0.90	0.93	0.99	15,312,716	3,352	1,217,130	711,126	52,007	(200,139)	(184,065)	
Res & IE	New Construction - IE	15.9	4,491,603	1,822	133,986	9,263,163	-	-	0.80	0.80	0.90	3,599,994	1,455	120,516	7,366,052	-	-	-	-
Res & IE	Electric Home New Construction	14.2	1,596,590	232	44,278	3,572,849	10,274	(9,551)	1.00	1.00	1.00	1,596,590	232	44,278	3,572,849	10,274	-	-	(9,551)
Res & IE	Multifamily Upgrades	15.2	84,514	18	-	544,458	961	(844)	0.80	0.80	-	67,611	14	-	435,567	769	(675)	-	-
Res & IE	Behavior - Res/IE	10.0	-	-	-	-	-	-	-	-	-	109,384,787	18,880	-	-	-	-	-	-
Pilot	Upstream Commercial Food Service Equipment	12.4	1,538,625	185	-	-	5,278	-	0.80	0.80	-	1,230,900	148	-	-	-	4,222	-	-
Pilot	VHSP as AC Replacement	16.0	32,247	16	-	383,883	-	-	0.80	0.80	-	25,798	13	-	307,107	-	-	-	-
Pilot	Heat Pump Water Heater Pilot	15.0	13,941	1	(9)	17,036	-	-	0.80	0.80	0.80	11,153	1	(7)	13,629	-	-	-	-
Market Transformation	ENERGY STAR Retail Products Platform	15.0	10,427,321	1,572	-	-	175,179	-	1.00	1.00	-	10,427,321	1,572	-	-	-	175,179	-	-
Voltage Optimization	Voltage Optimization	15.0	179,982,384	35,780	-	-	-	-	1.00	1.00	-	179,982,384	35,780	-	-	-	-	-	-
<b>Total</b>		<b>11.8</b>	<b>1,698,988,271</b>	<b>271,736</b>	<b>10,319,624</b>	<b>14,492,517</b>	<b>1,844,093</b>	<b>(1,998,482)</b>	<b>(16,239,725)</b>	<b>0.86</b>	<b>0.85</b>	<b>0.91</b>	<b>1,564,175,398</b>	<b>254,027</b>	<b>10,060,083</b>	<b>12,406,329</b>	<b>1,764,218</b>	<b>(1,903,024)</b>	<b>(12,820,383)</b>

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 direct savings from Table 3-1 minus those shown in Table 4-4. Savings from electrification are presented separately in this table and excluded from the direct

\* 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.

Source: Evaluation team analysis

## 6. High Impact Measures of CY2022

Table 6-1 through Table 6-6 provide the list of CY2022 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 and electrification savings.

**Table 6-1. Summary Table of CY2022 High Impact Measures – Business Gross Impact**

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Gross)	Weighted Average Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Business & Public Sector	Interior & Exterior LED Fixtures	Lighting	246,368,375	13.2	-	2,867,912,961	246,368,375	22.2%	22.2%
Business & Public Sector	VO	Voltage Optimization	179,982,384	15.0	-	2,699,735,756	179,982,384	16.2%	38.4%
Business & Public Sector	Other Lighting	Lighting	154,427,777	12.6	-	1,913,250,325	154,427,777	13.9%	52.3%
Business & Public Sector	TLED Lamps	Lighting	63,711,819	15.0	-	955,240,490	63,711,819	5.7%	58.1%
Business & Public Sector	Standard LED Lamps	Lighting	60,513,944	6.8	-	338,444,368	60,513,944	5.5%	63.5%
Business & Public Sector	Strategic Energy Management	Other	47,468,176	7.0	-	332,277,231	47,468,176	4.3%	67.8%
Business & Public Sector	Other Non-lighting	Other	43,965,280	12.9	-	566,043,585	43,965,280	4.0%	71.8%
Business & Public Sector	Leak Repair	Compressed Air	41,847,141	3.0	-	125,541,422	41,847,141	3.8%	75.5%
Business & Public Sector	New Construction	Other	36,564,700	13.5	-	502,332,248	36,564,700	3.3%	78.8%
Business & Public Sector	Carryover Lamps	Lighting	35,771,179	10.1	-	292,629,275	35,771,179	3.2%	82.0%
Business & Public Sector	Occupancy Sensor & Other Controls	Lighting	32,073,031	13.9	-	447,246,915	32,073,031	2.9%	84.9%
Business & Public Sector	Retro & Virtual Commissioning	Other	27,144,686	7.3	-	198,156,208	27,144,686	2.4%	87.4%
Business & Public Sector	Whole Building	Other	22,410,491	17.4	-	389,942,547	22,410,491	2.0%	89.4%
Business & Public Sector	Compressor system	Compressed Air	17,978,236	12.4	-	223,807,509	17,978,236	1.6%	91.0%
Business & Public Sector	Streetlights	Lighting	17,775,751	20.0	-	355,515,010	17,775,751	1.6%	92.6%
Business & Public Sector	Weather Stripping	Other	13,089,150	10.0	-	130,891,495	13,089,150	1.2%	93.8%
Business & Public Sector	Variable Speed Drive	HVAC	10,352,171	17.3	-	179,337,717	10,352,171	0.9%	94.7%
Business & Public Sector	LED HID	Lighting	8,179,223	14.4	-	117,692,184	8,179,223	0.7%	95.5%
Business & Public Sector	LED Exit Signs, Channel Sign & Nightlight	Lighting	6,944,509	5.0	-	34,722,545	6,944,509	0.6%	96.1%
Business & Public Sector	Commercial & Industrial Refrigeration	Refrigeration	6,451,571	11.6	-	74,719,892	6,451,571	0.6%	96.7%
Business & Public Sector	EC Motor for Cooler or Freezer	Refrigeration	5,218,837	14.1	-	73,348,301	5,218,837	0.5%	97.1%
Business & Public Sector	HVAC Control System & Maintenance	HVAC	4,913,917	10.7	-	52,557,477	4,913,917	0.4%	97.6%
Business & Public Sector	EMS	EMS & BAS	4,605,480	15.0	-	69,082,207	4,605,480	0.4%	98.0%
Business & Public Sector	Other Non-lighting	HVAC	3,200,520	14.5	-	46,311,113	3,200,520	0.3%	98.3%
Business & Public Sector	BOC Training	Other	2,266,400	13.0	-	20,896,206	2,266,400	0.2%	98.5%
Business & Public Sector	Other Non-lighting	Food Service Equipment	398,517	19.3	1,716,633	42,015,946	2,115,149	0.2%	98.7%
Business & Public Sector	Programmable/Reprogrammable Thermostat	HVAC	1,974,264	10.1	-	19,964,413	1,974,264	0.2%	98.9%
Business & Public Sector	Waste Water Treatment	Other	1,943,531	13.0	-	25,265,898	1,943,531	0.2%	99.0%
Business & Public Sector	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	1,223,550	10.0	-	12,235,500	1,223,550	0.1%	99.2%
Business & Public Sector	Small Business Kits	Other	1,220,039	6.7	-	7,083,741	1,220,039	0.1%	99.3%
Business & Public Sector	Combined Heat and Power	HVAC	1,109,663	24.5	-	27,219,686	1,109,663	0.1%	99.4%
Business & Public Sector	Packaged RTU Sealing	HVAC	1,008,459	13.1	-	13,171,941	1,008,459	0.1%	99.5%
Business & Public Sector	Process Cooling & Heating	HVAC	860,692	6.2	-	5,337,770	860,692	0.1%	99.5%
Business & Public Sector	Advanced Power Strips	Consumer Electronics	832,017	7.0	-	5,824,118	832,017	0.1%	99.6%
Business & Public Sector	Tune-up	HVAC	727,049	3.0	-	2,181,148	727,049	0.1%	99.7%
Business & Public Sector	Equipment Optimization	Telecomm	696,046	10.0	-	6,960,462	696,046	0.1%	99.7%
Business & Public Sector	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	526,897	11.9	-	6,286,230	526,897	0.0%	99.8%
Business & Public Sector	Steamers	Food Service Equipment	512,178	12.0	-	6,146,137	512,178	0.0%	99.8%
Business & Public Sector	Strip Curtains for Cooler or Freezer	Refrigeration	351,309	4.0	-	1,405,236	351,309	0.0%	99.9%
Business & Public Sector	Deck Ovens	Food Service Equipment	323,317	12.0	-	3,879,804	323,317	0.0%	99.9%
Business & Public Sector	High-Efficiency Air Nozzles	Compressed Air	235,976	15.0	-	3,539,634	235,976	0.0%	99.9%
Business & Public Sector	Night Covers	Refrigeration	180,960	5.0	-	904,800	180,960	0.0%	99.9%
Business & Public Sector	Room & Central Air Conditioner	HVAC	143,954	15.0	-	1,406,897	143,954	0.0%	99.9%
Business & Public Sector	Demand Control Ventilation	HVAC	142,452	10.0	-	1,424,518	142,452	0.0%	100.0%
Business & Public Sector	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	138,032	8.0	-	1,104,256	138,032	0.0%	100.0%
Business & Public Sector	Freezer & Refrigerator	Appliances	84,942	12.0	-	1,019,301	84,942	0.0%	100.0%

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Gross)	Weighted Average Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Business & Public Sector	Battery Charger	Consumer Electronics	63,549	15.0	-	953,235	63,549	0.0%	100.0%
Business & Public Sector	Demand Control Ventilation	Food Service Equipment	59,592	20.0	-	1,191,840	59,592	0.0%	100.0%
Business & Public Sector	Dishwashers	Food Service Equipment	45,805	15.7	-	718,747	45,805	0.0%	100.0%
Business & Public Sector	Kitchen & Bathroom Faucet Aerator	Hot Water	36,266	10.0	-	362,662	36,266	0.0%	100.0%
Business & Public Sector	Computer Power Controls	Consumer Electronics	33,602	3.0	-	100,806	33,602	0.0%	100.0%
Business & Public Sector	Energy Efficient Hand Dryer	Other	25,363	10.0	-	253,634	25,363	0.0%	100.0%
Business & Public Sector	High Efficiency Pre-Rinse Spray Valve	Food Service Equipment	21,540	5.0	-	107,701	21,540	0.0%	100.0%
Business & Public Sector	HVAC Economizer	HVAC	9,181	5.0	-	45,904	9,181	0.0%	100.0%
Business & Public Sector	Beverage, Snack and Cooler Machine Controls	Food Service Equipment	5,680	5.0	-	28,399	5,680	0.0%	100.0%
Business & Public Sector	Hot Food Holding Cabinets	Food Service Equipment	4,405	12.0	-	52,861	4,405	0.0%	100.0%
Business & Public Sector	Roof Insulation for C&I Facilities	Other	1,778	20.0	-	35,555	1,778	0.0%	100.0%
Business & Public Sector	Low Flow Showerhead	Hot Water	1,053	10.0	-	10,532	1,053	0.0%	100.0%
Business & Public Sector	Smart Socket	Consumer Electronics	194	7.0	-	1,355	194	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, including electrification savings plus counted kWh converted, where applicable). Business & Public Sector measure list include the Voltage Optimization and the pilot Upstream Commercial Food Service Equipment programs.

Source: Evaluation team analysis

**Table 6-2. Summary Table of CY2022 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	230,892,909	-	230,892,909	23.2%	23.2%
Business	Voltage Optimization	Voltage Optimization	179,982,384	-	179,982,384	18.1%	41.3%
Business	Other Lighting	Lighting	151,630,624	-	151,630,624	15.2%	56.5%
Business	Standard LED Lamps	Lighting	50,831,713	-	50,831,713	5.1%	61.6%
Business	TLED Lamps	Lighting	50,332,337	-	50,332,337	5.1%	66.7%
Business	Strategic Energy Management	Other	46,044,131	-	46,044,131	4.6%	71.3%
Business	Other Non-lighting	Other	38,999,486	-	38,999,486	3.9%	75.2%
Business	Leak Repair	Compressed Air	32,222,298	-	32,222,298	3.2%	78.5%
Business	Occupancy Sensor & Other Controls	Lighting	31,110,809	-	31,110,809	3.1%	81.6%
Business	Carryover Lamps	Lighting	28,852,232	-	28,852,232	2.9%	84.5%
Business	Retro & Virtual Commissioning	Other	25,244,558	-	25,244,558	2.5%	87.0%
Business	New Construction	Other	16,819,762	-	16,819,762	1.7%	88.7%
Business	Streetlights	Lighting	16,615,851	-	16,615,851	1.7%	90.4%
Business	Compressor system	Compressed Air	14,322,046	-	14,322,046	1.4%	91.8%
Business	Weather Stripping	Other	12,696,475	-	12,696,475	1.3%	93.1%
Business	Whole Building	Other	10,757,036	-	10,757,036	1.1%	94.2%
Business	Variable Speed Drive	HVAC	9,098,379	-	9,098,379	0.9%	95.1%
Business	LED HID	Lighting	6,870,547	-	6,870,547	0.7%	95.8%
Business	LED Exit Signs, Channel Sign & Nightlight	Lighting	5,577,138	-	5,577,138	0.6%	96.3%
Business	Commercial & Industrial Refrigeration	Refrigeration	5,540,889	-	5,540,889	0.6%	96.9%
Business	EC Motor for Cooler or Freezer	Refrigeration	5,062,272	-	5,062,272	0.5%	97.4%
Business	HVAC Control System & Maintenance	HVAC	4,263,483	-	4,263,483	0.4%	97.8%
Business	EMS	EMS & BAS	3,941,749	-	3,941,749	0.4%	98.2%
Business	BOC Training	Other	2,266,400	-	2,266,400	0.2%	98.5%
Business	Programmable/Reprogrammable Thermostat	HVAC	1,943,996	-	1,943,996	0.2%	98.7%
Business	Other Non-lighting	Food Service Equipment	354,680	1,527,803	1,882,483	0.2%	98.9%
Business	Other Non-lighting	HVAC	1,504,244	-	1,504,244	0.2%	99.0%
Business	Anti-Sweat Heater Controls for Glass Door Cooler or Refrigerator	Refrigeration	1,186,844	-	1,186,844	0.1%	99.1%
Business	Small Business Kits	Other	1,146,836	-	1,146,836	0.1%	99.2%
Business	Waste Water Treatment	Other	913,459	-	913,459	0.1%	99.3%
Business	Packaged RTU Sealing	HVAC	840,000	-	840,000	0.1%	99.4%
Business	Advanced Power Strips	Consumer Electronics	807,056	-	807,056	0.1%	99.5%
Business	Tune-up	HVAC	705,238	-	705,238	0.1%	99.6%
Business	Process Cooling & Heating	HVAC	705,050	-	705,050	0.1%	99.6%
Business	Equipment Optimization	Telecomm	556,837	-	556,837	0.1%	99.7%
Business	Combined Heat and Power	HVAC	521,541	-	521,541	0.1%	99.7%
Business	Ice Machine, Fryer, Combination & Convection Ovens	Food Service Equipment	421,517	-	421,517	0.0%	99.8%
Business	Steamers	Food Service Equipment	409,742	-	409,742	0.0%	99.8%
Business	Strip Curtains for Cooler or Freezer	Refrigeration	340,770	-	340,770	0.0%	99.9%
Business	Deck Ovens	Food Service Equipment	258,654	-	258,654	0.0%	99.9%
Business	High-Efficiency Air Nozzles	Compressed Air	181,701	-	181,701	0.0%	99.9%
Business	Night Covers	Refrigeration	175,531	-	175,531	0.0%	99.9%
Business	Room & Central Air Conditioner	HVAC	139,635	-	139,635	0.0%	99.9%
Business	Demand Control Ventilation	HVAC	138,178	-	138,178	0.0%	100.0%
Business	Auto Closer for Walk-in Cooler or Freezer	Refrigeration	133,891	-	133,891	0.0%	100.0%
Business	Freezer & Refrigerator	Appliances	70,222	-	70,222	0.0%	100.0%
Business	Battery Charger	Consumer Electronics	50,839	-	50,839	0.0%	100.0%

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	Demand Control Ventilation	Food Service Equipment	47,674	-	47,674	0.0%	100.0%
Business	Dishwashers	Food Service Equipment	36,644	-	36,644	0.0%	100.0%
Business	Kitchen & Bathroom Faucet Aerator	Hot Water	35,178	-	35,178	0.0%	100.0%
Business	Computer Power Controls	Consumer Electronics	31,586	-	31,586	0.0%	100.0%
Business	Energy Efficient Hand Dryer	Other	24,603	-	24,603	0.0%	100.0%
Business	High Efficiency Pre-Rinse Spray Valve	Food Service Equipment	20,875	-	20,875	0.0%	100.0%
Business	HVAC Economizer	HVAC	8,905	-	8,905	0.0%	100.0%
Business	Beverage, Snack and Cooler Machine Controls	Food Service Equipment	5,509	-	5,509	0.0%	100.0%
Business	Hot Food Holding Cabinets	Food Service Equipment	3,524	-	3,524	0.0%	100.0%
Business	Roof Insulation for C&I Facilities	Other	1,724	-	1,724	0.0%	100.0%
Business	Low Flow Showerhead	Hot Water	1,022	-	1,022	0.0%	100.0%
Business	Smart Socket	Consumer Electronics	188	-	188	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, including electrification savings plus counted kWh converted, where applicable). Business & Public Sector measure list include the Voltage Optimization and the pilot Upstream Commercial Food Service Equipment programs.

Source: Evaluation team analysis

**Table 6-3. Summary Table of CY2022 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 Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Market Rate (Residential)	Omni-Directional LED Lamps	Lighting	91,018,984	9.5	-	533,594,215	91,018,984	27.0%	26.98%
Market Rate (Residential)	Specialty LED Lamps	Lighting	50,289,572	9.3	-	387,309,545	50,289,572	14.9%	41.89%
Market Rate (Residential)	Decorative & Directional LED Lamps	Lighting	43,389,684	9.3	-	314,435,250	43,389,684	12.9%	54.75%
Market Rate (Residential)	Carryover Lamps	Lighting	41,982,892	9.5	-	318,462,715	41,982,892	12.4%	67.20%
Market Rate (Residential)	Interior & Exterior LED Fixtures	Lighting	27,377,060	14.4	-	283,591,681	27,377,060	8.1%	75.31%
Market Rate (Residential)	Advanced Thermostat	HVAC	21,590,096	11	-	237,491,053	21,590,096	6.4%	81.71%
Market Rate (Residential)	Freezer & Refrigerator	Appliances	12,067,655	15.3	-	184,170,689	12,067,655	3.6%	85.29%
Market Rate (Residential)	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	11,982,251	15.8	-	174,164,946	11,982,251	3.6%	88.84%
Market Rate (Residential)	Advanced Power Strips	Consumer Electronics	8,847,723	7	-	61,934,060	8,847,723	2.6%	91.46%
Market Rate (Residential)	LED Exit Signs, Channel Sign & Nightlight	Lighting	6,214,820	7.5	-	46,305,279	6,214,820	1.8%	93.31%
Market Rate (Residential)	Air Purifier	Appliances	5,198,910	9	-	46,790,191	5,198,910	1.5%	94.85%
Market Rate (Residential)	Standard LED Lamps	Lighting	5,139,770	6.3	-	30,678,108	5,139,770	1.5%	96.37%
Market Rate (Residential)	Dehumidifier	Appliances	4,524,545	12	-	54,294,546	4,524,545	1.3%	97.71%
Market Rate (Residential)	Room & Central Air Conditioner	HVAC	1,362,275	17.6	-	20,477,437	1,362,275	0.4%	98.11%
Market Rate (Residential)	LED HID	Lighting	942,911	10	-	9,429,109	942,911	0.3%	98.39%
Market Rate (Residential)	Low Flow Showerhead	Hot Water	906,220	5.8	-	5,237,261	906,220	0.3%	98.66%
Market Rate (Residential)	High Performance HVAC Equipment	HVAC	839,858	15.7	-	12,016,722	839,858	0.2%	98.91%
Market Rate (Residential)	Clothes Washer	Appliances	715,259	14	-	10,013,632	715,259	0.2%	99.12%
Market Rate (Residential)	Acrylic Caulk	Shell	57,515	20	542,951	85,841,149	600,466	0.2%	99.30%
Market Rate (Residential)	Door Sweep	Shell	543,114	20	-	10,862,272	543,114	0.2%	99.46%
Market Rate (Residential)	Ventilation Fan	Appliances	379,685	19	-	7,214,011	379,685	0.1%	99.58%
Market Rate (Residential)	Water Dispenser	Appliances	246,286	10	-	2,462,856	246,286	0.1%	99.65%
Market Rate (Residential)	Programmable/Reprogrammable Thermostat	HVAC	210,441	11	-	2,314,850	210,441	0.1%	99.71%
Market Rate (Residential)	Clothes Dryer	Appliances	196,792	16	-	3,148,667	196,792	0.1%	99.77%
Market Rate (Residential)	Kitchen & Bathroom Faucet Aerator	Hot Water	169,225	10	-	1,692,253	169,225	0.1%	99.82%
Market Rate (Residential)	Gas & HP Water Heater	Hot Water	147,988	15	-	2,219,826	147,988	0.0%	99.86%
Market Rate (Residential)	Duct Insulation & Sealing	HVAC	8,793	20	105,274	2,279,474	114,067	0.0%	99.90%
Market Rate (Residential)	Air Sealing	Shell	43,643	19.9	-	872,717	43,643	0.0%	99.91%
Market Rate (Residential)	Water Heater Temperature Setback	Hot Water	40,856	2	-	81,712	40,856	0.0%	99.92%
Market Rate (Residential)	Kits	Other	36,493	13.9	-	36,493	36,493	0.0%	99.93%
Market Rate (Residential)	Occupancy Sensor & Other Controls	Lighting	32,371	10	-	322,720	32,371	0.0%	99.94%
Market Rate (Residential)	Variable Speed Drive	HVAC	28,642	12.7	-	429,623	28,642	0.0%	99.95%
Market Rate (Residential)	Other Non-lighting	Consumer Electronics	26,053	6	-	156,311	26,053	0.0%	99.96%
Market Rate (Residential)	Tune-up	HVAC	24,218	3	-	72,654	24,218	0.0%	99.97%
Market Rate (Residential)	Pipe Insulation	Hot Water	23,902	14.9	-	356,141	23,902	0.0%	99.97%
Market Rate (Residential)	Other Non-lighting	HVAC	20,487	15.3	-	313,304	20,487	0.0%	99.98%
Market Rate (Residential)	Reduced Infiltration & Thermal Bridging	Shell	16,612	20	-	332,241	16,612	0.0%	99.98%
Market Rate (Residential)	Hot Water Conservation	Hot Water	15,559	10	-	155,593	15,559	0.0%	99.99%
Market Rate (Residential)	Electric Dryers	Appliances	9,888	16	-	158,205	9,888	0.0%	99.99%
Market Rate (Residential)	Energy Recovery Ventilation	HVAC	8,700	15	-	130,506	8,700	0.0%	99.99%
Market Rate (Residential)	HVAC Control System & Maintenance	HVAC	7,602	11	-	83,627	7,602	0.0%	100.00%
Market Rate (Residential)	Efficient Appliances	Appliances	3,720	14.7	-	54,830	3,720	0.0%	100.00%
Market Rate (Residential)	Shower Timer	Hot Water	3,132	2	-	6,265	3,132	0.0%	100.00%
Market Rate (Residential)	Packaged RTU Sealing	HVAC	1,791	25	-	26,861	1,791	0.0%	100.00%
Market Rate (Residential)	Motors/Fans/Pumps	HVAC	1,722	19	-	32,722	1,722	0.0%	100.00%
Market Rate (Residential)	ECM Furnace Blower & Motor	HVAC	690	6	-	4,140	690	0.0%	100.00%
Market Rate (Residential)	ENERGY STAR Dishwasher	Food Service Equipment	654	11	-	7,191	654	0.0%	100.00%

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Average Gross)	Weighted Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Market Rate (Residential)	EV Chargers	Other	434	10	-	4,340	434	0.0%	100.00%
Market Rate (Residential)	Bathroom & Kitchen Exhaust Fan	HVAC	172	20	-	3,266	172	0.0%	100.00%
Market Rate (Residential)	Behavior Savings								

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, including electrification savings plus counted kWh converted, where applicable). Market Rate (Residential) measure list include the market transformation program and VSHP as Replacement and Heat Pump Pilot measures.

Source: Evaluation team analysis

**Table 6-4. Summary Table of CY2022 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
Market Rate (Residential)	Behavioral Savings	Behavior	109,384,787	-	109,384,787	34.0%	34.00%
Market Rate (Residential)	Omni-Directional LED Lamps	Lighting	48,014,725	-	48,014,725	14.9%	48.92%
Market Rate (Residential)	Specialty LED Lamps	Lighting	30,439,993	-	30,439,993	9.5%	58.38%
Market Rate (Residential)	Carryover Lamps	Lighting	23,560,828	-	23,560,828	7.3%	65.71%
Market Rate (Residential)	Decorative & Directional LED Lamps	Lighting	22,632,047	-	22,632,047	7.0%	72.74%
Market Rate (Residential)	Advanced Thermostat	HVAC	21,449,814	-	21,449,814	6.7%	79.41%
Market Rate (Residential)	Interior & Exterior LED Fixtures	Lighting	14,810,100	-	14,810,100	4.6%	84.01%
Market Rate (Residential)	Other Non-lighting	HVAC	10,619,234	-	10,619,234	3.3%	87.31%
Market Rate (Residential)	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	9,531,981	-	9,531,981	3.0%	90.27%
Market Rate (Residential)	Advanced Power Strips	Consumer Electronics	6,735,514	-	6,735,514	2.1%	92.37%
Market Rate (Residential)	LED Exit Signs, Channel Sign & Nightlight	Lighting	5,074,916	-	5,074,916	1.6%	93.94%
Market Rate (Residential)	Standard LED Lamps	Lighting	4,796,088	-	4,796,088	1.5%	95.43%
Market Rate (Residential)	Air Purifier	Appliances	4,095,671	-	4,095,671	1.3%	96.71%
Market Rate (Residential)	Dehumidifier	Appliances	3,029,613	-	3,029,613	0.9%	97.65%
Market Rate (Residential)	Room & Central Air Conditioner	HVAC	1,106,879	-	1,106,879	0.3%	97.99%
Market Rate (Residential)	Freezer & Refrigerator	Appliances	945,880	-	945,880	0.3%	98.29%
Market Rate (Residential)	Low Flow Showerhead	Hot Water	908,073	-	908,073	0.3%	98.57%
Market Rate (Residential)	LED HID	Lighting	738,213	-	738,213	0.2%	98.91%
Market Rate (Residential)	High Performance HVAC Equipment	HVAC	671,887	-	671,887	0.2%	99.12%
Market Rate (Residential)	Acrylic Caulk	Shell	57,515	542,951	600,466	0.2%	99.48%
Market Rate (Residential)	Door Sweep	Shell	543,114	-	543,114	0.2%	99.29%
Market Rate (Residential)	Ventilation Fan	Appliances	379,685	-	379,685	0.1%	99.60%
Market Rate (Residential)	Clothes Washer	Appliances	372,010	-	372,010	0.1%	98.69%
Market Rate (Residential)	Water Dispenser	Appliances	246,286	-	246,286	0.1%	99.67%
Market Rate (Residential)	Clothes Dryer	Appliances	196,792	-	196,792	0.1%	99.73%
Market Rate (Residential)	Programmable/Reprogrammable Thermostat	HVAC	186,617	-	186,617	0.1%	99.79%
Market Rate (Residential)	Kitchen & Bathroom Faucet Aerator	Hot Water	170,207	-	170,207	0.1%	99.85%
Market Rate (Residential)	Gas & HP Water Heater	Hot Water	118,391	-	118,391	0.0%	99.88%
Market Rate (Residential)	Duct Insulation & Sealing	HVAC	7,738	92,641	100,379	0.0%	99.91%
Market Rate (Residential)	Air Sealing	Shell	43,619	-	43,619	0.0%	99.93%
Market Rate (Residential)	Water Heater Temperature Setback	Hot Water	40,856	-	40,856	0.0%	99.94%
Market Rate (Residential)	Kits	Other	29,560	-	29,560	0.0%	99.95%
Market Rate (Residential)	Occupancy Sensor & Other Controls	Lighting	26,868	-	26,868	0.0%	99.96%
Market Rate (Residential)	Variable Speed Drive	HVAC	26,047	-	26,047	0.0%	99.97%
Market Rate (Residential)	Tune-up	HVAC	19,375	-	19,375	0.0%	99.97%
Market Rate (Residential)	Pipe Insulation	Hot Water	19,136	-	19,136	0.0%	99.98%
Market Rate (Residential)	Other Non-lighting	Consumer Electronics	16,114	-	16,114	0.0%	99.98%
Market Rate (Residential)	Reduced Infiltration & Thermal Bridging	Shell	13,290	-	13,290	0.0%	99.99%
Market Rate (Residential)	Hot Water Conservation	Hot Water	12,447	-	12,447	0.0%	99.99%
Market Rate (Residential)	Energy Recovery Ventilation	HVAC	6,960	-	6,960	0.0%	99.99%
Market Rate (Residential)	HVAC Control System & Maintenance	HVAC	6,082	-	6,082	0.0%	99.99%
Market Rate (Residential)	Electric Dryers	Appliances	6,060	-	6,060	0.0%	100.00%
Market Rate (Residential)	Shower Timer	Hot Water	3,226	-	3,226	0.0%	100.00%
Market Rate (Residential)	Efficient Appliances	Appliances	2,976	-	2,976	0.0%	100.00%
Market Rate (Residential)	Packaged RTU Sealing	HVAC	1,791	-	1,791	0.0%	100.00%
Market Rate (Residential)	Motors/Fans/Pumps	HVAC	1,378	-	1,378	0.0%	100.00%
Market Rate (Residential)	ECM Furnace Blower & Motor	HVAC	538	-	538	0.0%	100.00%

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
Market Rate (Residential)	ENERGY STAR Dishwasher	Food Service Equipment	404	-	404	0.0%	100.00%
Market Rate (Residential)	EV Chargers	Other	268	-	268	0.0%	100.00%
Market Rate (Residential)	Bathroom & Kitchen Exhaust Fan	HVAC	172	-	172	0.0%	100.00%

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, including electrification savings plus counted kWh converted, where applicable). Market Rate (Residential) measure list include the market transformation program and VSHP as Replacement and Heat Pump Pilot measures.

Source: Evaluation team analysis

**Table 6-5. Summary Table of CY2022 High Impact Measures – Income Eligible Gross Impact**

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Average Gross)	Weighted Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Income Eligible	Standard LED Lamps	Lighting	137,887,272	10	-	1,295,352,329	137,887,272	33.33%	33.33%
Income Eligible	Advanced Thermostat	HVAC	6,669,297	11	39,488,030	507,730,599	46,157,327	11.16%	44.49%
Income Eligible	Carryover Lamps	Lighting	35,071,987	10	-	312,734,549	35,071,987	8.48%	52.97%
Income Eligible	Attic/Wall/Basement /Floor/Foundation Insulation	Shell	4,191,634	12	20,231,473	435,132,715	24,423,107	5.90%	58.87%
Income Eligible	Weather Stripping	Shell	4,857,486	20	19,301,443	483,178,568	24,158,928	5.84%	64.71%
Income Eligible	Air Sealing	Shell	6,168,097	20	13,711,559	307,089,902	19,879,655	4.81%	69.51%
Income Eligible	Omni-Directional LED Lamps	Lighting	19,518,359	10	-	146,170,306	19,518,359	4.72%	74.23%
Income Eligible	Low Flow Showerhead	Hot Water	2,852,754	10	6,952,334	98,050,880	9,805,088	2.37%	76.60%
Income Eligible	Specialty LED Lamps	Lighting	8,903,361	10	-	75,797,842	8,903,361	2.15%	78.76%
Income Eligible	Steam Trap	HVAC	8,885	6	8,360,624	50,217,054	8,369,509	2.02%	80.78%
Income Eligible	Pipe Insulation	Hot Water	58,787	10	7,097,111	107,331,068	7,155,898	1.73%	82.51%
Income Eligible	Advanced Power Strips	Consumer Electronics	6,326,256	7	-	44,283,794	6,326,256	1.53%	84.04%
Income Eligible	Interior & Exterior LED Fixtures	Lighting	6,253,083	13	(6,862)	60,932,116	6,246,221	1.51%	85.55%
Income Eligible	Air Purifier	Appliances	5,945,290	9	-	53,507,610	5,945,290	1.44%	86.98%
Income Eligible	LED Exit Signs, Channel Sign & Nightlight	Lighting	5,597,331	8	-	43,291,514	5,597,331	1.35%	88.34%
Income Eligible	Shower Timer	Hot Water	1,605,457	2	2,846,914	8,904,742	4,452,371	1.08%	89.41%
Income Eligible	Decorative & Directional LED Lamps	Lighting	3,652,142	10	-	28,766,041	3,652,142	0.88%	90.30%
Income Eligible	Tune-up	HVAC	121,853	3	3,493,359	10,845,636	3,615,212	0.87%	91.17%
Income Eligible	High Performance HVAC Equipment	HVAC	3,560,260	14	-	48,447,735	3,560,260	0.86%	92.03%
Income Eligible	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	3,357,589	11	-	50,801,529	3,357,589	0.81%	92.84%
Income Eligible	Door Sweep	Shell	491,565	20	2,359,474	57,020,771	2,851,039	0.69%	93.53%
Income Eligible	Switch and Outlet Gasket	Shell	410,098	20	2,428,275	56,767,450	2,838,372	0.69%	94.22%
Income Eligible	Programmable/Reprogrammable Thermostat	HVAC	527,643	9	1,880,628	17,948,030	2,408,271	0.58%	94.80%
Income Eligible	Kitchen & Bathroom Faucet Aerator	Hot Water	710,153	10	1,543,214	22,533,662	2,253,366	0.54%	95.34%
Income Eligible	High Efficiency Boiler	HVAC	-	-	1,778,912	35,472,421	1,778,912	0.43%	95.77%
Income Eligible	LED HID	Lighting	1,733,580	5	-	17,335,796	1,733,580	0.42%	96.19%
Income Eligible	DHW Controls	Hot Water	39,708	6	1,654,856	25,418,454	1,694,564	0.41%	96.60%
Income Eligible	Residential Water Savings Kit	Hot Water	245,622	10	1,350,575	15,961,975	1,596,198	0.39%	96.99%
Income Eligible	High Efficiency Furnace	HVAC	137,501	19	1,298,459	18,810,753	1,435,960	0.35%	97.34%
Income Eligible	Other Non-lighting	HVAC	613,765	14	794,356	16,809,055	1,408,121	0.34%	97.68%
Income Eligible	Window Insulation Kit	Shell	298,980	20	1,101,206	28,003,729	1,400,186	0.34%	98.02%
Income Eligible	HVAC Control System & Maintenance	HVAC	47,077	11	1,280,508	25,424,965	1,327,585	0.32%	98.34%
Income Eligible	Closed Cell Foam w-Adhesive Strip	Shell	37,282	20	1,258,656	25,918,748	1,295,937	0.31%	98.65%
Income Eligible	Duct Insulation & Sealing	HVAC	130,397	20	1,111,983	18,996,351	1,242,380	0.30%	98.95%
Income Eligible	Kits	Other	16,279	14	544,821	561,100	561,100	0.14%	99.09%
Income Eligible	Bathroom & Kitchen Exhaust Fan	HVAC	384,331	19	-	7,302,283	384,331	0.09%	99.18%
Income Eligible	Reduced Infiltration & Thermal Bridging	Shell	138,603	20	244,950	7,764,677	383,553	0.09%	99.27%
Income Eligible	Other Lighting	Lighting	378,729	15	-	5,680,881	378,729	0.09%	99.36%
Income Eligible	Dehumidifier	Appliances	377,308	12	-	4,527,692	377,308	0.09%	99.45%
Income Eligible	Gas & HP Water Heater	Hot Water	75,759	15	297,051	5,435,262	372,810	0.09%	99.54%
Income Eligible	Room & Central Air Conditioner	HVAC	363,912	16	-	4,451,123	363,912	0.09%	99.63%
Income Eligible	Hot Water Conservation	Hot Water	12,839	11	309,273	3,201,802	322,112	0.08%	99.71%
Income Eligible	Freezer & Refrigerator	Appliances	294,552	16	8,934	4,536,656	303,486	0.07%	99.78%
Income Eligible	DHW Pipe Wrap	Hot Water	27,135	15	179,003	3,092,058	206,137	0.05%	99.83%
Income Eligible	Covers and Gap Sealers for Room AC	Hot Water	5,837	2	120,594	632,151	126,430	0.03%	99.86%
Income Eligible	Room & Central Air Conditioner	Appliances	112,219	12	-	1,346,628	112,219	0.03%	99.89%
Income Eligible	DHW Storage Tank Insulation	Hot Water	-	-	102,940	1,544,106	102,940	0.02%	99.92%

Sector	High Impact Measure	End Use Type	First year kWh Savings (Verified Average Gross)	Weighted Measure Life*	Verified Gross Savings (kWh from Therms)	Lifetime Total Gross kWh (Verified)	Verified Gross Savings (kWh Total)	Percent 1st Year kWh	Cumulative Percent
Income Eligible	High-Performance Windows	Shell	13,306	20	52,710	1,328,360	66,016	0.02%	99.93%
Income Eligible	Crawl Space Ceiling Insulation	Shell	22,663	3	36,175	1,348,094	58,838	0.01%	99.95%
Income Eligible	Motors/Fans/Pumps	HVAC	54,368	19	-	1,032,994	54,368	0.01%	99.96%
Income Eligible	Ventilation Fan	HVAC	38,470	19	-	730,922	38,470	0.01%	99.97%
Income Eligible	Occupancy Sensor & Other Controls	Lighting	34,999	8	-	285,129	34,999	0.01%	99.98%
Income Eligible	Water Dispenser	Appliances	25,582	10	-	255,816	25,582	0.01%	99.98%
Income Eligible	Variable Speed Drive	HVAC	20,755	6	-	311,330	20,755	0.01%	99.99%
Income Eligible	Thermostatic Radiator Valve	HVAC	-	-	15,484	232,253	15,484	0.00%	99.99%
Income Eligible	Efficient Appliances	Appliances	12,589	16	-	201,427	12,589	0.00%	99.99%
Income Eligible	ECM Furnace Blower & Motor	HVAC	6,712	6	-	39,906	6,712	0.00%	100.00%
Income Eligible	IU Ducted ASHP	HVAC	6,026	15	-	96,416	6,026	0.00%	100.00%
Income Eligible	Clothes Dryer	Appliances	2,132	16	2,833	73,774	4,965	0.00%	100.00%
Income Eligible	Induction Stove	Appliances	3,168	16	-	50,681	3,168	0.00%	100.00%
Income Eligible	Machine Occupancy Sensor	HVAC	1,748	15	-	8,738	1,748	0.00%	100.00%
Income Eligible	Clothes Washer	Appliances	-	-	517	3,620	517	0.00%	100.00%
Income Eligible	Other Non-lighting	Other	52	1	-	52	52	0.00%	100.00%

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, including electrification savings plus counted kWh converted, where applicable).

Source: *Evaluation team analysis*

**Table 6-6. Summary Table of CY2022 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	137,887,272	-	137,887,272	33.90%	33.90%
Income Eligible	Advanced Thermostat	HVAC	6,669,297	39,488,030	46,157,327	11.35%	45.24%
Income Eligible	Carryover Lamps	Lighting	34,818,885	-	34,818,885	8.56%	53.80%
Income Eligible	Attic/Wall/Basement /Floor/Foundation Insulation	Shell	4,191,634	20,231,881	24,423,515	6.00%	59.81%
Income Eligible	Weather Stripping	Shell	4,857,486	19,301,443	24,158,928	5.94%	65.75%
Income Eligible	Air Sealing	Shell	6,168,097	13,711,559	19,879,655	4.89%	70.63%
Income Eligible	Omni-Directional LED Lamps	Lighting	16,278,266	-	16,278,266	4.00%	74.64%
Income Eligible	Low Flow Showerhead	Hot Water	2,852,754	6,952,334	9,805,088	2.41%	77.05%
Income Eligible	Steam Trap	HVAC	8,885	8,360,624	8,369,509	2.06%	79.10%
Income Eligible	Pipe Insulation	Hot Water	58,787	7,097,111	7,155,898	1.76%	80.86%
Income Eligible	Specialty LED Lamps	Lighting	6,995,684	-	6,995,684	1.72%	82.58%
Income Eligible	Advanced Power Strips	Consumer Electronics	6,326,256	-	6,326,256	1.56%	84.14%
Income Eligible	Air Purifier	Appliances	5,945,290	-	5,945,290	1.46%	85.60%
Income Eligible	LED Exit Signs, Channel Sign & Nightlight	Lighting	5,527,975	-	5,527,975	1.36%	86.96%
Income Eligible	Interior & Exterior LED Fixtures	Lighting	5,520,270	(6,862)	5,513,408	1.36%	88.31%
Income Eligible	Shower Timer	Hot Water	1,605,457	2,846,914	4,452,371	1.09%	89.41%
Income Eligible	Tune-up	HVAC	121,853	3,493,359	3,615,212	0.89%	90.30%
Income Eligible	High Performance HVAC Equipment	HVAC	3,560,260	-	3,560,260	0.88%	91.17%
Income Eligible	Heat Pumps (ASHP, Ductless HP, GSHP, Others)	HVAC	3,357,589	-	3,357,589	0.83%	92.00%
Income Eligible	Decorative & Directional LED Lamps	Lighting	2,939,350	-	2,939,350	0.72%	92.72%
Income Eligible	Door Sweep	Shell	491,565	2,359,474	2,851,039	0.70%	93.42%
Income Eligible	Switch and Outlet Gasket	Shell	410,098	2,428,275	2,838,372	0.70%	94.12%
Income Eligible	Programmable/Reprogrammable Thermostat	HVAC	527,643	1,880,628	2,408,271	0.59%	94.71%
Income Eligible	Kitchen & Bathroom Faucet Aerator	Hot Water	710,153	1,543,214	2,253,366	0.55%	95.27%
Income Eligible	High Efficiency Boiler	HVAC	-	1,778,912	1,778,912	0.44%	95.70%
Income Eligible	LED HID	Lighting	1,733,580	-	1,733,580	0.43%	96.13%
Income Eligible	DHW Controls	Hot Water	39,708	1,654,856	1,694,564	0.42%	96.55%
Income Eligible	Residential Water Savings Kit	Hot Water	245,622	1,350,575	1,596,198	0.39%	96.94%
Income Eligible	High Efficiency Furnace	HVAC	137,501	1,298,459	1,435,960	0.35%	97.29%
Income Eligible	Other Non-lighting	HVAC	613,765	794,356	1,408,121	0.35%	97.64%
Income Eligible	Window Insulation Kit	Shell	298,980	1,101,206	1,400,186	0.34%	97.98%
Income Eligible	HVAC Control System & Maintenance	HVAC	47,077	1,280,508	1,327,585	0.33%	98.31%
Income Eligible	Closed Cell Foam w-Adhesive Strip	Shell	37,282	1,258,656	1,295,937	0.32%	98.63%
Income Eligible	Duct Insulation & Sealing	HVAC	130,397	1,111,983	1,242,380	0.31%	98.93%
Income Eligible	Kits	Other	16,279	544,821	561,100	0.14%	99.07%
Income Eligible	Bathroom & Kitchen Exhaust Fan	HVAC	384,331	-	384,331	0.09%	99.16%
Income Eligible	Reduced Infiltration & Thermal Bridging	Shell	138,603	244,950	383,553	0.09%	99.26%
Income Eligible	Other Lighting	Lighting	378,729	-	378,729	0.09%	99.35%
Income Eligible	Dehumidifier	Appliances	377,308	-	377,308	0.09%	99.44%
Income Eligible	Gas & HP Water Heater	Hot Water	75,759	297,051	372,810	0.09%	99.54%
Income Eligible	Room & Central Air Conditioner	HVAC	363,912	-	363,912	0.09%	99.63%
Income Eligible	Hot Water Conservation	Hot Water	12,839	309,273	322,112	0.08%	99.70%
Income Eligible	Freezer & Refrigerator	Appliances	294,552	8,934	303,486	0.07%	99.78%
Income Eligible	DHW Pipe Wrap	Hot Water	27,135	179,003	206,137	0.05%	99.83%
Income Eligible	Covers and Gap Sealers for Room AC	Hot Water	5,837	120,594	126,430	0.03%	99.86%
Income Eligible	Room & Central Air Conditioner	Appliances	112,219	-	112,219	0.03%	99.89%

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	DHW Storage Tank Insulation	Hot Water	-	102,940	102,940	0.03%	99.91%
Income Eligible	High-Performance Windows	Shell	13,306	52,710	66,016	0.02%	99.93%
Income Eligible	Crawl Space Ceiling Insulation	Shell	22,663	36,175	58,838	0.01%	99.94%
Income Eligible	Motors/Fans/Pumps	HVAC	54,368	-	54,368	0.01%	99.96%
Income Eligible	Ventilation Fan	HVAC	38,470	-	38,470	0.01%	99.97%
Income Eligible	Occupancy Sensor & Other Controls	Lighting	34,999	-	34,999	0.01%	99.98%
Income Eligible	Water Dispenser	Appliances	25,582	-	25,582	0.01%	99.98%
Income Eligible	Variable Speed Drive	HVAC	20,755	-	20,755	0.01%	99.99%
Income Eligible	Thermostatic Radiator Valve	HVAC	-	15,484	15,484	0.00%	99.99%
Income Eligible	Efficient Appliances	Appliances	12,589	-	12,589	0.00%	99.99%
Income Eligible	ECM Furnace Blower & Motor	HVAC	6,712	-	6,712	0.00%	100.00%
Income Eligible	IU Ducted ASHP	HVAC	6,026	-	6,026	0.00%	100.00%
Income Eligible	Clothes Dryer	Appliances	2,132	2,833	4,965	0.00%	100.00%
Income Eligible	Induction Stove	Appliances	3,168	-	3,168	0.00%	100.00%
Income Eligible	Machine Occupancy Sensor	HVAC	1,748	-	1,748	0.00%	100.00%
Income Eligible	Clothes Washer	Appliances	-	517	517	0.00%	100.00%
Income Eligible	Other Non-lighting	Other	52	-	52	0.00%	100.00%

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, including electrification savings plus counted kWh converted, where applicable).

Source: Evaluation team analysis