



ComEd Multifamily Upgrades Program Impact Report

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

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The Multifamily Upgrades report is in three sections. The Multifamily Upgrades program section provides the combined total of all activities. The Public Housing Upgrades (PH) section details results for this program component. The final section presents Multifamily Upgrades program savings excluding the Public Housing Upgrades component.

Multifamily Upgrades Program

Introduction

This section presents the results of the impact evaluation of the Multifamily Upgrades program, including the PH component, for the program year from January 1 to December 31, 2022 (CY2022). The program was designed to provide free energy saving products to multifamily housing and public housing units.

The program is offered jointly to customers served by ComEd, Nicor Gas, Peoples Gas, and North Shore Gas. The results for the gas utilities will be in a separate report.

Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the Multifamily Upgrades program achieved in CY2022, including the PH component. The gas savings are only those that ComEd may be able to claim, which excludes savings the gas utilities claim, either via joint or non-joint programs.¹ Table 2 summarizes the savings achieved from income eligible participants, and Table 3 summarizes savings from non-income eligible participants. Together, they make up the total shown in Table 1.

Table 1. Multifamily Upgrades Total Annual Incremental Electric Savings – Total

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	25,297,170	1.04	26,400,181	0.97			25,517,724
Electric Energy Savings - Converted from Gas§	kWh	38,768,978	0.90	35,043,923	1.00			34,974,925
Electric Energy Savings - Indirect From Fuel Switching (through Electrification)	kWh	-						
Total Electric Energy Savings#	kWh	64,066,147	0.96	61,444,104	0.98			60,492,649
Secondary Water Savings	kWh	24,384	5.01	122,233	1.01			122,901
Summer Peak*† Demand Savings	kW	3,673	1.05	3,881	0.92			3,584

* Ex ante and verified gross savings exclude gross carryover savings from CY2020 and CY2021.

† The Verified Net Savings in row one (Electric Energy Savings - Direct) excludes carryover savings as they do not apply to this program.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency

¹ The evaluation will determine which gas savings will be counted toward goal while producing the portfolio-wide Summary Report. 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 requirement as defined in paragraph (7.5) of subsection (g) of this Section be met through savings of fuels other than electricity."

savings from fuel switching measures but excludes the fuel switching savings), secondary kWh savings from wastewater treatment, and electric heating penalties.

§ Gas savings converted to kWh by multiplying therms * 29.31 (which is based on 100,000 Btu/therm and 3,412 Btu/kWh). The evaluation team will determine which gas savings will be converted to kWh and counted toward ComEd’s electric savings goal while producing the portfolio-wide Summary Report.

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

Total Electric Energy Savings is the sum of the Electric Energy Savings - Direct, the Electric Energy Savings Converted from Gas, and the Electrification Savings from fuel switching.

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

Note: The program-level NTG values 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 2. Multifamily Upgrades Total Annual Incremental Electric Savings - Income Eligible

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program NTG Ratio	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	16,212,148	1.07	17,411,434	1.00			17,411,434
Electric Energy Savings - Converted from Gas§	kWh	35,383,988	0.91	32,181,009	1.00			32,181,417
Electric Energy Savings – Indirect From Fuel Switching (through Electrification)	kWh	-						
Total Electric Energy Savings#	kWh	51,596,136	0.96	49,592,443	1.00			49,592,851
Secondary Water Savings	kWh	19,955	5.01	99,959	1.00			99,959
Summer Peak*† Demand Savings	kW	1,363	1.14	1,571	1.00			1,571

Footnotes are defined similarly as found in Table 1.

Source: Evaluation team analysis

Table 3. Multifamily Upgrades Total Annual Incremental Electric Savings - Non-Income Eligible

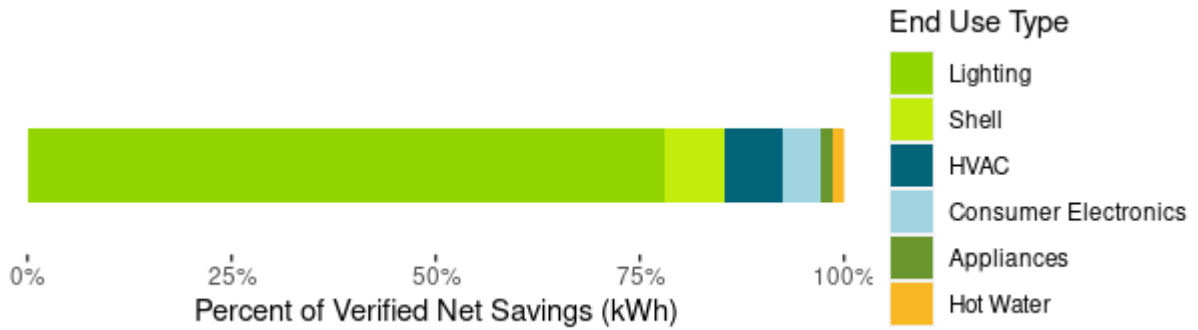
Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program NTG Ratio	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	9,085,021	0.99	8,988,746	0.90			8,102,638
Electric Energy Savings - Converted from Gas§	kWh	3,384,990	0.85	2,862,914	0.91			2,610,849
Electric Energy Savings – Indirect From Fuel Switching kWh (through Electrification)	kWh	-	NA	-	-			-
Total Electric Energy Savings#	kWh	12,470,011	0.95	11,851,660	0.90			10,713,488
Secondary Water Savings	kWh	4,429	5.03	22,274	1.03			22,942
Summer Peak*† Demand Savings	kW	2,310	1.00	2,310	0.87			2,013

Footnotes are defined similarly as found in Table 1.

Source: Evaluation team analysis

Figure 1 presents the electric energy savings by measure end use. It includes measure efficiency savings and secondary water kWh. It does not include gas savings converted to kWh.

Figure 1. Multifamily Upgrades Verified Net Savings by End Use Type – Electric



Source: Evaluation team analysis

Cumulative Persistent Annual Savings

Table 4 to Table 6 show the cumulative persisting annual savings (CPAS) for the measures installed in CY2022. Table 4 shows the electric CPAS across all measures installed in 2022. Table 5 shows the gas contribution to CPAS (converted to equivalent electricity). Table 6 shows the combined savings.

Table 4. Multifamily Upgrades CPAS – Electric

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Contribution to CPAS	26,400,181	249,057,324					25,517,724	24,903,416	23,680,158	23,578,331	23,363,328	19,972,874	15,089,242
Historic Program Total Contribution to CPAS‡			11,768,297	17,484,846	26,770,117	31,603,548	31,299,255	30,552,060	28,314,771	24,149,912	15,850,854	12,163,454	8,699,475
Program Total CPAS	26,400,181	249,057,324	11,768,297	17,484,846	26,770,117	31,603,548	56,816,979	55,455,476	51,994,930	47,728,243	39,214,182	32,136,328	23,788,716
CY2022 Program Incremental Expiring Savings§								614,309	1,223,257	101,828	215,003	3,390,454	4,883,632
Historic Program Incremental Expiring Savings							304,293	747,195	2,237,289	4,164,859	8,299,058	3,687,400	3,463,980
Program Total Incremental Expiring Savings#							304,293	1,361,503	3,460,546	4,266,686	8,514,062	7,077,853	8,347,612

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Contribution to CPAS	26,400,181	249,057,324	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	3,470,523
Historic Program Total Contribution to CPAS‡			6,913,392	6,227,454	4,761,981	2,682,804	1,790,227	1,085,101	406,326	8,425			
Program Total CPAS	26,400,181	249,057,324	20,782,537	20,090,455	18,624,407	9,532,207	8,495,889	7,744,135	7,065,137	6,667,236	3,778,003	3,667,394	3,470,523
CY2022 Program Incremental Expiring Savings§			1,220,096	6,144	575	7,013,023	143,740	46,628	224	0	2,880,808	110,609	196,871
Historic Program Incremental Expiring Savings			1,786,083	685,938	1,465,473	2,079,177	892,577	705,126	678,775	397,900	8,425	0	0
Program Total Incremental Expiring Savings#			3,006,179	692,082	1,466,048	9,092,200	1,036,318	751,754	678,998	397,900	2,889,234	110,609	196,871

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2022 Program Total Contribution to CPAS	26,400,181	249,057,324	3,455,105	3,454,933	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡													
Program Total CPAS	26,400,181	249,057,324	3,455,105	3,454,933	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			15,418	172	3,454,933	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			15,418	172	3,454,933	0	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 5. Multifamily Upgrades CPAS – Gas

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,630	14,888,614					1,193,276	1,182,023	1,161,753	1,112,779	1,112,779	1,088,485	800,606
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,043,923						34,974,925	34,645,087	34,050,995	32,615,539	32,615,539	31,903,481	23,465,750
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§													
Program Total Gas CPAS (kWh Equivalent)	35,043,923	0	0	0	0	0	34,974,925	34,645,087	34,050,995	32,615,539	32,615,539	31,903,481	23,465,750
CY2022 Program Incremental Expiring Gas Savings (Therms)								11,253	20,269	48,975	0	24,294	287,879
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)								329,837	594,092	1,435,456	0	712,058	8,437,731
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#							0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†							0	329,837	594,092	1,435,456	0	712,058	8,437,731

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,630	14,888,614	800,785	800,788	800,789	747,213	701,460	630,916	629,769	629,673	330,151	291,343	291,343
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,043,923		23,471,001	23,471,104	23,471,134	21,900,825	20,559,790	18,492,136	18,458,535	18,455,702	9,676,730	8,539,252	8,539,252
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§													
Program Total Gas CPAS (kWh Equivalent)	35,043,923	0	23,471,001	23,471,104	23,471,134	21,900,825	20,559,790	18,492,136	18,458,535	18,455,702	9,676,730	8,539,252	8,539,252
CY2022 Program Incremental Expiring Gas Savings (Therms)			-179	-4	-1	53,576	45,754	70,544	1,146	97	299,521	38,809	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			-5,251	-103	-30	1,570,308	1,341,036	2,067,653	33,601	2,833	8,778,973	1,137,478	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			-5,251	-103	-30	1,570,308	1,341,036	2,067,653	33,601	2,833	8,778,973	1,137,478	0

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,630	14,888,614	291,343	291,343	0	0	0	0	0	0	0	0	0
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,043,923		8,539,252	8,539,252	0	0	0	0	0	0	0	0	0
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§													
Program Total Gas CPAS (kWh Equivalent)	35,043,923	0	8,539,252	8,539,252	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (Therms)			0	0	291,343	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			0	0	8,539,252	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			0	0	8,539,252	0	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 6. Multifamily Upgrades CPAS – Total

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings												
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
CY2022 Program Total Contribution to CPAS	61,444,104	685,442,605					60,492,649	59,548,503	57,731,153	56,193,870	55,978,867	51,876,355	38,554,992		
Historic Program Total Contribution to CPAS‡			11,768,297	17,484,846	26,770,117	31,603,548	31,299,255	1,055,667,100	1,043,762,284	1,022,184,577	971,812,303	968,124,904	943,790,497		
Program Total CPAS	61,444,104	685,442,605	11,768,297	17,484,846	26,770,117	31,603,548	91,791,904	1,115,215,603	1,101,493,438	1,078,378,447	1,027,791,170	1,020,001,258	982,345,488		
CY2022 Program Incremental Expiring Savings§								944,146	1,817,350	1,537,284	215,003	4,102,512	13,321,363		
Historic Program Incremental Expiring Savings								304,293 -1,024,367,845	11,904,816	21,577,708	50,372,273	3,687,400	24,334,407		
Program Total Incremental Expiring Savings#								304,293 -1,023,423,700	13,722,166	23,114,991	50,587,277	7,789,912	37,655,770		

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings												
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
CY2022 Program Total Contribution to CPAS	61,444,104	685,442,605	37,340,147	37,334,105	37,333,560	28,750,228	27,265,452	25,151,171	25,117,346	25,114,513	13,454,732	12,206,646	12,009,775		
Historic Program Total Contribution to CPAS‡			694,694,524	694,162,500	692,700,042	690,621,730	643,703,414	603,692,533	542,410,841	541,028,095	540,936,632	283,624,943	250,285,473		
Program Total CPAS	61,444,104	685,442,605	732,034,671	731,496,605	730,033,601	719,371,958	670,968,866	628,843,703	567,528,187	566,142,609	554,391,364	295,831,589	262,295,248		
CY2022 Program Incremental Expiring Savings§			1,214,845	6,041	546	8,583,332	1,484,776	2,114,281	33,825	2,833	11,659,781	1,248,087	196,871		
Historic Program Incremental Expiring Savings			249,095,972	532,024	1,462,458	2,078,311	46,918,316	40,010,881	61,281,692	1,382,745	91,464	257,311,688	33,339,471		
Program Total Incremental Expiring Savings#			250,310,817	538,066	1,463,004	10,661,643	48,403,092	42,125,162	61,315,516	1,385,578	11,751,245	258,559,775	33,536,342		

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings												
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050		
CY2022 Program Total Contribution to CPAS	61,444,104	685,442,605	11,994,356	11,994,185	0	0	0	0	0	0	0	0	0		
Historic Program Total Contribution to CPAS‡			250,285,473	250,285,473	250,285,473	0	0	0	0	0	0	0	0		
Program Total CPAS	61,444,104	685,442,605	262,279,829	262,279,657	250,285,473	0	0	0	0	0	0	0	0		
CY2022 Program Incremental Expiring Savings§			15,418	172	11,994,185	0	0	0	0	0	0	0	0		
Historic Program Incremental Expiring Savings			0	0	0	250,285,473	0	0	0	0	0	0	0		
Program Total Incremental Expiring Savings#			15,418	172	11,994,185	250,285,473	0	0	0	0	0	0	0		

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Public Housing Upgrades Component

Introduction

This section presents the results of the impact evaluation of the PH component of the Multifamily Upgrades program for the program year from January 1 to December 31, 2022 (CY2022). The PH component was designed to provide free energy saving products to public housing facilities.

The PH component is offered jointly to customers served by ComEd, Nicor Gas, and Peoples Gas. This report presents the results just for ComEd. The results for the gas utilities will be in a separate report. Because this is public housing there is no Market Rate sector to the program.

Program Savings Detail

Table 7 summarizes the incremental energy and demand savings the PH component achieved in CY2022. The gas savings are only those that ComEd may be able to claim, which excludes savings the gas utilities claim, either via joint or non-joint programs. Table 8 summarizes the savings achieved from income eligible participants, and Table 9 summarizes savings from non-income eligible participants. Together, they make up the total shown in Table 7.

Table 7. Public Housing Upgrades Total Annual Incremental Electric Savings - Total

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program NTG Ratio	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	74,491	1.06	78,676	1.00			78,676
Electric Energy Savings - Converted from Gas§	kWh	0		-6,862	1.00			-6,862
Electric Energy Savings – Indirect From Fuel Switching (through Electrification)	kWh	-	NA	-	-			-
Total Electric Energy Savings#	kWh	74,491	1.05	71,814	1.00			71,814
Secondary Water Savings	kWh							
Summer Peak*† Demand Savings	kW	10	1.03	10	1.00			10

Footnotes are defined similarly as found in Table 1.

Source: Evaluation team analysis

Table 8. Public Housing Upgrades Total Annual Incremental Electric Savings - Income Eligible

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program NTG Ratio	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	74,491	1.06	78,676	1.00			78,676
Electric Energy Savings - Converted from Gas§	kWh	0		-6,862	1.00			-6,862
Electric Energy Savings – Indirect From Fuel Switching (through Electrification)	kWh	-	NA	-	-			-
Total Electric Energy Savings#	kWh	74,491	1.05	71,814	1.00			71,814
Secondary Water Savings	kWh							
Summer Peak*† Demand Savings	kW	10	1.03	10	1.00			10

Footnotes are defined similarly as found in Table 1.
Source: Evaluation team analysis

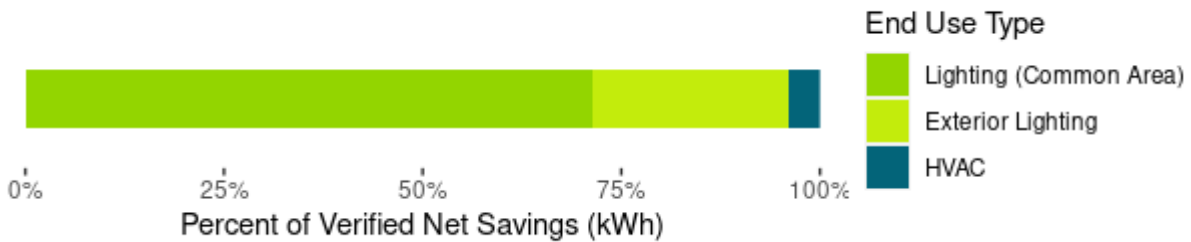
Table 9. Public Housing Upgrades Total Annual Incremental Electric Savings - Non-Income Eligible

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program NTG Ratio	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	-	-	-	-	-	-	-
Electric Energy Savings - Converted from Gas§	kWh	-	-	-	-	-	-	-
Electric Energy Savings – Indirect From Fuel Switching kWh (through Electrification)		-	-	-	-	-	-	-
Total Electric Energy Savings#	kWh	-	-	-	-	-	-	-
Secondary Water Savings	kWh	-	-	-	-	-	-	-
Summer Peak** Demand Savings	kW	-	-	-	-	-	-	-

Footnotes are defined similarly as found in Table 1.
Source: Evaluation team analysis

Figure 2 shows the electric energy savings by measure end use. It includes measure efficiency savings, carryover kWh and secondary water kWh. It does not include gas savings converted to kWh.

Figure 2. Public Housing Upgrades Verified Net Savings by End Use Type – Electric



Source: Evaluation team analysis

CPAS

Table 10 to Table 12 show the CPAS for the measures installed in CY2022. The electric CPAS across all measures installed in 2022 is shown in Table 10. The gas contribution to CPAS (converted to equivalent electricity) is shown in Table 11. The combined savings are shown in Table 12.

Table 10. Public Housing Upgrades CPAS – Electric

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings											
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
CY2022 Program Total Contribution to CPAS	78,676	625,556					78,676	78,676	78,676	78,676	78,676	75,491	66,655	
Historic Program Total Contribution to CPAS‡			2,472,099	5,495,917	6,679,860	7,256,469	7,142,211	6,987,253	6,403,423	5,085,294	4,148,721	3,959,803	2,670,910	
Program Total CPAS	78,676	625,556	2,472,099	5,495,917	6,679,860	7,256,469	7,220,887	7,065,929	6,482,099	5,163,970	4,227,397	4,035,295	2,737,565	
CY2022 Program Incremental Expiring Savings§								0	0	0	0	3,185	8,837	
Historic Program Incremental Expiring Savings								114,258	154,958	583,831	1,318,128	936,573	188,918	1,288,893
Program Total Incremental Expiring Savings#								114,258	154,958	583,831	1,318,128	936,573	192,102	1,297,730

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Contribution to CPAS	78,676	625,556	19,906	19,548	19,306	19,306	11,966	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			2,038,691	1,387,500	759,787	370,299	267,391	208,789	206,976	194,528	190,255	68,539	59,148
Program Total CPAS	78,676	625,556	2,058,597	1,407,048	779,093	389,605	279,356	208,789	206,976	194,528	190,255	68,539	59,148
CY2022 Program Incremental Expiring Savings§			46,749	358	242	0	7,340	11,966	0	0	0	0	0
Historic Program Incremental Expiring Savings			632,219	651,191	627,713	389,488	102,908	58,602	1,813	12,448	4,273	121,716	9,392
Program Total Incremental Expiring Savings#			678,968	651,549	627,955	389,488	110,248	70,568	1,813	12,448	4,273	121,716	9,392

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings											
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
CY2022 Program Total Contribution to CPAS	78,676	625,556	0	0	0	0	0	0	0	0	0	0	0	
Historic Program Total Contribution to CPAS‡			40,985	4,181	4,181									
Program Total CPAS	78,676	625,556	40,985	4,181	4,181	0	0	0	0	0	0	0	0	
CY2022 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	0	0	0	
Historic Program Incremental Expiring Savings			18,163	36,804	0	4,181	0	0	0	0	0	0	0	
Program Total Incremental Expiring Savings#			18,163	36,804	0	4,181	0	0	0	0	0	0	0	

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 11. Public Housing Upgrades CPAS – Gas

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
CY2022 Program Total Gas Contribution to CPAS (Therms)	-234	-1,605					-234	-234	-234	-234	-234	-234	-197	
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	-6,862						-6,862	-6,862	-6,862	-6,862	-6,862	-6,862	-5,782	
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§						1,714,544	1,783,957	1,783,957	1,659,701	1,659,701	1,437,495	43,467	43,467	
Program Total Gas CPAS (kWh Equivalent)	-6,862	0	0	0	0	1,714,544	1,777,096	1,777,096	1,652,839	1,652,839	1,430,633	36,606	37,685	
CY2022 Program Incremental Expiring Gas Savings (Therms)								0	0	0	0	0	-37	
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)								0	0	0	0	0	-1,079	
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#								-69,413	0	124,257	0	222,206	1,394,028	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†								-69,413	0	124,257	0	222,206	1,394,028	-1,079

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
CY2022 Program Total Gas Contribution to CPAS (Therms)	-234	-1,605	-2	-1	0	0	0	0	0	0	0	0	0	0
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	-6,862		-73	-30	0	0	0	0	0	0	0	0	0	0
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§			43,467	43,467	32,700	32,700	32,700	32,392	32,392	32,392	32,392	16,494	16,494	16,494
Program Total Gas CPAS (kWh Equivalent)	-6,862	0	43,394	43,438	32,700	32,700	32,700	32,392	32,392	32,392	32,392	16,494	16,494	16,494
CY2022 Program Incremental Expiring Gas Savings (Therms)			-195	-1	-1	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			-5,709	-44	-30	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	0	10,767	0	0	307	0	0	0	15,898	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			-5,709	-44	10,738	0	0	307	0	0	0	15,898	0	0

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
CY2022 Program Total Gas Contribution to CPAS (Therms)	-234	-1,605	0	0	0	0	0	0	0	0	0	0	0	0
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	-6,862		0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§			16,494											
Program Total Gas CPAS (kWh Equivalent)	-6,862	0	16,494	0	0	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (Therms)			0	0	0	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	16,494	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			0	16,494	0	0	0	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 12. Public Housing Upgrades CPAS – Total

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Contribution to CPAS	71,814	578,501					71,814	71,814	71,814	71,814	71,814	68,630	60,872
Historic Program Total Contribution to CPAS‡			2,472,099	5,495,917	6,679,860	8,971,013	8,926,168	8,771,211	8,063,123	6,744,995	5,586,216	4,003,271	2,714,377
Program Total CPAS	71,814	578,501	2,472,099	5,495,917	6,679,860	8,971,013	8,997,983	8,843,025	8,134,938	6,816,810	5,658,031	4,071,900	2,775,249
CY2022 Program Incremental Expiring Savings§							0	0	0	0	0	3,185	7,757
Historic Program Incremental Expiring Savings							44,845	154,958	708,087	1,318,128	1,158,779	1,582,946	1,288,893
Program Total Incremental Expiring Savings#							44,845	154,958	708,087	1,318,128	1,158,779	1,586,130	1,296,651

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Contribution to CPAS	71,814	578,501	19,832	19,518	19,306	19,306	11,966	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			2,082,158	1,430,967	792,487	402,999	300,090	241,181	239,368	226,920	206,749	85,033	75,642
Program Total CPAS	71,814	578,501	2,101,991	1,450,485	811,793	422,304	312,056	241,181	239,368	226,920	206,749	85,033	75,642
CY2022 Program Incremental Expiring Savings§			41,040	314	212	0	7,340	11,966	0	0	0	0	0
Historic Program Incremental Expiring Savings			632,219	651,191	638,480	389,488	102,908	58,909	1,813	12,448	20,171	121,716	9,392
Program Total Incremental Expiring Savings#			673,259	651,505	638,692	389,488	110,248	70,875	1,813	12,448	20,171	121,716	9,392

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2022 Program Total Contribution to CPAS	71,814	578,501	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			57,479	4,181	4,181	0	0	0	0	0	0	0	0
Program Total CPAS	71,814	578,501	57,479	4,181	4,181	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			18,163	53,298	0	4,181	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			18,163	53,298	0	4,181	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Multifamily Upgrades Program Excluding Public Housing Upgrades Component

Introduction

This section presents the results of the impact evaluation of the Multifamily Upgrades program, excluding any savings achieved through the PH component, for the program year from January 1 to December 31, 2022 (CY2022). The program was designed to provide free energy efficiency measures to multifamily buildings.

The program is offered jointly to customers served by ComEd, Nicor Gas, Peoples Gas, and North Shore Gas. The results for the gas utilities will be in a separate report.

Program Savings Detail

Table 13 summarizes the incremental energy and demand savings the Multifamily Upgrades program achieved in CY2022, excluding the PH component. The gas savings are only those that ComEd may be able to claim, which excludes savings the gas utilities claim, either via joint or non-joint programs. Table 14 summarizes the savings achieved from income eligible participants, and Table 15 summarizes savings from non-income eligible participants. Together, they make up the total shown in Table 13.

Table 13. Multifamily Upgrades Excluding Public Housing Total Annual Incremental Electric Savings - Total

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	25,222,679	1.04	26,321,505	0.97			25,439,048
Electric Energy Savings - Converted from Gas§	kWh	38,768,978	0.90	35,050,784	1.00			34,981,786
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)	kWh							
Total Electric Energy Savings#	kWh	63,991,657	0.96	61,372,289	0.98			60,420,835
Secondary Water Savings	kWh	24,384	5.01	122,233	1.01			122,901
Summer Peak*†† Demand Savings	kW	3,673	1.05	3,871	0.92			3,574

Footnotes are defined similarly as found in Table 1.

Source: Evaluation team analysis

Table 14. Multifamily Upgrades Excluding Public Housing Total Annual Incremental Electric Savings - Income Eligible

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	16,137,657	1.07	17,332,758	1.00			17,332,758
Electric Energy Savings - Converted from Gas§	kWh	35,383,988	0.91	32,187,871	1.00			32,188,278

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)								
Total Electric Energy Savings#	kWh	51,521,645	0.96	49,520,629	1.00			49,521,037
Secondary Water Savings	kWh	19,955	5.01	99,959	1.00			99,959
Summer Peak** Demand Savings	kW	1,363	1.15	1,561	1.00			1,561

Footnotes are defined similarly as found in Table 1.
Source: Evaluation team analysis

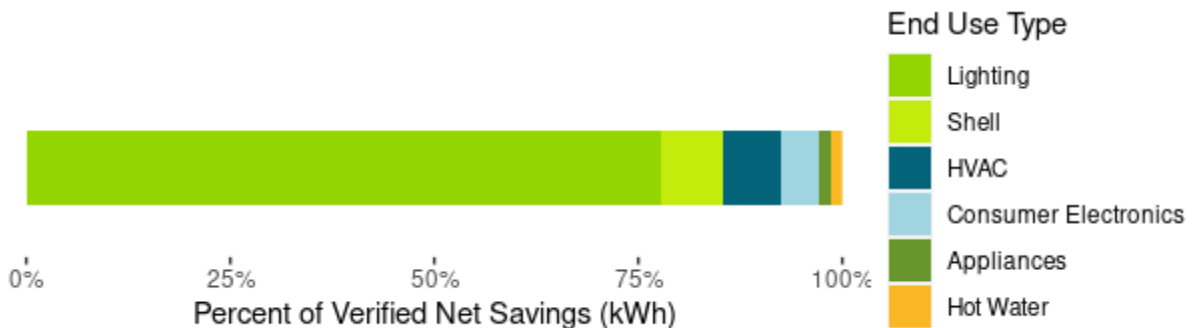
Table 15. Multifamily Upgrades Excluding Public Housing Total Annual Incremental Electric Savings - Non-Income Eligible

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	9,085,021	0.99	8,988,746	0.90			8,106,290
Electric Energy Savings - Converted from Gas§	kWh	3,384,990	0.85	2,862,914	0.98			2,793,508
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)								
Total Electric Energy Savings#	kWh	12,470,011	0.95	11,851,660	0.92			10,899,798
Secondary Water Savings	kWh	4,429	5.03	22,274	1.03			22,942
Summer Peak** Demand Savings	kW	2,310	1.00	2,310	0.87			2,013

Footnotes are defined similarly as found in Table 1.
Source: Evaluation team analysis

Figure 3 shows the electric energy savings by measure end use. It includes measure efficiency savings, carryover kWh and secondary water kWh. It does not include gas savings converted to kWh.

Figure 3. Multifamily Upgrades Excluding Public Housing Verified Net Savings by End Use Type – Electric



Source: Evaluation team analysis

CPAS

Table 16 to Table 18 show the CPAS for the measures installed in CY2022. Table 16 shows the electric CPAS across all measures installed in 2022. Table 17 shows the gas contribution to CPAS (converted to equivalent electricity). Table 18 shows the combined savings.

Table 16. Multifamily Upgrades Excluding Public Housing CPAS – Electric

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Contribution to CPAS	26,321,505	248,431,768					25,439,048	24,824,740	23,601,482	23,499,655	23,284,652	19,897,383	15,022,587
Historic Program Total Contribution to CPAS‡			11,768,297	17,484,846	26,770,117	31,603,548	31,299,255	30,552,060	28,314,771	24,149,912	15,850,854	12,163,454	8,699,475
Program Total CPAS	26,321,505	248,431,768	11,768,297	17,484,846	26,770,117	31,603,548	56,738,303	55,376,800	51,916,254	47,649,567	39,135,506	32,060,837	23,722,062
CY2022 Program Incremental Expiring Savings§								614,309	1,223,257	101,828	215,003	3,387,269	4,874,796
Historic Program Incremental Expiring Savings							304,293	747,195	2,237,289	4,164,859	8,299,058	3,687,400	3,463,980
Program Total Incremental Expiring Savings#							304,293	1,361,503	3,460,546	4,266,686	8,514,062	7,074,669	8,338,776

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Contribution to CPAS	26,321,505	248,431,768	13,849,240	13,843,454	13,843,120	6,830,097	6,693,697	6,659,035	6,658,811	6,658,811	3,778,003	3,667,394	3,470,523
Historic Program Total Contribution to CPAS‡			6,913,392	6,227,454	4,761,981	2,682,804	1,790,227	1,085,101	406,326	8,425			
Program Total CPAS	26,321,505	248,431,768	20,762,632	20,070,907	18,605,101	9,512,901	8,483,923	7,744,135	7,065,137	6,667,236	3,778,003	3,667,394	3,470,523
CY2022 Program Incremental Expiring Savings§			1,173,347	5,786	333	7,013,023	136,400	34,662	224	0	2,880,808	110,609	196,871
Historic Program Incremental Expiring Savings			1,786,083	685,938	1,465,473	2,079,177	892,577	705,126	678,775	397,900	8,425	0	0
Program Total Incremental Expiring Savings#			2,959,430	691,724	1,465,806	9,092,200	1,028,978	739,788	678,998	397,900	2,889,234	110,609	196,871

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2022 Program Total Contribution to CPAS	26,321,505	248,431,768	3,455,105	3,454,933	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡													
Program Total CPAS	26,321,505	248,431,768	3,455,105	3,454,933	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			15,418	172	3,454,933	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			15,418	172	3,454,933	0	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis

Table 17. Multifamily Upgrades Excluding Public Housing CPAS – Gas

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,864	14,890,220					1,193,510	1,182,257	1,161,988	1,113,013	1,113,013	1,088,719	800,803	
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,050,784						34,981,786	34,651,949	34,057,857	32,622,401	32,622,401	31,910,342	23,471,532	
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§														
Program Total Gas CPAS (kWh Equivalent)	35,050,784	0	0	0	0	0	34,981,786	34,651,949	34,057,857	32,622,401	32,622,401	31,910,342	23,471,532	
CY2022 Program Incremental Expiring Gas Savings (Therms)									11,253	20,269	48,975	0	24,294	287,916
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)									329,837	594,092	1,435,456	0	712,058	8,438,810
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#							0	0	0	0	0	0	0	
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†							0	329,837	594,092	1,435,456	0	712,058	8,438,810	

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,864	14,890,220	800,787	800,789	800,789	747,213	701,460	630,916	629,769	629,673	330,151	291,343	291,343
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,050,784		23,471,074	23,471,134	23,471,134	21,900,825	20,559,790	18,492,136	18,458,535	18,455,702	9,676,730	8,539,252	8,539,252
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§													
Program Total Gas CPAS (kWh Equivalent)	35,050,784	0	23,471,074	23,471,134	23,471,134	21,900,825	20,559,790	18,492,136	18,458,535	18,455,702	9,676,730	8,539,252	8,539,252
CY2022 Program Incremental Expiring Gas Savings (Therms)			16	-2	0	53,576	45,754	70,544	1,146	97	299,521	38,809	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			458	-59	0	1,570,308	1,341,036	2,067,653	33,601	2,833	8,778,973	1,137,478	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			458	-59	0	1,570,308	1,341,036	2,067,653	33,601	2,833	8,778,973	1,137,478	0

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,195,864	14,890,220	291,343	291,343	0	0	0	0	0	0	0	0	0	0
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	35,050,784		8,539,252	8,539,252	0	0	0	0	0	0	0	0	0	0
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§														
Program Total Gas CPAS (kWh Equivalent)	35,050,784	0	8,539,252	8,539,252	0	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (Therms)			0	0	291,343	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			0	0	8,539,252	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			0	0	8,539,252	0	0	0	0	0	0	0	0	0

† Lifetime savings are the sum of CPAS savings through the EUL.
 ‡ kWh equivalent savings are calculated by multiplying therm savings by 29.31.
 § 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.

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

Source: Evaluation team analysis

Table 18. Multifamily Upgrades Excluding Public Housing CPAS – Total

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Contribution to CPAS	61,372,289	684,864,104					60,420,835	59,476,689	57,659,339	56,122,056	55,907,052	51,807,725	38,494,120
Historic Program Total Contribution to CPAS‡			11,768,297	17,484,846	26,770,117	31,603,548	31,299,255	1,055,868,215	1,043,963,399	1,022,385,692	972,013,418	968,326,018	943,991,611
Program Total CPAS	61,372,289	684,864,104	11,768,297	17,484,846	26,770,117	31,603,548	91,720,089	1,115,344,904	1,101,622,738	1,078,507,747	1,027,920,470	1,020,133,744	982,485,731
CY2022 Program Incremental Expiring Savings§								944,146	1,817,350	1,537,284	215,003	4,099,327	13,313,606
Historic Program Incremental Expiring Savings								304,293	-1,024,568,960	11,904,816	21,577,708	50,372,273	3,687,400
Program Total Incremental Expiring Savings#								304,293	-1,023,624,815	13,722,166	23,114,991	50,587,277	7,786,727

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Contribution to CPAS	61,372,289	684,864,104	37,320,315	37,314,587	37,314,254	28,730,922	27,253,486	25,151,171	25,117,346	25,114,513	13,454,732	12,206,646	12,009,775
Historic Program Total Contribution to CPAS‡			694,864,008	694,164,647	692,700,907	690,621,730	643,703,414	603,692,533	542,410,841	541,028,095	540,936,632	283,624,943	250,285,473
Program Total CPAS	61,372,289	684,864,104	732,184,323	731,479,234	730,015,161	719,352,652	670,956,900	628,843,703	567,528,187	566,142,609	554,391,364	295,831,589	262,295,248
CY2022 Program Incremental Expiring Savings§			1,173,805	5,727	333	8,583,332	1,477,436	2,102,315	33,825	2,833	11,659,781	1,248,087	196,871
Historic Program Incremental Expiring Savings			249,127,603	699,362	1,463,739	2,079,177	46,918,316	40,010,881	61,281,692	1,382,745	91,464	257,311,688	33,339,471
Program Total Incremental Expiring Savings#			250,301,408	705,089	1,464,073	10,662,509	48,395,752	42,113,196	61,315,516	1,385,578	11,751,245	258,559,775	33,536,342

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	CPAS Verified Net kWh Savings										
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2022 Program Total Contribution to CPAS	61,372,289	684,864,104	11,994,356	11,994,185	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			250,285,473	250,285,473	250,285,473	0	0	0	0	0	0	0	0
Program Total CPAS	61,372,289	684,864,104	262,279,829	262,279,657	250,285,473	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			15,418	172	11,994,185	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	250,285,473	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			15,418	172	11,994,185	250,285,473	0	0	0	0	0	0	0

† 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.

Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis