

ComEd Small Business Program Impact Evaluation Report

Energy Efficiency/Demand Response Plan:
Program Year 2023 (CY2023)
(1/1/2023-12/31/2023)

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FINAL

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Introduction

This report presents the results of the impact evaluation of the Small Business program from the program year from January 1 to December 31, 2023 (CY2023). The program was designed to assist qualified ComEd private and public sector non-residential customers¹ in achieving electric energy savings. The program educates these customers about energy efficiency opportunities through no-cost onsite energy assessments conducted by authorized, specially trained Energy Efficiency Service Providers (EESPs) and installs no-cost direct install measures.² Further savings are available to participating customers through incentives of 30%-75% offered for select contractor-installed measures.³

Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the Small Business Program achieved in CY2023. The gas or other fuel savings reported are only those that ComEd may be able to claim as this is a non-joint program.⁴

Table 1. 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)	CY2021 Net Carryover Savings	CY2022 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	232,510,311	1.00	232,555,032	0.98	900,242	155,977	227,894,346
Electric Energy Savings - Converted from Other Fuel§	kWh	8,346,650	1.01	8,468,725	0.99			8,383,456
Electric Energy Savings - Electrification	kWh							
Total Electric Energy Savings#	kWh	240,856,961	1.00	241,023,757	0.98	900,242	155,977	236,277,802
Total Electric Energy Savings Including Carryover#	kWh	240,856,961	1.01	242,117,774	0.98	900,242	155,977	236,277,802
Summer Peak** Demand Savings	kW	44,719	1.00	44,722	0.98			43,628
Summer Peak** Demand Savings Including Carryover	kW	44,719	1.01	44,991	0.98	225	35	43,888

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

¹ Participants must be ComEd commercial or industrial customers with monthly peak demand levels up to 200 kW for private businesses and 400 kW for the public sector in CY2022. In CY2023 – CY2025, commercial or industrial private business customers with monthly peak demand levels up to 400 kWh will be eligible to align with public sector customer eligibility.

² No-cost direct install measures include low flow showerheads and faucet aerators, pre-rinse spray valves, power strips, and controls for novelty coolers, beverage machines, and snack machines. The program also offers kits consisting of a variety of measures including lighting (BR30, PAR30, and candelabra lamps), hot water (bathroom and kitchen aerators, pre-rinse spray valves, and low flow showerheads), and consumer electronics (smart sockets) for fire stations, the general public, or private facilities and restaurants. Kits are offered to customers in CY2022 and will be discontinued in CY2023 – CY2025.

³ Incented measures may include LED retrofits and fixtures, lighting controls, VSDs and HVAC system components, electric water heaters, refrigeration system components, commercial kitchen equipment, compressed air system measures, smart thermostats, and building envelope measures.

⁴ The evaluation will determine which other fuel 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."

* The “Ex Ante Gross Savings” and “Verified Gross Savings” in row one (Electric Energy Savings - Direct) and row six (Summer Peak Demand Savings) exclude gross carryover savings from CY2021 and CY2022.

† The “Verified Net Savings” in row one and row six include net carryover savings from CY2021 and CY2022.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency savings from electrification measures but excludes the electrification savings, however there are no electrification measures in this program), 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) and/or propane savings converted to kWh by multiplying Gallons * 26.77 (which is based on 91,333 Btu/Gallon and 3,412 Btu/kWh). The evaluation team will determine which other fuel savings will be converted to kWh and counted toward ComEd’s electric savings goal while producing the portfolio-wide Summary Report.

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

Total Electric Energy Savings is the sum of the Electric Energy Savings - Direct, the Electric Energy Savings Converted from Other Fuel, and the Electrification Savings. Note: This row does not include carryover gross savings, but the next one includes carryover verified gross savings, for the purpose of recalculating the gross realization rate resulting from including carryover savings (same for the peak demand savings).

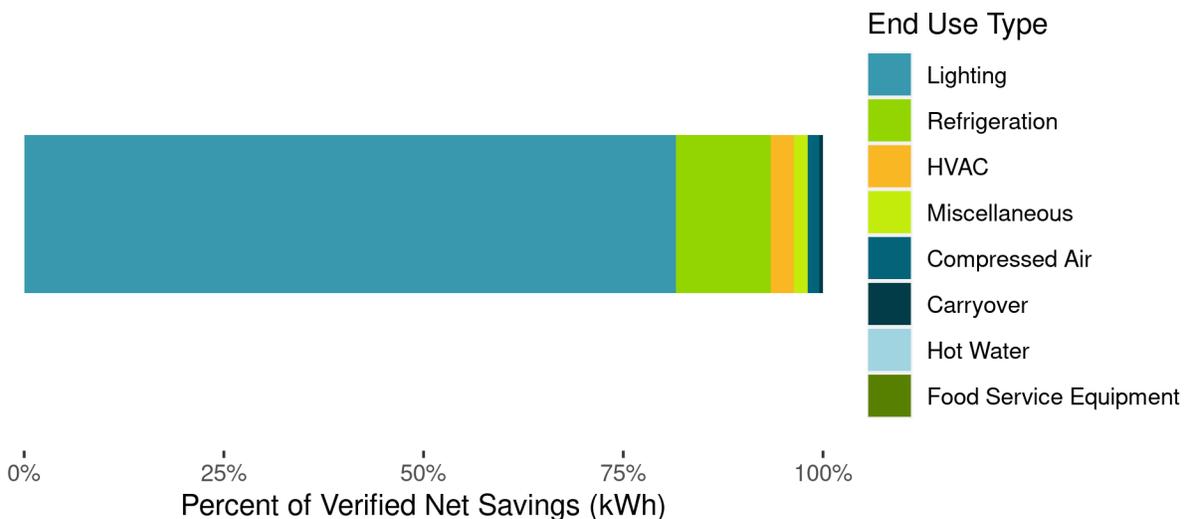
*† The Peak Demand Savings are savings occurring at coincident Summer Peak period, defined as 1:00-5:00 PM Central Prevailing Time on non-holiday weekdays, June through August. This definition is in accordance with PJM requirement.

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-2023>.

Source: Evaluation team analysis

Figure 1 shows the electric energy savings by measure end use. It includes measure efficiency savings, carryover kWh, secondary water kWh, and electrification savings. It does not include other fuel savings converted to kWh.

Figure 1. Verified Net Savings by Measure – Electric



Source: Evaluation team analysis

Cumulative Persisting Annual Savings

Table 2 to Table 4 show the cumulative persisting annual savings (CPAS) for the measures installed in CY2023. The electric CPAS across all measures installed in 2023 is shown in Table 2. The gas and other fuel contribution to CPAS (converted to equivalent electricity) are shown in Table 3.⁵ The combined savings are shown in Table 4.

Table 2. 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	
CY2023 Program Total Contribution to CPAS	233,649,049	2,902,350,098							227,894,346	227,861,072	227,005,299	222,331,561	218,441,791	212,305,008
Historic Program Total Contribution to CPAS [‡]			196,963,232	329,370,837	536,386,617	751,380,221	1,000,715,528	988,569,498	937,550,153	918,067,015	890,000,038	875,675,200	833,795,536	
Program Total CPAS	233,649,049	2,902,350,098	196,963,232	329,370,837	536,386,617	751,380,221	1,000,715,528	1,216,463,844	1,165,411,225	1,145,072,314	1,112,331,598	1,094,116,990	1,046,100,543	
CY2023 Program Incremental Expiring Savings [§]									33,274	855,773	4,673,738	3,889,770	6,136,783	
Historic Program Incremental Expiring Savings									12,146,030	51,019,345	19,483,138	28,066,978	14,324,838	41,879,664
Program Total Incremental Expiring Savings [#]									12,146,030	51,052,619	20,338,910	32,740,716	18,214,608	48,016,447

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
CY2023 Program Total Contribution to CPAS	233,649,049	2,902,350,098	211,657,514	210,859,628	208,863,706	204,709,909	191,246,950	166,328,411	139,128,223	123,262,938	110,445,014	873	873
Historic Program Total Contribution to CPAS [‡]			817,126,753	683,611,616	605,801,741	501,300,509	406,467,394	252,299,159	178,891,059	90,368,865	84,332	73,486	59,605
Program Total CPAS	233,649,049	2,902,350,098	1,028,784,267	894,471,244	814,665,447	706,010,418	597,714,344	418,627,570	318,019,281	213,631,803	110,529,346	74,359	60,478
CY2023 Program Incremental Expiring Savings [§]			647,494	797,886	1,995,922	4,153,797	13,462,960	24,918,539	27,200,188	15,865,285	12,817,924	110,444,141	0
Historic Program Incremental Expiring Savings			16,668,783	133,515,137	77,809,875	104,501,232	94,833,115	154,168,235	73,408,100	88,522,193	90,284,533	10,846	13,881
Program Total Incremental Expiring Savings [#]			17,316,277	134,313,023	79,805,797	108,655,029	108,296,074	179,086,774	100,608,289	104,387,478	103,102,457	110,454,987	13,881

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
CY2023 Program Total Contribution to CPAS	233,649,049	2,902,350,098	873	873	873	873	873	873	873	873	0	0	0
Historic Program Total Contribution to CPAS [‡]			39,056	1,724	0	0	0	0	0	0	0	0	0
Program Total CPAS	233,649,049	2,902,350,098	39,929	2,597	873	873	873	873	873	873	0	0	0
CY2023 Program Incremental Expiring Savings [§]			0	0	0	0	0	0	0	0	873	0	0
Historic Program Incremental Expiring Savings			20,549	37,332	1,724	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings [#]			20,549	37,332	1,724	0	0	0	0	0	873	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 3. CPAS – Other Fuel (Gas + Propane)

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings [†]	CPAS Verified Net Therms Savings											
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
CY2023 Program Total Other Fuel Contribution to CPAS (Therms)	288,936	2,665,304							286,027	286,027	286,027	286,027	286,027	239,537
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent) [‡]	8,468,725								8,383,456	8,383,456	8,383,456	8,383,456	8,383,456	7,020,832
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent) [§]			9,794,779	21,307,759	33,883,907	44,421,953	67,338,340	66,806,862	66,223,283	65,960,213	65,464,818	64,396,017	58,296,241	
Program Total Other Fuel CPAS (kWh Equivalent)	8,468,725	0	9,794,779	21,307,759	33,883,907	44,421,953	67,338,340	75,190,318	74,606,740	74,343,670	73,848,274	72,779,473	65,317,073	
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)									0	0	0	0	46,490	
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)									0	0	0	0	1,362,624	
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent) [#]									531,478	583,579	263,070	495,396	1,068,801	6,099,776
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent) ^{*†}									531,478	583,579	263,070	495,396	1,068,801	7,462,400

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings [†]	CPAS Verified Net Therms Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2023 Program Total Other Fuel Contribution to CPAS (Therms)	288,936	2,665,304	239,537	239,537	239,487	232,388	42,560	152	152	152	152	152	152
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent) [‡]	8,468,725		7,020,832	7,020,832	7,019,364	6,811,287	1,247,426	4,444	4,444	4,444	4,444	4,444	4,444

⁵ The Small Business program had only natural gas as other fuel savings.

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings†	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§			49,532,548	41,400,929	31,625,231	10,857,792	3,430,597	3,430,597	925,570	909,018	909,018	197,513	197,513
Program Total Other Fuel CPAS (kWh Equivalent)	8,468,725	0	56,553,380	48,421,761	38,644,596	17,669,079	4,678,023	3,435,041	930,014	913,462	913,462	201,957	201,957
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)			0	0	50	7,099	189,828	42,408	0	0	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)			0	0	1,467	208,078	5,563,861	1,242,982	0	0	0	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#			8,763,693	8,131,619	9,775,698	20,767,439	7,427,195	0	2,505,027	16,552	0	711,505	0
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†			8,763,693	8,131,619	9,777,165	20,975,516	12,991,056	1,242,982	2,505,027	16,552	0	711,505	0

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings†	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2023 Program Total Other Fuel Contribution to CPAS (Therms)	288,936	2,665,304	152	152	152	152	152	152	152	152	0	0	0
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	8,468,725		4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	0	0	0
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§			176,463	0	0	0	0	0	0	0	0	0	0
Program Total Other Fuel CPAS (kWh Equivalent)	8,468,725	0	180,907	4,444	4,444	4,444	4,444	4,444	4,444	4,444	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)			0	0	0	0	0	0	0	0	152	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)			0	0	0	0	0	0	0	0	4,444	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#			21,050	176,463	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†			21,050	176,463	0	0	0	0	0	0	4,444	0	0

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

‡ Fossil fuel savings (from natural gas, propane, etc.) are reported in therms. kWh equivalent savings are calculated by multiplying therms 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 4. 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	
CY2023 Program Total Contribution to CPAS	242,117,774	2,980,470,161							236,277,802	236,244,528	235,388,755	230,715,017	226,825,247	219,325,839
Historic Program Total Contribution to CPAS‡			206,758,011	350,678,596	570,270,523	795,802,173	1,068,053,868	1,055,376,360	1,003,773,436	984,027,229	955,464,856	940,071,217	892,091,777	
Program Total CPAS	242,117,774	2,980,470,161	206,758,011	350,678,596	570,270,523	795,802,173	1,068,053,868	1,291,654,162	1,240,017,964	1,219,415,984	1,186,179,872	1,166,896,464	1,111,417,616	
CY2023 Program Incremental Expiring Savings§									33,274	855,773	4,673,738	3,889,770	7,499,407	
Historic Program Incremental Expiring Savings									12,677,508	51,602,924	19,746,208	28,562,373	15,393,639	47,979,440
Program Total Incremental Expiring Savings#									12,677,508	51,636,198	20,601,980	33,236,111	19,283,409	55,478,847

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2023 Program Total Contribution to CPAS	242,117,774	2,980,470,161	218,678,346	217,880,460	215,883,071	211,521,196	192,494,376	166,332,855	139,132,666	123,267,382	110,449,457	5,316	5,316
Historic Program Total Contribution to CPAS‡			866,659,301	725,012,545	637,426,972	512,158,301	409,897,991	255,729,756	179,816,629	91,277,883	993,351	270,999	257,119
Program Total CPAS	242,117,774	2,980,470,161	1,085,337,647	942,893,005	853,310,043	723,679,497	602,392,367	422,062,611	318,949,295	214,545,265	111,442,808	276,316	262,435
CY2023 Program Incremental Expiring Savings§			647,494	797,886	1,997,390	4,361,874	19,026,821	26,161,521	27,200,188	15,865,285	12,817,924	110,444,141	0
Historic Program Incremental Expiring Savings			25,432,476	141,646,756	87,585,572	125,268,671	102,260,310	154,168,235	75,913,128	88,538,745	90,284,533	722,351	13,881
Program Total Incremental Expiring Savings#			26,079,970	142,444,642	89,582,962	129,630,546	121,287,130	180,329,756	103,113,316	104,404,030	103,102,457	111,166,492	13,881

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh)†	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
CY2023 Program Total Contribution to CPAS	242,117,774	2,980,470,161	5,316	5,316	5,316	5,316	5,316	5,316	5,316	5,316	0	0	0
Historic Program Total Contribution to CPAS‡			215,519	1,724	0	0	0	0	0	0	0	0	0
Program Total CPAS	242,117,774	2,980,470,161	220,836	7,041	5,316	5,316	5,316	5,316	5,316	5,316	0	0	0
CY2023 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	5,316	0	0
Historic Program Incremental Expiring Savings			41,599	213,795	1,724	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			41,599	213,795	1,724	0	0	0	0	0	5,316	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