

ComEd Targeted Systems Program Impact Evaluation Report

Energy Efficiency/Demand Response Plan:
Program Year 2024 (CY2024)
(1/1/2024-12/31/2024)

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Introduction

This report presents the results of the impact evaluation of the Targeted Systems program from the program year from January 1 to December 31, 2024 (CY2024).

The Targeted Systems program provides a fully funded engineering study to help optimize operations of existing building and industrial systems and identifies low-cost and no-cost measures for systems and processes. The program is also available to smaller customers, through measures in which smart meter interval usage data is used to remotely identify operational savings opportunities. The program also offers tuition-reimbursement for customers who complete the training and certification for commercial building operators. Eligible measures include low-cost energy conservation measures that have an average simple payback of 18 months, capital investments, and operational adjustments, such as optimizing operating parameters, properly matching equipment to load, and installing controls that improve system efficiency. Applicable systems include compressed air, process cooling, industrial refrigeration, building HVAC systems, water and wastewater treatment, and process efficiency for heating and cooling in production. This program targets public and private commercial and industrial customers in ComEd's service territory. Typical participants include commercial office buildings, hospitals/health care facilities, higher education buildings, and industrial customers.

The program is offered jointly to customers served by ComEd, Nicor Gas, Peoples Gas, and North Shore Gas. This report presents the results just for ComEd. 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 Targeted Systems program achieved in CY2024. The gas or other fuel 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 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)	CY2022 Net Carryover Savings	CY2023 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	109,307,790	0.99	107,897,809	0.84	N/A	N/A	90,836,052
Electric Energy Savings - Converted from Other Fuels§	kWh	180,139	10.14	1,827,083	0.99	N/A	N/A	1,816,537
Electric Energy Savings - Indirect from Electrification (electrification baseline)	kWh	0	N/A	0	N/A	N/A	N/A	0
Electric Energy Savings - Indirect from Electrification (efficiency baseline)	kWh							
Total Electric Energy Savings#	kWh	109,487,929	1.00	109,724,891	0.84	N/A	N/A	92,652,589
Total Electric Energy Savings Including Carryover#	kWh							
Summer Peak** Demand Savings	kW	11,534	1.04	12,035	0.82	N/A	N/A	9,821
Summer Peak** Demand Savings Including Carryover	kW							

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

* The "Ex Ante Gross Savings" and "Verified Gross Savings" in row one (Electric Energy Savings - Direct) and row seven (Summer Peak Demand Savings) exclude gross carryover savings from CY2022 and CY2023.

† The "Verified Net Savings" in row one (Electric Energy Savings - Direct) and row seven (Summer Peak Demand Savings) include net carryover savings from CY2022 and CY2023 for applicable programs.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (excluding electrification savings from both electrification and efficiency baseline), 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 excluding direct efficiency savings. Calculated from net electric savings from increase in kWh consumption and decrease in gas consumption from electrification (kWh equivalent). This row calculates savings using electrification baseline. The next row (Electric Energy Savings – Indirect from Electrification (efficiency baseline)) calculates the portion of converted electrification savings to traditional efficiency electric savings using an efficiency baseline, which can be claimable towards ComEd's electric savings goal (applied to only midstream programs).² The evaluation team determined which electrification savings are allocated toward ComEd's electrification savings goal, and which portion of electrification are converted to traditional efficiency electric savings based on analysis of portfolio-wide verified savings.

Total Electric Energy Savings is the sum of the Electric Energy Savings - Direct, Electric Energy Savings Converted from Other Fuel, Electric Energy Savings - Indirect from Electrification (electrification baseline), and Electric Energy Savings - Indirect from Electrification (efficiency baseline). Note: This row does not include carryover gross savings,

¹ The evaluation will determine which other fuel savings will be counted towards 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."

² ComEd Electrification Policy Resolutions for 2024 Final Draft. "...the ComEd Energy Efficiency portfolio will use the Electric Point of Sale baseline set by the TRM, without applying the additional electrification ratios, to claim Energy Efficiency savings from heat-pump projects through midstream programs once either of the electrification caps has been reached."

but the next row (Total Electric Savings Including Carryover) includes carryover in the gross savings, for the purpose of recalculating the gross realization rate, including carryover savings (same for the peak demand savings).

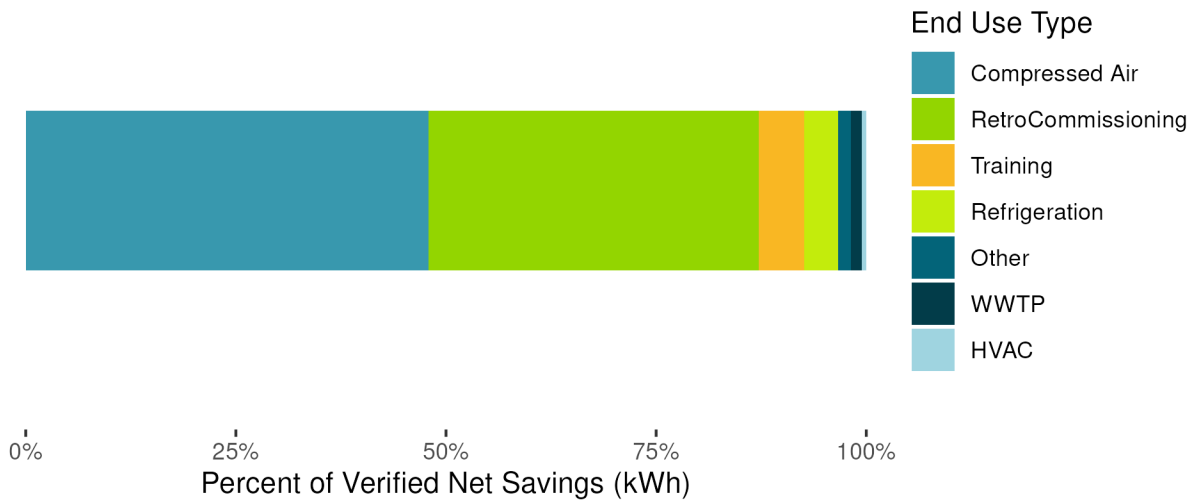
*† The Peak Demand Savings are savings occurring at coincident Summer Peak period, defined as 1:00-5:00 PM Central Prevailing Time on non-holiday weekdays, June through August. This definition is in accordance with PJM requirements.

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-2024>. The NTG ratio for eligible business customers in disadvantaged neighborhoods is set to 1.00 as per the “NTG Ratio for Disadvantaged Areas” policy.³

Source: Evaluation team analysis

Figure 1 shows the electric energy savings by measure end use. It includes measure efficiency savings. It does not include other fuel savings converted to kWh.

Figure 1. Verified Net Savings by Measure – Electric



Source: Evaluation team analysis

³ Illinois Energy Efficiency Policy Manual Version 3.0, Section 7.4, available at <https://www.ilsag.info/policy/>

Cumulative Persisting Annual Savings

Table 2 to Table 4 show the cumulative persisting annual savings (CPAS) for the measures installed in CY2024. The electric CPAS across all measures installed in CY2024 is shown in Table 2. The gas and other fuel contribution to CPAS (converted to equivalent electricity) are shown in Table 3. 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		
CY2024 Program Total Contribution to CPAS	107,897,809	738,403,456									90,836,052	90,836,052	90,836,052	63,062,902
Historic Program Total Contribution to CPAS‡			60,659,142	106,764,200	193,396,065	265,339,807	355,484,339	408,940,913	392,341,958	342,605,248	300,971,304	300,971,304	268,761,156	
Program Total CPAS			60,659,142	106,764,200	193,396,065	265,339,807	355,484,339	408,940,913	483,178,010	433,441,300	391,807,356	391,807,356	331,824,058	
CY2024 Program Incremental Expiring Savings§											0	0	27,773,150	
Historic Program Incremental Expiring Savings											16,598,955	49,736,710	41,633,944	32,210,148
Program Total Incremental Expiring Savings#											16,598,955	49,736,710	41,633,944	59,983,299

Savings Category	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
CY2024 Program Total Contribution to CPAS	60,990,937	60,990,937	60,990,937	49,221,760	36,047,826	24,371,671	24,223,090	24,223,090	24,223,090	12,072,995	12,072,995	2,392,397	2,392,397	2,392,397
Historic Program Total Contribution to CPAS‡	209,910,399	155,731,607	110,476,025	76,954,784	66,011,083	45,815,301	34,343,041	21,073,387	7,634,271	6,207,247	4,456,629	4,188,934	4,025,763	2,049,997
Program Total CPAS	270,901,336	216,722,544	171,466,962	126,176,544	102,058,909	70,186,972	58,566,131	45,296,477	31,857,361	18,280,242	16,529,624	6,581,331	6,418,161	4,442,394
CY2024 Program Incremental Expiring Savings§	2,071,965	0	0	11,769,177	13,173,934	11,676,155	148,581	0	0	12,150,095	0	9,680,597	0	0
Historic Program Incremental Expiring Savings	58,850,757	54,178,792	45,255,581	33,521,241	10,943,701	20,195,782	11,472,260	13,269,654	13,439,116	1,427,024	1,750,618	267,695	163,170	1,975,767
Program Total Incremental Expiring Savings#	60,922,722	54,178,792	45,255,581	45,290,418	24,117,635	31,871,937	11,620,841	13,269,654	13,439,116	13,577,119	1,750,618	9,948,293	163,170	1,975,767

Savings Category	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
CY2024 Program Total Contribution to CPAS	2,392,397	2,392,397	480,361	480,361	480,361	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡	1,965,792	1,314,464	1,225,231	664,552	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	4,358,190	3,706,862	1,705,592	1,144,913	480,361	0	0	0	0	0	0	0	0	0
CY2024 Program Incremental Expiring Savings§	0	0	1,912,036	0	0	480,361	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings	84,204	651,328	89,233	560,679	664,552	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#	84,204	651,328	2,001,269	560,679	664,552	480,361	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 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		
CY2024 Program Total Other Fuel Contribution to CPAS (Therms)	62,336	567,930									61,977	61,977	61,977	61,977
CY2024 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	1,827,083	16,646,037									1,816,537	1,816,537	1,816,537	1,816,537
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§			2,907,030	3,986,674	7,278,229	9,167,511	15,247,071	17,296,452	17,296,452	15,842,937	14,189,984	14,189,984	13,112,559	
Program Total Other Fuel CPAS (kWh Equivalent)			2,907,030	3,986,674	7,278,229	9,167,511	15,247,071	17,296,452	19,112,989	17,659,474	16,006,521	16,006,521	14,929,096	
CY2024 Program Incremental Expiring Other Fuel Savings (Therms)											0	0	0	0
CY2024 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)											0	0	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#											0	1,453,515	1,652,952	1,077,425
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†											0	1,453,515	1,652,952	1,077,425

Savings Category	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
CY2024 Program Total Other Fuel Contribution to CPAS (Therms)	38,314	38,314	38,314	38,314	36,059	32,677	32,677	32,677	32,677	0	0	0	0	0
CY2024 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	1,122,982	1,122,982	1,122,982	1,122,982	1,056,896	957,767	957,767	957,767	957,767	0	0	0	0	0
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§	11,504,708	8,715,310	5,421,479	1,494,866	570,537	570,537	570,537	295,123	0	0	0	0	0	0
Program Total Other Fuel CPAS (kWh Equivalent)	12,627,690	9,838,292	6,544,461	2,617,848	1,627,433	1,528,304	1,528,304	1,252,890	957,767	0	0	0	0	0
CY2024 Program Incremental Expiring Other Fuel Savings (Therms)	23,663	0	0	0	2,255	3,382	0	0	0	32,677	0	0	0	0
CY2024 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)	693,555	0	0	0	66,086	99,129	0	0	0	957,767	0	0	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#	1,607,851	2,789,398	3,293,831	3,926,613	924,329	0	0	275,414	295,123	0	0	0	0	0
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†	2,301,406	2,789,398	3,293,831	3,926,613	990,415	99,129	0	275,414	295,123	957,767	0	0	0	0

Savings Category	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
CY2024 Program Total Other Fuel Contribution to CPAS (Therms)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY2024 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Program Total Other Fuel CPAS (kWh Equivalent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY2024 Program Incremental Expiring Other Fuel Savings (Therms)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CY2024 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†	0	0	0	0	0	0	0	0	0	0	0	0	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		
CY2024 Program Total Contribution to CPAS	109,724,891	755,049,494									92,652,589	92,652,589	92,652,589	64,879,439
Historic Program Total Contribution to CPAS‡			63,566,172	110,750,874	200,674,295	274,507,318	370,731,410	426,237,365	409,638,410	358,448,185	315,161,289	281,873,715		
Program Total CPAS			63,566,172	110,750,874	200,674,295	274,507,318	370,731,410	426,237,365	502,290,999	451,100,774	407,813,878	346,753,154		
CY2024 Program Incremental Expiring Savings§											0	0	27,773,150	
Historic Program Incremental Expiring Savings									16,598,955	51,190,225	43,286,896	33,287,574		
Program Total Incremental Expiring Savings#									16,598,955	51,190,225	43,286,896	61,060,724		

Savings Category	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
CY2024 Program Total Contribution to CPAS	62,113,919	62,113,919	62,113,919	50,344,742	37,104,722	25,329,438	25,180,857	25,180,857	25,180,857	12,072,995	12,072,995	2,392,397	2,392,397	2,392,397
Historic Program Total Contribution to CPAS‡	221,415,107	164,446,916	115,897,504	78,449,650	66,581,620	46,385,838	34,913,578	21,368,510	7,634,271	6,207,247	4,456,629	4,188,934	4,025,763	2,049,997
Program Total CPAS	283,529,026	226,560,835	178,011,423	128,794,392	103,686,342	71,715,276	60,094,435	46,549,367	32,815,128	18,280,242	16,529,624	6,581,331	6,418,161	4,442,394
CY2024 Program Incremental Expiring Savings§	2,765,520	0	0	11,769,177	13,240,020	11,775,284	148,581	0	0	13,107,862	0	9,680,597	0	0
Historic Program Incremental Expiring Savings	60,458,608	56,968,191	48,549,412	37,447,854	11,868,030	20,195,782	11,472,260	13,545,068	13,734,239	1,427,024	1,750,618	267,695	163,170	1,975,767
Program Total Incremental Expiring Savings#	63,224,128	56,968,191	48,549,412	49,217,031	25,108,050	31,971,066	11,620,841	13,545,068	13,734,239	14,534,886	1,750,618	9,948,293	163,170	1,975,767

Savings Category	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
CY2024 Program Total Contribution to CPAS	2,392,397	2,392,397	480,361	480,361	480,361	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡	1,965,792	1,314,464	1,225,231	664,552	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	4,358,190	3,706,862	1,705,592	1,144,913	480,361	0	0	0	0	0	0	0	0	0
CY2024 Program Incremental Expiring Savings§	0	0	1,912,036	0	0	480,361	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings	84,204	651,328	89,233	560,679	664,552	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#	84,204	651,328	2,001,269	560,679	664,552	480,361	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