

ComEd Electric Homes New Construction 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 Electric Homes New Construction program from the program year from January 1 to December 31, 2024 (CY2024). The program was designed to provide incentives to builders for the construction of energy efficiency all-electric homes. The program targets single-family homes, duplexes, townhomes, 2-4 flats, or accessory dwelling units.

Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the Electric Homes New Construction Program achieved in CY2024. The electrification savings are those resulting from electrification measures.¹

Table 1. Total Annual Incremental Electric Savings - Total

Savings Category	Units	Ex Ante Gross Savings*	Program Realization Rate	Gross Verified Savings*	Program Net-to-Gross Ratio (NTG)	CY2022 Net Carryover Savings	CY2023 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	349,130	1.10	384,532	0.93			356,566
Electric Energy Savings - Converted from Other Fuel§	kWh							
Electric Energy Savings - Indirect from Electrification (electrification baseline)	kWh	1,473,260	0.82	1,204,096	0.93			1,116,526
Electric Energy Savings - Indirect from Electrification (efficiency baseline)	kWh							
Total Electric Energy Savings#	kWh	1,822,390	0.87	1,588,628	0.93			1,473,091
Total Electric Energy Savings Including Carryover#	kWh							
Summer Peak*†† Demand Savings	kW	35	0.97	34	0.93			32
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

¹ The electrification savings counted toward ComEd's electric savings goal were determined by the evaluation team's analysis of portfolio verified savings. 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."

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, 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).

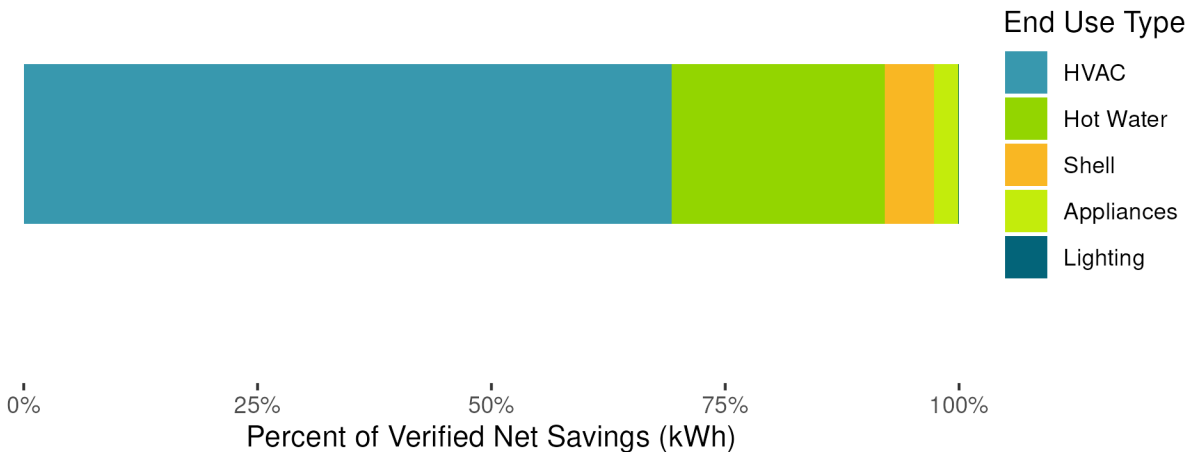
*† The Peak Demand Savings are savings occurring at coincident Summer Peak period, defined as 1:00-5:00 PM Central Prevailing Time on non-holiday weekdays, June through August. This definition is in accordance with PJM requirements.

Note: The program-level NTG values are calculated as Verified Net/Verified Gross. The evaluation team provided a NTG research memo to ComEd in September 2021³ that recommended a NTG value of 0.80 for all measures in the program. The NTG ratio for eligible business customers in disadvantaged neighborhoods is set to 1.00 as per the "NTG Ratio for Disadvantaged Areas" policy.⁴

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

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."

³ Guidehouse, "ComEd Electric Homes New Construction CY2021 NTG Memo," September 30, 2021, <https://ilsag.s3.amazonaws.com/ComEd-EHNC-CY2021-NTG-Memo-2021-09-30-Final.pdf>.

⁴ Illinois Energy Efficiency Policy Manual Version 3.0, Section 7.4, available at <https://www.ilsag.info/policy/>

Cumulative Persisting Annual Savings

Table 4 shows the cumulative persisting annual savings (CPAS) for the measures installed in CY2024.

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	1,588,628	22,961,656									1,473,091	1,473,091	1,472,165	1,472,165
Historic Program Total Contribution to CPAS‡						153,748	657,695	2,118,057	2,118,057	2,097,271	2,097,271	2,097,271	2,097,271	2,097,271
Program Total CPAS	1,588,628	52,154,211	0	0	0	153,748	657,695	2,118,057	3,591,148	3,570,362	3,569,436	3,569,436	3,569,436	3,569,436
CY2024 Program Incremental Expiring Savings§											0	0	926	0
Historic Program Incremental Expiring Savings											0	20,786	0	0
Program Total Incremental Expiring Savings#											0	20,786	926	0

Savings Category	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
CY2024 Program Total Contribution to CPAS	1,472,165	1,472,165	1,472,165	1,472,165	1,472,165	1,472,165	1,419,723	1,392,492	1,392,492	1,380,706	1,363,028	968,964	80,882	80,882
Historic Program Total Contribution to CPAS‡	2,097,271	2,097,271	2,097,271	2,097,271	2,084,823	2,005,566	1,958,408	1,955,699	1,796,199	1,428,137	875,684	80,163	80,163	78,786
Program Total CPAS	3,569,436	3,569,436	3,569,436	3,569,436	3,556,988	3,477,731	3,378,131	3,348,191	3,188,691	2,808,843	2,238,712	1,049,127	161,045	159,668
CY2024 Program Incremental Expiring Savings§	0	0	0	0	0	0	52,442	27,231	0	11,786	17,679	394,064	888,081	0
Historic Program Incremental Expiring Savings	0	0	0	0	12,448	79,257	47,158	2,709	159,500	368,062	552,453	795,521	0	1,377
Program Total Incremental Expiring Savings#	0	0	0	0	12,448	79,257	99,600	29,940	159,500	379,848	570,132	1,189,585	888,081	1,377

Savings Category	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
CY2024 Program Total Contribution to CPAS	80,882	78,100	0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡	49,973	0	0	0	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	130,855	78,100	0	0	0	0	0	0	0	0	0	0	0	0
CY2024 Program Incremental Expiring Savings§	0	2,783	78,100	0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings	28,813	49,973	0	0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#	28,813	52,756	78,100	0	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