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| ComEd Electric Homes New Construction Program Impact Evaluation ReportEnergy Efficiency/Demand Response Plan: Program Year 2024 (CY2024) (1/1/2024-12/31/2024) |
| Prepared for:ComEdDRAFTMarch 06, 2025 |
| Prepared by:  |  |
| Mike FrischmannEcoMetric  | Fahman KahnEcoMetric |  |
| EcoMetric |  |  |
|  |  |  |

**Submitted to:**

ComEd

2011 Swift Drive

Oak Brook, IL 60523

**Submitted by:**

Guidehouse Inc.

150 N. Riverside Plaza, Suite 2100

Chicago, IL 60606

**Contact:**

|  |  |  |
| --- | --- | --- |
| Charles Maglione, Partner703.431.1983**cmaglione@guidehouse.com** | Jeff Erickson, Director608.616.4962**jeff.erickson@guidehouse.com** | Natasha Herring, Managing Consultant303.600.3934**naherring@guidehouse.com** |

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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]](#footnote-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 | 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 programs).[[2]](#footnote-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 2021[[3]](#footnote-3) 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]](#footnote-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

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# Cumulative Persisting Annual Savings

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

Table 4. CPAS – Electric

|  | CPAS Verified Net kWh Savings |  |
| --- | --- | --- |
| Savings Category | Verified Gross Savings (kWh) | Lifetime Net Savings (kWh)† | 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 |
| 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 |
| 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

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." [↑](#footnote-ref-1)
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.” [↑](#footnote-ref-2)
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. [↑](#footnote-ref-3)
4. Illinois Energy Efficiency Policy Manual Version 3.0, Section 7.4, available at https://www.ilsag.info/policy/ [↑](#footnote-ref-4)