

# ComEd New Construction - Bus/Pub Program Impact Evaluation Report

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

**Prepared for:**

**ComEd**

## **FINAL**

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Prepared by:

Malena Hernandez  
Opinion Dynamics

Nick Plants  
Opinion Dynamics

Ryan Kroll  
Driftless Energy



**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, Partner  
703.431.1983  
[cmaglione@guidehouse.com](mailto:cmaglione@guidehouse.com)

Jeff Erickson, Director  
608.616.4962  
[jeff.erickson@guidehouse.com](mailto:jeff.erickson@guidehouse.com)

Nishant Mehta, Associate Director  
608.616.5823  
[nishant.mehta@guidehouse.com](mailto:nishant.mehta@guidehouse.com)

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## Introduction

This report presents the results of the impact evaluation of the New Construction - Bus/Pub program for the program year from January 1 to December 31, 2023 (CY2023). The program was designed to capture immediate and long-term energy efficiency opportunities that are available during the design and construction of non-residential and multifamily buildings in ComEd’s service territory. The program covers new buildings, additions, and major renovations.

The program reaches out to design professionals, commercial real estate developers, and customers at the beginning of the design process. The implementation team provides technical assistance in building design to reduce energy use beyond what is required by existing building codes and standards.

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

## Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the New Construction - Bus/Pub Program achieved in CY2023. 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.<sup>1</sup>

**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	20,583,262	1.02	20,947,081	0.50	N/A	N/A	10,442,324
Electric Energy Savings - Converted from Other Fuels§	kWh	341,462	0.94	321,314	N/A	N/A	N/A	138,165
Electric Energy Savings - Electrification	kWh	0	N/A	0	N/A	N/A	N/A	0
Total Electric Energy Savings#	kWh	20,924,724	1.02	21,268,394	0.50	N/A	N/A	10,580,489
Total Electric Energy Savings Including Carryover#	kWh							
Summer Peak*† Demand Savings	kW	2,400	1.02	2,437	0.52	N/A	N/A	1,267
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 six (Summer Peak Demand Savings) exclude gross carryover savings as they don’t apply to this program.

† The “Verified Net Savings” in row one and row six exclude carryover savings as they don’t apply to this program.

‡ 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). 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.

<sup>1</sup> 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.”

# 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*

## 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 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	2028	
CY2023 Program Total Contribution to CPAS	20,947,081	181,696,446							10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324
Historic Program Total Contribution to CPAS‡			22,239,823	40,976,658	58,403,275	74,240,339	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375
Program Total CPAS	20,947,081	181,696,446	22,239,823	40,976,658	58,403,275	74,240,339	84,997,375	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700
CY2023 Program Incremental Expiring Savings§									0	0	0	0	0	0
Historic Program Incremental Expiring Savings									0	0	0	0	0	0
Program Total Incremental Expiring Savings#									0	0	0	0	0	0

  

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	20,947,081	181,696,446	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	10,442,324	
Historic Program Total Contribution to CPAS‡			84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	84,997,375	71,653,481	51,515,451	33,564,747	17,091,862	4,302,814
Program Total CPAS	20,947,081	181,696,446	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700	95,439,700	82,095,806	61,957,775	44,007,072	27,534,186	14,745,139
CY2023 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	0	0	13,343,894	20,138,030	17,950,704	16,472,885	12,789,047
Program Total Incremental Expiring Savings#			0	0	0	0	0	0	0	13,343,894	20,138,030	17,950,704	16,472,885	12,789,047

  

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	20,947,081	181,696,446	4,176,930	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡														
Program Total CPAS	20,947,081	181,696,446	4,176,930	0	0	0	0	0	0	0	0	0	0	0
CY2023 Program Incremental Expiring Savings§			6,265,395	4,176,930	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			4,302,814	0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			10,568,209	4,176,930	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 3. CPAS – Other Fuel (Gas)**

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)	10,963	82,022							4,714	4,714	4,714	4,714	4,714	4,714
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	321,314								138,165	138,165	138,165	138,165	138,165	138,165
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§			981,763	2,500,239	3,713,955	4,940,022	5,057,950	5,057,950	5,057,950	5,057,950	5,057,950	5,057,950	5,057,950	
Program Total Other Fuel CPAS (kWh Equivalent)	321,314	0	981,763	2,500,239	3,713,955	4,940,022	5,057,950	5,196,115	5,196,115	5,196,115	5,196,115	5,196,115	5,196,115	
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)									0	0	0	0	0	
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)									0	0	0	0	0	
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#									0	0	0	0	0	
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†									0	0	0	0	0	

  

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)	10,963	82,022	4,714	4,714	4,714	4,714	4,714	4,714	4,714	4,714	4,714	4,714	4,714
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	321,314		138,165	138,165	138,165	138,165	138,165	138,165	138,165	138,165	138,165	138,165	138,165
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§			5,057,950	5,057,950	5,057,950	5,057,950	5,057,950	5,057,950	4,468,893	3,165,102	1,829,482	608,355	47,171
Program Total Other Fuel CPAS (kWh Equivalent)	321,314	0	5,196,115	5,196,115	5,196,115	5,196,115	5,196,115	5,196,115	4,607,058	3,303,267	1,967,647	746,520	185,336

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings†	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)			0	0	0	0	0	0	0	0	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)			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	589,058	1,303,791	1,335,620	1,221,127	561,184
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†			0	0	0	0	0	0	589,058	1,303,791	1,335,620	1,221,127	561,184

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)	10,963	82,022	1,886	0	0	0	0	0	0	0	0	0	0
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	321,314		55,266	0	0	0	0	0	0	0	0	0	0
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§													
Program Total Other Fuel CPAS (kWh Equivalent)	321,314	0	55,266	0	0	0	0	0	0	0	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)			2,828	1,886	0	0	0	0	0	0	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)			82,899	55,266	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#			47,171	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†			130,070	55,266	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) 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	21,268,394	184,100,514							10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489
Historic Program Total Contribution to CPAS‡			23,221,586	43,476,897	62,117,229	79,180,362	90,055,326	90,055,326	90,055,326	90,055,326	90,055,326	90,055,326	90,055,326	90,055,326
Program Total CPAS	21,268,394	184,100,514	23,221,586	43,476,897	62,117,229	79,180,362	90,055,326	100,635,815	100,635,815	100,635,815	100,635,815	100,635,815	100,635,815	100,635,815
CY2023 Program Incremental Expiring Savings§									0	0	0	0	0	0
Historic Program Incremental Expiring Savings								0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#								0	0	0	0	0	0	0

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	21,268,394	184,100,514	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489	10,580,489
Historic Program Total Contribution to CPAS‡			90,055,326	90,055,326	90,055,326	90,055,326	90,055,326	90,055,326	76,122,374	54,680,553	35,394,229	17,700,217	4,349,986
Program Total CPAS	21,268,394	184,100,514	100,635,815	100,635,815	100,635,815	100,635,815	100,635,815	100,635,815	86,702,863	65,261,042	45,974,719	28,280,706	14,930,475
CY2023 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	0	13,932,952	21,441,821	19,286,324	17,694,012	13,350,231
Program Total Incremental Expiring Savings#			0	0	0	0	0	0	13,932,952	21,441,821	19,286,324	17,694,012	13,350,231

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	21,268,394	184,100,514	4,232,196	0	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡													
Program Total CPAS	21,268,394	184,100,514	4,232,196	0	0	0	0	0	0	0	0	0	0
CY2023 Program Incremental Expiring Savings§			6,348,294	4,232,196	0	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			4,349,986	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			10,698,279	4,232,196	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