



ComEd Residential Behavior Program Impact Evaluation Report

Energy Efficiency/Demand Response Plan:
Program Year 2022 (CY2022)
(1/1/2022-12/31/2022)

Prepared for:

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FINAL

March 15, 2023

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Introduction

This report presents the results of the impact evaluation of the Residential Behavior Program for the program year from January 1 to December 31, 2022 (CY2022). The program was designed to generate energy savings by providing residential customers with information about energy use and conservation strategies. Program participants receive information from regularly mailed and emailed home energy reports.

Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the Residential Behavior program achieved in CY2022. The electrification savings are those resulting from fuel switching measures.¹ Since the randomized control trial (RCT) design inherently estimates net savings, neither the evaluation team nor the implementer estimated gross savings and there is no gross realization rate and no net-to-gross (NTG) ratio.

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)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh							109,384,787
Electric Energy Savings - Converted from Gas§	kWh							0
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)	kWh							0
Total Electric Energy Savings#	kWh							109,384,787
Secondary Water Savings	kWh							0
Summer Peak*†† Demand Savings kW								18,880

All gross savings columns are intentionally blank as the RCT design inherently estimates net savings and therefore neither the evaluation team nor the implementer estimated gross savings.

* Ex ante and verified gross savings exclude gross carryover savings from CY2020 and CY2021.

† The “Verified Net Savings” in row one (Electric Energy Savings - Direct) excludes carryover savings as they do not apply to this program.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency savings from fuel switching measures but excludes the fuel switching savings), secondary kWh savings from wastewater treatment, and electric heating penalties.

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

Total Electric Energy Savings is the sum of the Electric Energy Savings - Direct, the Electric Energy Savings Converted from Gas, and the Electrification Savings from fuel switching.

*† 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.

Source: Evaluation team analysis

¹ The evaluation team will determine which electrification savings from fuel switching will be counted toward ComEd’s electric savings goal while producing the portfolio-wide Summary Report. 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.”

Table 2 provides the detailed adjustments made to arrive at the final verified net savings for CY2022 and compares them to ex ante net savings. Of the modeled savings, 4% are from uplift into other ComEd energy efficiency programs and half (50%) are attributable to prior program years. After the uplift and persistence adjustments, the program achieved a net realization rate of 1.02.

Table 2. Total Program Net Electric Savings - Total

Savings Category	Energy Savings (kWh)
Ex Ante Net Savings	107,503,000
Modeled Savings	237,270,042
Current Year Uplift Adjustment	(1,178,402)
Legacy Uplift Adjustment	(8,029,617)
Verified Unadjusted Net Savings	228,062,023
Persistence Adjustment	(118,677,237)
Final Verified Net Savings	109,384,787
Program Net Realization Rate	1.02

Source: Evaluation team analysis

CPAS Savings

The electric CPAS across all measures installed in 2022 is shown in Table 3.

Table 3. Cumulative Persisting Annual Savings (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
CY2022 Program Total Contribution to CPAS	0	355,391,073					109,384,787	76,617,480	53,807,081	37,229,207	26,318,673	18,524,078	13,192,976
Historic Program Total Contribution to CPAS‡			279,539,772	255,950,948	240,435,808	249,725,611	150,414,629	69,426,909	31,564,732	10,336,490	0	0	0
Program Total CPAS	0	355,391,073	279,539,772	255,950,948	240,435,808	249,725,611	259,799,415	146,044,389	85,371,813	47,565,697	26,318,673	18,524,078	13,192,976
CY2022 Program Incremental Expiring Savings§								32,767,307	22,810,399	16,577,873	10,910,534	7,794,595	5,331,102
Historic Program Incremental Expiring Savings							99,310,982	80,987,720	37,862,177	21,228,242	10,336,490	0	0
Program Total Incremental Expiring Savings#							99,310,982	113,755,026	60,672,576	37,806,116	21,247,024	7,794,595	5,331,102

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
CY2022 Program Total Contribution to CPAS	0	355,391,073	9,271,794	6,475,833	4,569,163	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			0	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	0	355,391,073	9,271,794	6,475,833	4,569,163	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			3,921,182	2,795,961	1,906,670	4,569,163	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			3,921,182	2,795,961	1,906,670	4,569,163	0	0	0	0	0	0	0

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
CY2022 Program Total Contribution to CPAS	0	355,391,073	0	0	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			0	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	0	355,391,073	0	0	0	0	0	0	0	0	0	0	0
CY2022 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	0	0	0	0	0
Program Total Incremental Expiring Savings#			0	0	0	0	0	0	0	0	0	0	0

* 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-2022>.

† 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