

# ComEd ENERGY STAR Retail Products Platform Program Impact Evaluation Report

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

Prepared for:

ComEd

## FINAL

April 23, 2024

Prepared by:  
Ryan Wall  
Guidehouse

Jason Christenson  
Cadmus

Mike Frischmann  
EcoMetric



**CADMUS**

**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)

Ryan Wall, Senior Consultant  
518.318.3289  
[rwall@guidehouse.com](mailto:rwall@guidehouse.com)

This report was prepared by Guidehouse for ComEd. The work presented in this report represents Guidehouse's professional judgment based on the information available at the time this report was prepared. Use of this report by any other party for whatever purpose should not, and does not, absolve such party from using due diligence in verifying the report's contents. Neither Guidehouse nor any of its subsidiaries or affiliates assumes any liability or duty of care to such parties, and hereby disclaims any such liability.

## Table of Contents

<b>Introduction .....</b>	<b>1</b>
<b>Program Savings Detail .....</b>	<b>1</b>
<b>Cumulative Persisting Annual Savings .....</b>	<b>4</b>

## List of Tables and Figures

Table 1. Total Annual Incremental Electric Savings - Total.....	1
Table 2. CPAS – Electric.....	4
Table 3. CPAS – Other Fuel (Gas + Propane) .....	4
Table 4. CPAS – Total .....	5

## Introduction

This report presents the results of the impact evaluation of the ENERGY STAR® Retail Products Platform Market Transformation Program (ESRPP) program from the program year from January 1 to December 31, 2023 (CY2023). The program was designed to promote higher levels of efficiency in consumer goods sold via retail channels through participation in a national midstream market transformation program. The national ESRPP program began in 2016. ComEd’s ESRPP program launched in June 2020 with the following participating retailers: Best Buy, The Home Depot, Lowe’s, and Nationwide Marketing Group. Abt Electronics also joined ComEd’s ESRPP program in September 2020. Currently, ComEd incentivizes two product categories: top-loading clothes washers and refrigerators.

## Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the ENERGY STAR® Retail Products Platform Market Transformation 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> The program does not claim electrification savings from electrification measures.

**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	3,460,734	2.78	9,610,560	1.00			9,610,560
Electric Energy Savings - Converted from Other Fuels§	kWh			4,351,801	1.00			4,351,801
Electric Energy Savings - Electrification	kWh							
Total Electric Energy Savings#	kWh	3,460,734	4.03	13,962,361	1.00			13,962,361
Total Electric Energy Savings Including Carryover#	kWh	3,460,734	4.03	13,962,361	1.00			13,962,361
Summer Peak** Demand Savings	kW			1,449	1.00			1,449
Summer Peak** Demand Savings Including Carryover	kW			1,449	1.00			1,449

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 from CY2021 and CY2022.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency savings from electrification measures but excludes the electrification savings), 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) and/or propane savings converted to kWh by multiplying Gallons \* 26.77 (which is based on 91,333 Btu/Gallon 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.

|| resulting from including carryover savings (same for the peak demand 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).

<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.”

\*† 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.

|| 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).

# 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. Note: ESRPP is a market transformation program where impact calculation approach directly produces net savings and so the NTG value is set to 1.0 in all relevant calculations.

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 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	2028	
CY2023 Program Total Contribution to CPAS	9,610,560	137,797,829							9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560
Historic Program Total Contribution to CPAS‡					103,975	1,372,066	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566
Program Total CPAS	9,610,560	137,797,829	0	0	103,975	1,372,066	11,974,566	21,585,125	21,585,125	21,585,125	21,585,125	21,585,125	21,585,125	
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)†	CPAS Verified Net kWh Savings											
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
CY2023 Program Total Contribution to CPAS	9,610,560	137,797,829	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	9,610,560	3,249,990	0	0
Historic Program Total Contribution to CPAS‡			11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,870,611	10,602,500	3,615,821	3,615,821	3,615,821	3,615,821
Program Total CPAS	9,610,560	137,797,829	21,585,125	21,585,125	21,585,125	21,585,125	21,585,125	21,585,125	21,481,170	20,213,059	13,226,381	6,865,810	3,615,821	0
CY2023 Program Incremental Expiring Savings§			0	0	0	0	0	0	0	0	0	6,360,570	3,249,990	0
Historic Program Incremental Expiring Savings			0	0	0	0	0	103,955	1,268,111	6,986,679	0	0	0	3,615,821
Program Total Incremental Expiring Savings#			0	0	0	0	0	103,955	1,268,111	6,986,679	6,360,570	3,249,990	3,615,821	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	2028		
CY2023 Program Total Other Fuel Contribution to CPAS (Therms)	148,475	2,078,650							148,475	148,475	148,475	148,475	148,475	148,475	148,475
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	4,351,801								4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801
Historic Program Total Other Fuel Contribution to CPAS (kWh Equivalent)§					0	0	0	0	0	0	0	0	0	0	
Program Total Other Fuel CPAS (kWh Equivalent)	4,351,801	0	0	0	0	0	0	0	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)									0	0	0	0	0	0	
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)									0	0	0	0	0	0	
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#								0	0	0	0	0	0	0	
Program Total Incremental Expiring Other Fuel Savings (kWh Equivalent)*†								0	0	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)	148,475	2,078,650	148,475	148,475	148,475	148,475	148,475	148,475	148,475	148,475	148,475	0	0	0
CY2023 Program Total Other Fuel Contribution to CPAS (kWh Equivalent)‡	4,351,801		4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	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
Program Total Other Fuel CPAS (kWh Equivalent)	4,351,801	0	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	4,351,801	0	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (Therms)			0	0	0	0	0	0	0	0	0	148,475	0	0
CY2023 Program Incremental Expiring Other Fuel Savings (kWh Equivalent)			0	0	0	0	0	0	0	0	0	4,351,801	0	0
Historic Program Incremental Expiring Other Fuel Savings (kWh Equivalent)#			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	4,351,801	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) <sup>†</sup>	CPAS Verified Net kWh Savings												
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
CY2023 Program Total Contribution to CPAS	13,962,361	198,723,048								13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361
Historic Program Total Contribution to CPAS <sup>‡</sup>					103,975	1,372,066	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566
Program Total CPAS	13,962,361	198,723,048	0	0	103,975	1,372,066	11,974,566	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927
CY2023 Program Incremental Expiring Savings <sup>§</sup>										0	0	0	0	0	0
Historic Program Incremental Expiring Savings <sup>  </sup>									0	0	0	0	0	0	0
Program Total Incremental Expiring Savings <sup>#</sup>									0	0	0	0	0	0	0

Savings Category	Verified Gross Savings (kWh)	Lifetime Net Savings (kWh) <sup>†</sup>	CPAS Verified Net kWh Savings											
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
CY2023 Program Total Contribution to CPAS	13,962,361	198,723,048	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	13,962,361	3,249,990	0	0
Historic Program Total Contribution to CPAS <sup>‡</sup>			11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,974,566	11,870,611	10,602,500	3,615,821	3,615,821	3,615,821	3,615,821
Program Total CPAS	13,962,361	198,723,048	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927	25,936,927	25,832,972	24,564,861	17,578,182	6,865,810	3,615,821	0
CY2023 Program Incremental Expiring Savings <sup>§</sup>			0	0	0	0	0	0	0	0	0	10,712,371	3,249,990	0
Historic Program Incremental Expiring Savings <sup>  </sup>			0	0	0	0	0	0	103,955	1,268,111	6,986,679	0	0	3,615,821
Program Total Incremental Expiring Savings <sup>#</sup>			0	0	0	0	0	0	103,955	1,268,111	6,986,679	10,712,371	3,249,990	3,615,821

<sup>†</sup> Lifetime savings are the sum of CPAS savings through the EUL.

<sup>‡</sup> Historical savings go back to CY2018.

<sup>§</sup> Incremental expiring savings are equal to CPAS Y<sub>n-1</sub> - CPAS Y<sub>n</sub>.

<sup>||</sup> Historic incremental expiring savings are equal to Historic CPAS Y<sub>n-1</sub> – Historic CPAS Y<sub>n</sub>.

<sup>#</sup> Program total incremental expiring savings are equal to current year total incremental expiring savings plus historic total incremental expiring savings.

Source: Evaluation team analysis