



# ComEd Product Distribution Program Impact Evaluation Report

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

Prepared for:

ComEd

**FINAL**

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## Introduction

This report presents the results of the impact evaluation of the Product Distribution program for the program year from January 1 to December 31, 2022 (CY2022). The program was designed to provide free energy savings products and kits through local community channels including schools, Community Action Agencies, local food banks, and food pantries. The program focuses primarily on income eligible customers, but also includes market rate customers. During CY2022, eligible measures in the Product Distribution Program included LED lights, low-flow faucet aerators, low-flow showerheads, shower timers, advanced power strips, air sealing equipment, and pipe wrap.

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

## Program Savings Detail

Table 1 summarizes the incremental energy and demand savings the Product Distribution Program achieved in CY2022. The gas 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 electrification savings are those resulting from fuel switching measures.<sup>2</sup> Table 2 summarizes the savings achieved from income eligible participants, and Table 3 summarizes savings from non-income eligible participants. Together, they make up the total shown in Table 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)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	156,329,137	1.01	157,871,938	Varies	10,217,779	12,302,234	179,037,503
Electric Energy Savings - Converted from Gas§	kWh	30,280,187	1.02	31,015,306	Varies			31,015,306
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)	kWh							
Total Electric Energy Savings#	kWh	186,609,324	1.01	188,887,243	Varies	10,217,779	12,302,234	210,052,808
Secondary Water Savings	kWh			1,281,330	Varies			1,281,330
Summer Peak** Demand Savings	kW	19,321	0.98	18,978	Varies	1,178	1,448	21,463

\* 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) includes net carryover savings from CY2020 and CY2021.

‡ The Electric Energy Savings - Direct includes primary kWh savings from efficient measures (includes efficiency

<sup>1</sup> The evaluation will determine which gas 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.”

<sup>2</sup> 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.”

savings from fuel switching measures but excludes the fuel switching 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). 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 from fuel switching measures excluding direct efficiency savings calculated from net electric savings from an 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 p.m. -5:00 p.m. 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-2022>.

Source: Evaluation team analysis

**Table 2. Total Annual Incremental Electric Savings - Income Eligible**

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	154,484,835	1.01	155,705,417	Varies	10,151,440	11,980,346	176,816,159
Electric Energy Savings - Converted from Gas§	kWh	30,280,187	1.02	31,015,306	Varies			31,015,306
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)	kWh							
Total Electric Energy Savings#	kWh	184,765,021	1.01	186,720,723	Varies	10,151,440	11,980,346	207,831,465
Secondary Water Savings	kWh			1,078,433	Varies			1,078,433
Summer Peak*† Demand Savings	kW	18,982	0.98	18,642	Varies	1,178	1,414	21,121

Footnotes are defined similarly as found in Table 1

Source: Evaluation team analysis

**Table 3. Total Annual Incremental Electric Savings - Non-Income Eligible**

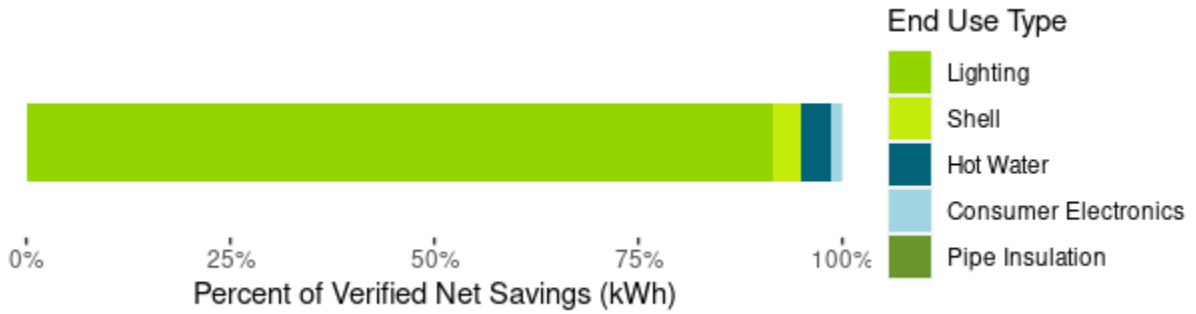
Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2020 Net Carryover Savings	CY2021 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct‡	kWh	1,844,303	1.17	2,166,520	Varies	66,339	321,888	2,221,343
Electric Energy Savings - Converted from Gas§	kWh	0		0	Varies			0
Electric Energy Savings - Indirect from Fuel Switching (through Electrification)	kWh							
Total Electric Energy Savings#	kWh	1,844,303	1.17	2,166,520	Varies	66,339	321,888	2,221,343
Secondary Water Savings	kWh			202,897	Varies			202,897
Summer Peak*† Demand Savings	kW	340	0.99	336	Varies	0	34	342

Footnotes are defined similarly as found in Table 1

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 gas savings converted to kWh.

**Figure 1. Verified Net Savings by End Use Type – Electric**



Source: Evaluation team analysis

## Cumulative Persistent Annual Savings

Tables 4 to 6 show the cumulative persisting annual savings (CPAS) for the measures installed in CY2022. Table 4 shows the electric CPAS across all measures installed in 2022. Table 5 shows the gas contribution to CPAS (converted to equivalent electricity). Table 6 shows the combined savings.

**Table 4. 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	180,428,663	1,719,686,916					179,037,503	179,037,503	176,934,808	176,934,808	176,825,960	176,825,960	173,146,756	
Historic Program Total Contribution to CPAS‡			56,396,205	161,973,998	309,944,405	329,174,113	329,041,979	328,736,115	323,714,233	319,174,167	314,987,619	244,526,426	203,240,728	
Program Total CPAS	180,428,663	1,719,686,916	56,396,205	161,973,998	309,944,405	329,174,113	508,079,481	507,773,618	500,649,041	496,108,975	491,813,579	421,352,387	376,387,484	
CY2022 Program Incremental Expiring Savings§								0	2,102,694	0	108,848	0	3,679,204	
Historic Program Incremental Expiring Savings								132,135	305,864	5,021,882	4,540,066	4,186,548	70,461,193	41,285,698
Program Total Incremental Expiring Savings#								132,135	305,864	7,124,576	4,540,066	4,295,396	70,461,193	44,964,902

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	180,428,663	1,719,686,916	140,767,213	137,276,051	137,276,051	6,852,180	6,852,180	6,852,180	6,852,180	6,852,180	6,272,681	6,272,681	6,272,681
Historic Program Total Contribution to CPAS‡			166,207,338	83,548,276	1,595,497	1,595,497	1,595,497	1,595,497	1,595,497	1,581,426	1,581,426	1,581,426	1,581,426
Program Total CPAS	180,428,663	1,719,686,916	306,974,552	220,824,327	138,871,548	8,447,677	8,447,677	8,447,677	8,447,677	8,433,606	7,854,107	7,854,107	7,854,107
CY2022 Program Incremental Expiring Savings§			32,379,543	3,491,162	0	130,423,871	0	0	0	0	579,499	0	0
Historic Program Incremental Expiring Savings			37,033,390	82,659,062	81,952,779	0	0	0	0	14,071	0	0	0
Program Total Incremental Expiring Savings#			69,412,933	86,150,225	81,952,779	130,423,871	0	0	0	14,071	579,499	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	180,428,663	1,719,686,916	6,272,681	6,272,681	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			1,561,332	0	0	0	0	0	0	0	0	0	0
Program Total CPAS	180,428,663	1,719,686,916	7,834,013	6,272,681	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			0	0	6,272,681	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			20,094	1,561,332	0	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			20,094	1,561,332	6,272,681	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 5. CPAS – Gas**

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,058,182	16,770,571					1,058,182	1,058,182	973,797	973,797	973,797	973,797	973,797
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	31,015,306						31,015,306	31,015,306	28,541,982	28,541,982	28,541,982	28,541,982	28,541,982
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§			5,157,303	26,567,068	47,425,490	66,987,986	66,926,441	66,766,247	66,766,247	66,766,247	66,766,247	65,265,221	61,927,408
Program Total Gas CPAS (kWh Equivalent)	31,015,306	0	5,157,303	26,567,068	47,425,490	66,987,986	97,941,746	97,781,553	95,308,230	95,308,230	95,308,230	93,807,203	90,469,391
CY2022 Program Incremental Expiring Gas Savings (Therms)									0	84,385	0	0	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)									0	2,473,323	0	0	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#									61,545	160,193	0	0	1,501,027
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†									61,545	160,193	2,473,323	0	1,501,027

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings										
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,058,182	16,770,571	973,797	973,797	973,797	689,437	689,437	689,437	689,437	689,437	689,437	683,330	683,330
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	31,015,306		28,541,982	28,541,982	28,541,982	20,207,398	20,207,398	20,207,398	20,207,398	20,207,398	20,207,398	20,028,396	20,028,396
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§			40,981,962	20,209,240	19,388,756	19,388,756	19,388,756	19,388,756	19,388,756	19,388,756	19,388,756	19,388,756	19,388,756
Program Total Gas CPAS (kWh Equivalent)	31,015,306	0	69,523,944	48,751,222	47,930,739	39,596,155	39,596,155	39,596,155	39,596,155	39,596,155	39,417,152	39,417,152	39,417,152
CY2022 Program Incremental Expiring Gas Savings (Therms)			0	0	0	284,360	0	0	0	0	0	6,107	0
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			0	0	0	8,334,584	0	0	0	0	0	179,003	0
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			20,945,447	20,772,722	820,483	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			20,945,447	20,772,722	820,483	8,334,584	0	0	0	0	0	179,003	0

Savings Category	Verified Gross Savings (Therms)	Lifetime Net Savings (Therms)†	CPAS Verified Net Therms Savings											
			2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
CY2022 Program Total Gas Contribution to CPAS (Therms)	1,058,182	16,770,571	683,330	683,330	0	0	0	0	0	0	0	0	0	
CY2022 Program Total Gas Contribution to CPAS (kWh Equivalent)‡	31,015,306		20,028,396	20,028,396	0	0	0	0	0	0	0	0	0	
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§			19,388,756	245,692										
Program Total Gas CPAS (kWh Equivalent)	31,015,306	0	39,417,152	20,274,088	0	0	0	0	0	0	0	0	0	
CY2022 Program Incremental Expiring Gas Savings (Therms)			0	0	683,330	0	0	0	0	0	0	0	0	
CY2022 Program Incremental Expiring Gas Savings (kWh Equivalent)			0	0	20,028,396	0	0	0	0	0	0	0	0	
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)#			0	19,143,064	245,692	0	0	0	0	0	0	0	0	
Program Total Incremental Expiring Gas Savings (kWh Equivalent)*†			0	19,143,064	20,274,088	0	0	0	0	0	0	0	0	

† Lifetime savings are the sum of CPAS savings through the EUL.

‡ kWh equivalent savings are calculated by multiplying therm 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 6. 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	
CY2022 Program Total Contribution to CPAS	211,443,968	2,211,232,358					210,052,808	210,052,808	205,476,791	205,476,791	205,367,943	205,367,943	201,688,739	
Historic Program Total Contribution to CPAS‡			61,553,508	188,541,066	357,369,895	396,162,099	395,968,420	395,502,362	390,480,480	385,940,414	381,753,866	309,791,647	265,168,136	
Program Total CPAS	211,443,968	2,211,232,358	61,553,508	188,541,066	357,369,895	396,162,099	606,021,228	605,555,171	595,957,271	591,417,205	587,121,809	515,159,590	466,856,875	
CY2022 Program Incremental Expiring Savings§									0	4,576,017	0	108,848	0	3,679,204
Historic Program Incremental Expiring Savings							193,680	466,057	5,021,882	4,540,066	4,186,548	71,962,219	44,623,511	
Program Total Incremental Expiring Savings#							193,680	466,057	9,597,899	4,540,066	4,295,396	71,962,219	48,302,715	

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	211,443,968	2,211,232,358	169,309,196	165,818,034	165,818,034	27,059,578	27,059,578	27,059,578	27,059,578	27,059,578	26,301,076	26,301,076	26,301,076
Historic Program Total Contribution to CPAS‡			207,189,300	103,757,515	20,984,254	20,984,254	20,984,254	20,984,254	20,984,254	20,984,254	20,970,183	20,970,183	20,970,183
Program Total CPAS	211,443,968	2,211,232,358	376,498,496	269,575,549	186,802,287	48,043,832	48,043,832	48,043,832	48,043,832	48,043,832	48,029,761	47,271,259	47,271,259
CY2022 Program Incremental Expiring Savings§			32,379,543	3,491,162	0	138,758,455	0	0	0	0	758,502	0	0
Historic Program Incremental Expiring Savings			57,978,837	103,431,784	82,773,262	0	0	0	0	14,071	0	0	0
Program Total Incremental Expiring Savings#			90,358,379	106,922,947	82,773,262	138,758,455	0	0	0	14,071	758,502	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	211,443,968	2,211,232,358	26,301,076	26,301,076	0	0	0	0	0	0	0	0	0
Historic Program Total Contribution to CPAS‡			20,950,089	245,692	0								
Program Total CPAS	211,443,968	2,211,232,358	47,251,165	26,546,768	0	0	0	0	0	0	0	0	0
CY2022 Program Incremental Expiring Savings§			0	0	26,301,076	0	0	0	0	0	0	0	0
Historic Program Incremental Expiring Savings			20,094	20,704,397	245,692	0	0	0	0	0	0	0	0
Program Total Incremental Expiring Savings#			20,094	20,704,397	26,546,768	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