

Combined Utility Elementary Energy Education Impact Evaluation Report

Energy Efficiency/Demand Response Plan:
Program Year 2021 (CY2021)
(1/1/2021-12/31/2021)

Prepared for:

ComEd
Nicor Gas
Peoples Gas
North Shore Gas

FINAL

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1. Introduction

The CY2021 Elementary Energy Education (EEE) Program is offered jointly to elementary students and their families served by ComEd, Nicor Gas, Peoples Gas, and North Shore Gas.

This report presents the CY2021 EEE Program impact evaluation results for all four utilities. It summarizes the total energy and demand impacts for the program broken out by relevant measure and program structure details. The appendices provide the impact analysis methodology and details of the total resource cost (TRC) analysis inputs. CY2021 covers January 1, 2021 through December 31, 2021.

2. Program Description

The EEE Program is offered jointly to schools served by ComEd, Nicor Gas, Peoples Gas, and North Shore Gas. Nicor Gas also offered this program to schools served by Nicor Gas and an electricity provider other than ComEd (Nicor Gas Only). The program is implemented by Franklin Energy Services. ComEd claimed all the electric savings from kits sent to the joint utility customers (ComEd-Nicor Gas, ComEd-Peoples Gas, and ComEd-North Shore Gas). Nicor Gas, Peoples Gas, and North Shore Gas claimed all the gas savings for the kits sent to their respective customers. Starting in CY2018, ComEd began offering additional kits to schools served by ComEd but none of the joint participating gas utilities (Nicor Gas, Peoples Gas, and North Shore Gas). The program refers to these kits as ComEd Only kits, and ComEd claimed electric and natural gas savings for these kits.

In CY2021, the program provided take-home energy efficiency kits for elementary students to install in their home with their families. The energy efficiency kits included various measures such as light-emitting diode (LED) bulbs and nightlights (only included in joint ComEd and ComEd Only kits), low flow showerheads, faucet aerators, water heater temperature setback cards, and shower timers. New to the program in CY2021 was the inclusion of a voucher in the energy efficiency kits for families to redeem for LED bulbs through ComEd’s online portal.

The EEE Program had varying levels of participation based on utility combination. In 2021, the EEE program distributed 37,091 kits with 294,288 measures (see Table 2-1).

Table 2-1. Number of Kits and Measures Distributed

Participation	ComEd Only	ComEd - PGL	ComEd - NSG	ComEd - Nicor Gas	Nicor Gas Only	Total
Number of Total Kits Distributed	2,500	13,959	2,433	16,979	1,220	37,091
Number of Measures per Kit Distributed	7	7	7	7	5	
Total Number of Measures Distributed	20,000	111,672	19,464	135,832	7,320	294,288
Number of Showerheads Distributed	2,500	13,959	2,433	16,979	1,220	37,091
Number of Kitchen Aerators Distributed	2,500	13,959	2,433	16,979	1,220	37,091
Number of Bathroom Aerators Distributed	5,000	27,918	4,866	33,958	2,440	74,182
Number of BR30 LED Bulbs Distributed	2,500	13,959	2,433	16,979	0	35,871
Number of LED Nightlights Distributed	2,500	13,959	2,433	16,979	0	35,871
Number of Water Heater Setback Cards Distributed	2,500	13,959	2,433	16,979	1,220	37,091
Number of Shower Timers Distributed	2,500	13,959	2,433	16,979	1,220	37,091

PGL – Peoples Gas

NSG – North Shore Gas

Note: The quantities in Table 2-1 do not include the LED lightbulb quantities distributed through ComEd’s online portal.

Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

The program included the measures shown in Table 2-2 and Figure 2-1. Table 2-2 includes the LED lightbulbs distributed through ComEd’s online portal as well as the measures distributed in the kits.

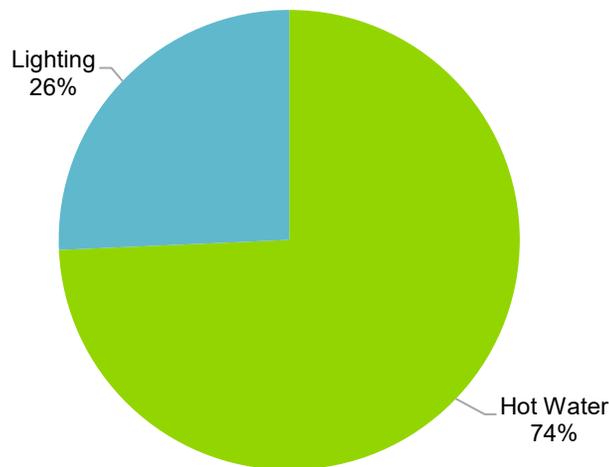
Table 2-2. Number of Measures by Type

Distribution Channel	End Use Type	Research Category	Quantity Unit
Kit	Hot Water	Showerhead (1.5 GPM)	37,091 Each
Kit	Hot Water	Kitchen Aerator (1.5 GPM)	37,091 Each
Kit	Hot Water	Bathroom Aerator (1.0 GPM)	74,182 Each
Kit	Lighting	LED Light Bulb BR30	35,871 Bulb
Kit	Lighting	LED Nightlight	35,871 Each
Kit	Hot Water	Water Heater Temperature Setback	37,091 Each
Kit	Hot Water	Shower Timer Install	37,091 Each
Online Portal	Lighting	LED Light Bulb A19	2,528 Bulb
Online Portal	Lighting	LED Light Bulb BR30	1,418 Bulb
Online Portal	Lighting	LED Light Bulb Candelabra	482 Bulb
Online Portal	Lighting	LED Light Bulb Globe	570 Bulb
Online Portal	Lighting	LED Light Bulb Mini Globe	244 Bulb
Total			299,530

Note: The rows are sorted by verified gross savings.

Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

Figure 2-1. Share of Measures Distributed by End Use Type



Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

3. Program Savings Detail

Table 3-1 summarizes the incremental energy and demand savings the EEE Program achieved in CY2021. The natural 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.¹ Table 3-2 summarizes the natural gas savings the EEE Program achieved in CY2021. The natural gas savings in Table 3-2 are only those savings that each of the three natural gas utilities claim.

Table 3-1. Total Annual Incremental Electric Savings

Savings Category	Units	Ex Ante Gross Savings*	Program Gross Realization Rate	Verified Gross Savings*	Program Net-to-Gross Ratio (NTG)	CY2019 Net Carryover Savings	CY2020 Net Carryover Savings	Verified Net Savings†
Electric Energy Savings - Direct	kWh	4,519,834	1.00	4,511,321	Varies	801,346	78,401	5,238,932
Electric Energy Savings - Converted from Gas‡	kWh	836,205	1.06	883,750	Varies	N/A	N/A	883,750
Total Electric Energy Savings	kWh	5,356,040	1.01	5,395,071	Varies	801,346	78,401	6,122,682
Summer Peak§ Demand Savings	kW	489	1.00	489	Varies	76	0	540

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

* Ex ante and verified gross savings exclude gross carryover savings from CY2019 and CY2020.

† Verified net savings includes net carryover savings from CY2019 and CY2020.

‡ Gas savings are converted to kilowatt-hours (kWh) by multiplying therms by 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. 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 incremental goal as defined in paragraph (7) of subsection (g) of this Section be met through savings of fuels other than electricity."

§ The coincident summer peak period is defined as 1:00-5:00 p.m. Central Prevailing Time on non-holiday weekdays, June through August.

Source: ComEd tracking data and evaluation team analysis

Table 3-2. CY2021 Total Annual Incremental Therm Savings

Savings Category	Nicor Gas (Therms)	Peoples Gas (Therms)	North Shore Gas (Therms)
Natural Gas*			
Ex Ante Gross Savings	233,109	159,298	27,765
Program Gross Realization Rate	1.00	1.27	0.99
Verified Gross Savings	233,109	202,574	27,587
Program Net-to-Gross Ratio (NTG)	1.00	1.00	1.00
Verified Net Savings	233,109	202,574	27,587

* Natural gas savings with electric interactive effects removed.

Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

¹ The evaluation team will determine which gas savings will be counted toward goal while producing the portfolio-wide Summary Report.

4. Cumulative Persisting Annual Savings

Table 4-1 to Table 4-3 and Figure 4-1 show the measure-specific and total verified gross savings for the EEE Program and the cumulative persisting annual savings (CPAS) for the measures installed in CY2021. The electric CPAS across all measures installed in 2021 is shown in Table 4-1. The CY2021 natural gas contribution to CPAS (converted to equivalent electricity) is shown in Table 4-2. The combined savings are shown in Table 4-3. The historic rows in each table are the CPAS contribution back to CY2018. The Program Total Electric CPAS and the Program Total Gas CPAS are the sum of the CY2021 contribution and the historic contribution. Figure 4-1 shows the savings across the effective useful life (EUL) of the measures.

Table 4-1. Cumulative Persisting Annual Savings – Electric

End Use Type	Research Category	EUL	CY2021 Verified		LifETIME Net Savings (kWh)†	Verified Net kWh Savings										
			Gross Savings (kWh)	NTG*		2018	2019	2020	2021	2022	2023	2024	2025	2026		
Hot Water	Showerhead (1.5 GPM) - Single Family	10.0	975,153	1.00	9,751,530				975,153	975,153	975,153	975,153	975,153	975,153		
Hot Water	Showerhead (1.5 GPM) - Multifamily	10.0	654,912	1.00	6,549,115				654,912	654,912	654,912	654,912	654,912	654,912	654,912	
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	10.0	615,918	1.00	6,159,182				615,918	615,918	615,918	615,918	615,918	615,918	615,918	
Lighting	LED Light Bulb BR30 - Single Family	10.0	577,119	0.84	3,684,328				484,780	484,780	484,780	484,780	290,868	290,868		
Lighting	LED Nightlight - Single Family	8.0	419,855	1.00	3,358,837				419,855	419,855	419,855	419,855	419,855	419,855	419,855	
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	10.0	312,733	1.00	3,127,330				312,733	312,733	312,733	312,733	312,733	312,733	312,733	
Lighting	LED Light Bulb BR30 - Multifamily	10.0	255,583	0.84	1,631,641				214,690	214,690	214,690	214,690	128,814	128,814		
Lighting	LED Nightlight - Multifamily	8.0	176,204	1.00	1,409,631				176,204	176,204	176,204	176,204	176,204	176,204	176,204	
Hot Water	Shower Timer Install - Single Family	2.0	139,294	1.00	278,588				139,294	139,294						
Lighting	Portal Pick Bulb - A19	10.0	60,471	0.84	389,094				50,796	50,796	50,796	50,796	30,985	30,985		
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	10.0	55,502	1.00	555,018				55,502	55,502	55,502	55,502	55,502	55,502	55,502	
Hot Water	Shower Timer Install - Multifamily	2.0	46,911	1.00	93,821				46,911	46,911						
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	10.0	46,310	1.00	463,105				46,310	46,310	46,310	46,310	46,310	46,310	46,310	
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	10.0	46,306	1.00	463,064				46,306	46,306	46,306	46,306	46,306	46,306	46,306	
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	10.0	44,672	1.00	446,720				44,672	44,672	44,672	44,672	44,672	44,672	44,672	
Lighting	Portal Pick Bulb - BR30	10.0	36,390	0.84	232,315				30,568	30,568	30,568	30,568	18,341	18,341		
Hot Water	Water Heater Temperature Setback - Single Family	2.0	17,220	1.00	34,441				17,220	17,220						
Hot Water	Water Heater Temperature Setback - Multifamily	2.0	9,482	1.00	18,964				9,482	9,482						
Lighting	Portal Pick Bulb - Globe	10.0	9,210	0.84	59,262				7,737	7,737	7,737	7,737	4,719	4,719		
Lighting	Portal Pick Bulb - Candelabra	10.0	8,017	0.84	51,587				6,735	6,735	6,735	6,735	4,108	4,108		
Lighting	Portal Pick Bulb - Mini	10.0	4,059	0.84	26,114				3,409	3,409	3,409	3,409	2,080	2,080		
Carryover	CY2019 and CY2020 Carryover	9.8	1,032,384	0.85	5,659,660				879,747	879,747	879,747	879,747	382,912	382,912		
CY2021 Program Total Electric Contribution to CPAS									5,238,932	5,238,932	5,026,025	5,026,025	4,210,392	4,210,392		
Historic Program Total Electric Contribution to CPAS‡									14,809,299	14,677,165	14,584,208	14,061,864	13,606,702	13,606,702		
Program Total Electric CPAS									6,104,453	15,316,136	20,012,143	20,048,231	19,916,097	19,610,233	19,087,889	17,817,094
CY2021 Program Incremental Expiring Electric Savings§									-	-	212,907	-	815,633	-		
Historic Program Incremental Expiring Electric Savings									5,202,843	132,135	92,957	522,344	455,162	-		
Program Total Incremental Expiring Electric Savings									5,202,843	132,135	305,864	522,344	1,270,795	-		

End Use Type	Research Category	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Hot Water	Showerhead (1.5 GPM) - Single Family	975,153	975,153	975,153	975,153								
Hot Water	Showerhead (1.5 GPM) - Multifamily	654,912	654,912	654,912	654,912								
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	615,918	615,918	615,918	615,918								
Lighting	LED Light Bulb BR30 - Single Family	290,868	290,868	290,868	290,868								
Lighting	LED Nightlight - Single Family	419,855	419,855										
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	312,733	312,733	312,733	312,733								
Lighting	LED Light Bulb BR30 - Multifamily	128,814	128,814	128,814	128,814								
Lighting	LED Nightlight - Multifamily	176,204	176,204										
Hot Water	Shower Timer Install - Single Family												
Lighting	Portal Pick Bulb - A19	30,985	30,985	30,985	30,985								
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	55,502	55,502	55,502	55,502								
Hot Water	Shower Timer Install - Multifamily												
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	46,310	46,310	46,310	46,310								
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	46,306	46,306	46,306	46,306								
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	44,672	44,672	44,672	44,672								
Lighting	Portal Pick Bulb - BR30	18,341	18,341	18,341	18,341								
Hot Water	Water Heater Temperature Setback - Single Family												
Hot Water	Water Heater Temperature Setback - Multifamily												
Lighting	Portal Pick Bulb - Globe	4,719	4,719	4,719	4,719								
Lighting	Portal Pick Bulb - Candelabra	4,108	4,108	4,108	4,108								
Lighting	Portal Pick Bulb - Mini	2,080	2,080	2,080	2,080								
Carryover	CY2019 and CY2020 Carryover	382,912	382,912	304,511	304,511								
CY2021 Program Total Electric Contribution to CPAS		4,210,392	4,210,392	3,535,933	3,535,933	-	-	-	-	-	-	-	-
Historic Program Total Electric Contribution to CPAS†		11,722,111	8,425,486	2,179,369									
Program Total Electric CPAS		15,932,503	12,635,878	5,715,302	3,535,933	-	-	-	-	-	-	-	-
CY2021 Program Incremental Expiring Electric Savings‡		-	-	674,459	-	3,535,933	-	-	-	-	-	-	-
Historic Program Incremental Expiring Electric Savings		1,884,591	3,296,624	6,246,117	2,179,369	-	-	-	-	-	-	-	-
Program Total Incremental Expiring Electric Savings		1,884,591	3,296,624	6,920,576	2,179,369	3,535,933	-	-	-	-	-	-	-

Note: The green highlighted cell shows program total first-year electric savings. The gray cells are blank, indicating values irrelevant to the CY2021 contribution to CPAS.

* A deemed value. Source: Illinois Stakeholder Advisory Group (SAG) website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

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

‡ Incremental savings go back to CY2018.

§ Incremental expiring savings are equal to CPAS Y_{n-1} - CPAS Y_n.

Source: Evaluation team analysis

Table 4-2. Cumulative Persisting Annual Savings – Gas

End Use Type	Research Category	CY2021 Verified			Lifetime Net Savings (Therms)†	Verified Net Therms Savings									
		EUL	Gross Savings (Therms)	NTG*		2018	2019	2020	2021	2022	2023	2024	2025	2026	
Hot Water	Showerhead (1.5 GPM) - Single Family	10.0	10,607	1.00	106,071				10,607	10,607	10,607	10,607	10,607	10,607	10,607
Hot Water	Showerhead (1.5 GPM) - Multifamily	10.0	6,253	1.00	62,531				6,253	6,253	6,253	6,253	6,253	6,253	6,253
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	10.0	6,243	1.00	62,426				6,243	6,243	6,243	6,243	6,243	6,243	6,243
Lighting	LED Light Bulb BR30 - Single Family	10.0	-	0.84	-										
Lighting	LED Nightlight - Single Family	8.0	-	1.00	-										
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	10.0	2,939	1.00	29,391				2,939	2,939	2,939	2,939	2,939	2,939	2,939
Lighting	LED Light Bulb BR30 - Multifamily	10.0	-	0.84	-										
Lighting	LED Nightlight - Multifamily	8.0	-	1.00	-										
Hot Water	Shower Timer Install - Single Family	2.0	1,532	1.00	3,064				1,532	1,532					
Lighting	Portal Pick Bulb - A19	10.0	-	0.84	-										
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	10.0	545	1.00	5,448				545	545	545	545	545	545	545
Hot Water	Shower Timer Install - Multifamily	2.0	208	1.00	415				208	208					
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	10.0	591	1.00	5,909				591	591	591	591	591	591	591
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	10.0	417	1.00	4,173				417	417	417	417	417	417	417
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	10.0	398	1.00	3,983				398	398	398	398	398	398	398
Lighting	Portal Pick Bulb - BR30	10.0	-	0.84	-										
Hot Water	Water Heater Temperature Setback - Single Family	2.0	310	1.00	620				310	310					
Hot Water	Water Heater Temperature Setback - Multifamily	2.0	109	1.00	218				109	109					
Lighting	Portal Pick Bulb - Globe	10.0	-	0.84	-										
Lighting	Portal Pick Bulb - Candelabra	10.0	-	0.84	-										
Lighting	Portal Pick Bulb - Mini	10.0	-	1.00	-										
Carryover	CY2019 and CY2020 Carryover	9.8	-	N/A	-										
CY2021 Program Total Gas Contribution to CPAS (Therms)			30,152		284,250				30,152	30,152	27,993	27,993	27,993	27,993	27,993
CY2021 Program Total Gas Contribution to CPAS (kWh Equivalent)‡									883,750	883,750	820,483	820,483	820,483	820,483	820,483
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§									5,157,303	11,590,175	12,221,312	11,756,994	11,695,448	11,598,522	11,598,522
Program Total Gas CPAS (kWh Equivalent)									5,157,303	11,590,175	12,221,312	12,640,743	12,579,198	12,419,005	12,419,005
CY2021 Program Incremental Expiring Gas Savings (Therms)											2,159				
CY2021 Program Incremental Expiring Gas Savings (kWh Equivalent) 											63,267				
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)									464,318	61,545	96,927				
Program Total Incremental Expiring Gas Savings (kWh Equivalent)									464,318	61,545	160,193				

End Use Type	Research Category	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Hot Water	Showerhead (1.5 GPM) - Single Family	10,607	10,607	10,607	10,607								
Hot Water	Showerhead (1.5 GPM) - Multifamily	6,253	6,253	6,253	6,253								
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	6,243	6,243	6,243	6,243								
Lighting	LED Light Bulb BR30 - Single Family												
Lighting	LED Nightlight - Single Family												
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	2,939	2,939	2,939	2,939								
Lighting	LED Light Bulb BR30 - Multifamily												
Lighting	LED Nightlight - Multifamily												
Hot Water	Shower Timer Install - Single Family												
Lighting	Portal Pick Bulb - A19												
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	545	545	545	545								
Hot Water	Shower Timer Install - Multifamily												
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	591	591	591	591								
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	417	417	417	417								
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	398	398	398	398								
Lighting	Portal Pick Bulb - BR30												
Hot Water	Water Heater Temperature Setback - Single Family												
Hot Water	Water Heater Temperature Setback - Multifamily												
Lighting	Portal Pick Bulb - Globe												
Lighting	Portal Pick Bulb - Candelabra												
Lighting	Portal Pick Bulb - Mini												
Carryover	CY2019 and CY2020 Carryover												
CY2021 Program Total Gas Contribution to CPAS (Therms)		27,993	27,993	27,993	27,993	-	-	-	-	-	-	-	-
CY2021 Program Total Gas Contribution to CPAS (kWh Equivalent)†		820,483	820,483	820,483	820,483	-	-	-	-	-	-	-	-
Historic Program Total Gas Contribution to CPAS (kWh Equivalent)§		10,097,495	6,759,683	791,129									
Program Total Gas CPAS (kWh Equivalent)		10,917,978	7,580,166	1,611,612	820,483	-	-	-	-	-	-	-	-
CY2021 Program Incremental Expiring Gas Savings (Therms)		-	-	-	-	27,993	-	-	-	-	-	-	-
CY2021 Program Incremental Expiring Gas Savings (kWh Equivalent) 		-	-	-	-	820,483	-	-	-	-	-	-	-
Historic Program Incremental Expiring Gas Savings (kWh Equivalent)		1,501,027	3,337,812	5,968,554	791,129	-	-	-	-	-	-	-	-
Program Total Incremental Expiring Gas Savings (kWh Equivalent)		1,501,027	3,337,812	5,968,554	791,129	820,483	-	-	-	-	-	-	-

Note: The green highlighted cell shows program total first-year gas savings in kWh equivalents. The gray cells are blank, indicating no values or do not contribute to calculating CPAS in CY2021.

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

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

‡ kWh equivalent savings are calculated by multiplying therm savings by 29.31.

§ Historic savings go back to CY2018.

|| Incremental expiring savings are equal to CPAS Y_{n-1} - CPAS Y_n .

Source: Evaluation team analysis

Table 4-3. Cumulative Persisting Annual Savings – Total

End Use Type	Research Category	EUL	CY2021 Verified Gross Savings (kWh)	NTG*	Lifetime Net Savings (kWh)†	Verified Net kWh Savings (Including Those Converted from Gas Savings)								
						2018	2019	2020	2021	2022	2023	2024	2025	2026
Hot Water	Showerhead (1.5 GPM) - Single Family	10.0	1,286,049	1.00	12,860,485				1,286,049	1,286,049	1,286,049	1,286,049	1,286,049	1,286,049
Hot Water	Showerhead (1.5 GPM) - Multifamily	10.0	838,191	1.00	8,381,911				838,191	838,191	838,191	838,191	838,191	838,191
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	10.0	798,888	1.00	7,988,881				798,888	798,888	798,888	798,888	798,888	798,888
Lighting	LED Light Bulb BR30 - Single Family	10.0	577,119	0.84	3,684,328				484,780	484,780	484,780	484,780	290,868	290,868
Lighting	LED Nightlight - Single Family	8.0	419,855	1.00	3,358,837				419,855	419,855	419,855	419,855	419,855	419,855
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	10.0	398,879	1.00	3,988,788				398,879	398,879	398,879	398,879	398,879	398,879
Lighting	LED Light Bulb BR30 - Multifamily	10.0	255,583	0.84	1,631,641				214,690	214,690	214,690	214,690	128,814	128,814
Lighting	LED Nightlight - Multifamily	8.0	176,204	1.00	1,409,631				176,204	176,204	176,204	176,204	176,204	176,204
Hot Water	Shower Timer Install - Single Family	2.0	184,194	1.00	368,389				184,194	184,194				
Lighting	Portal Pick Bulb - A19	10.0	60,471	0.84	389,094				50,796	50,796	50,796	50,796	30,985	30,985
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	10.0	71,470	1.00	714,696				71,470	71,470	71,470	71,470	71,470	71,470
Hot Water	Shower Timer Install - Multifamily	2.0	52,999	1.00	105,998				52,999	52,999				
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	10.0	63,630	1.00	636,297				63,630	63,630	63,630	63,630	63,630	63,630
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	10.0	58,537	1.00	585,371				58,537	58,537	58,537	58,537	58,537	58,537
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	10.0	56,347	1.00	563,468				56,347	56,347	56,347	56,347	56,347	56,347
Lighting	Portal Pick Bulb - BR30	10.0	36,390	0.84	232,315				30,568	30,568	30,568	30,568	18,341	18,341
Hot Water	Water Heater Temperature Setback - Single Family	2.0	26,301	1.00	52,601				26,301	26,301				
Hot Water	Water Heater Temperature Setback - Multifamily	2.0	12,679	1.00	25,359				12,679	12,679				
Lighting	Portal Pick Bulb - Globe	10.0	9,210	0.84	59,262				7,737	7,737	7,737	7,737	4,719	4,719
Lighting	Portal Pick Bulb - Candelabra	10.0	8,017	0.84	51,587				6,735	6,735	6,735	6,735	4,108	4,108
Lighting	Portal Pick Bulb - Mini	10.0	4,059	0.84	26,114				3,409	3,409	3,409	3,409	2,080	2,080
Carryover	CY2019 and CY2020 Carryover	9.8	1,032,384	0.85	5,659,660				879,747	879,747	879,747	879,747	382,912	382,912
CY2021 Program Total Contribution to CPAS			6,427,455		52,774,713				6,122,682	6,122,682	5,846,508	5,846,508	5,030,875	5,030,875
Historic Program Total Contribution to CPAS‡						11,261,756	26,906,311	32,233,455	26,566,293	26,372,613	26,182,730	25,660,386	25,205,224	25,205,224
Program Total CPAS						11,261,756	26,906,311	32,233,455	32,688,975	32,495,295	32,029,238	31,506,894	30,236,099	30,236,099
CY2021 Program Incremental Expiring Savings§										-	276,174	-	815,633	-
Historic Program Incremental Expiring Savings									5,667,162	193,680	189,883	522,344	455,162	-
Program Total Incremental Expiring Savings									5,667,162	193,680	466,057	522,344	1,270,795	-

End Use Type	Research Category	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Hot Water	Showerhead (1.5 GPM) - Single Family	1,286,049	1,286,049	1,286,049	1,286,049								
Hot Water	Showerhead (1.5 GPM) - Multifamily	838,191	838,191	838,191	838,191								
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	798,888	798,888	798,888	798,888								
Lighting	LED Light Bulb BR30 - Single Family	290,868	290,868	290,868	290,868								
Lighting	LED Nightlight - Single Family	419,855	419,855										
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	398,879	398,879	398,879	398,879								
Lighting	LED Light Bulb BR30 - Multifamily	128,814	128,814	128,814	128,814								
Lighting	LED Nightlight - Multifamily	176,204	176,204										
Hot Water	Shower Timer Install - Single Family												
Lighting	Portal Pick Bulb - A19	30,985	30,985	30,985	30,985								
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	71,470	71,470	71,470	71,470								
Hot Water	Shower Timer Install - Multifamily												
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	63,630	63,630	63,630	63,630								
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	58,537	58,537	58,537	58,537								
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	56,347	56,347	56,347	56,347								
Lighting	Portal Pick Bulb - BR30	18,341	18,341	18,341	18,341								
Hot Water	Water Heater Temperature Setback - Single Family												
Hot Water	Water Heater Temperature Setback - Multifamily												
Lighting	Portal Pick Bulb - Globe	4,719	4,719	4,719	4,719								
Lighting	Portal Pick Bulb - Candelabra	4,108	4,108	4,108	4,108								
Lighting	Portal Pick Bulb - Mini	2,080	2,080	2,080	2,080								
Carryover	CY2019 and CY2020 Carryover	382,912	382,912	304,511	304,511								
CY2021 Program Total Contribution to CPAS		5,030,875	5,030,875	4,356,416	4,356,416	-	-	-	-	-	-	-	-
Historic Program Total Contribution to CPAS†		21,819,606	15,185,169	2,970,498	-	-	-	-	-	-	-	-	-
Program Total CPAS		26,850,481	20,216,044	7,326,914	4,356,416	-	-	-	-	-	-	-	-
CY2021 Program Incremental Expiring Savings‡		-	-	674,459	-	4,356,416	-	-	-	-	-	-	-
Historic Program Incremental Expiring Savings		3,385,618	6,634,436	12,214,671	2,970,498	-	-	-	-	-	-	-	-
Program Total Incremental Expiring Savings		3,385,618	6,634,436	12,889,130	2,970,498	4,356,416	-	-	-	-	-	-	-

Note: The green highlighted cell shows program total first-year electric savings (including direct electric savings and those converted from gas). The gray cells are blank, indicating no values or do not contribute to calculating CPAS in CY2021.

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

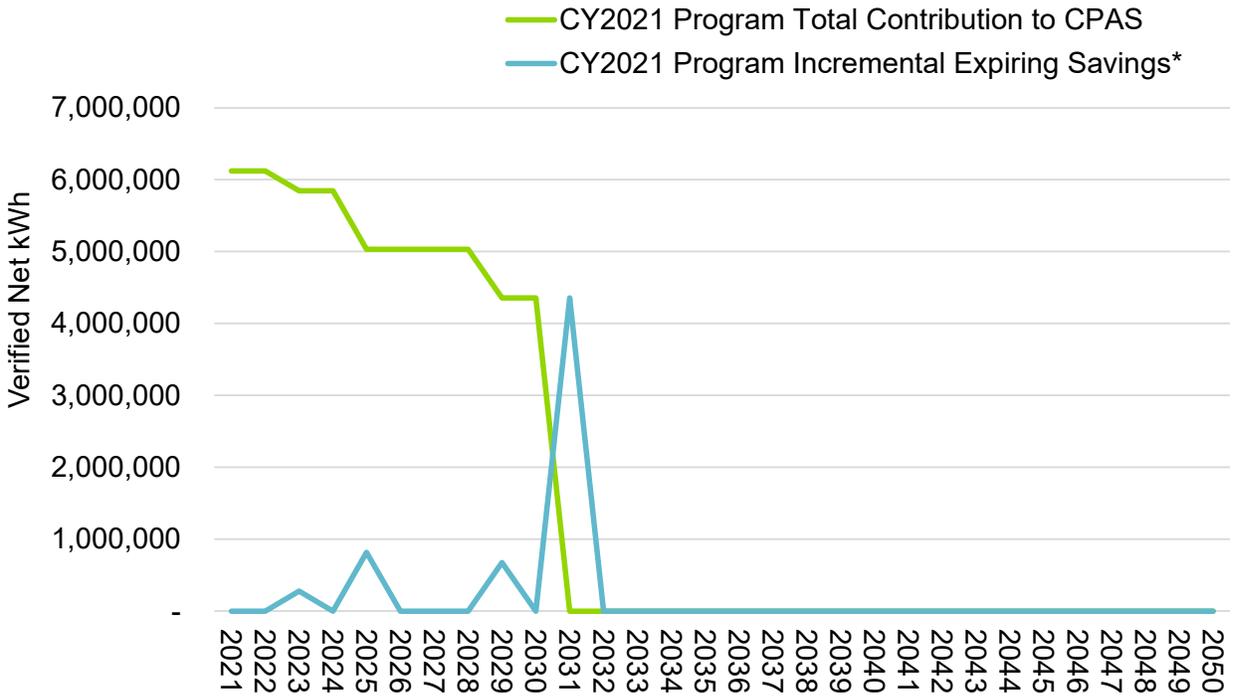
† Lifetime savings are the sum of CPAS savings through the EUL.

‡ Historic savings go back to CY2018.

§ Incremental expiring savings are equal to CPAS Y_{n-1} - CPAS Y_n .

Source: Evaluation team analysis

Figure 4-1. Cumulative Persisting Annual Savings



* Expiring savings are equal to CPAS Y_{n-1} - CPAS Y_n .

Source: Evaluation team analysis

5. Program Savings by Measure

The program includes energy efficiency kits with a various number of measures distributed to ComEd, Nicor Gas, Peoples Gas, and North Shore Gas customers. The measures included in the energy efficiency kits to customers varied by utility combination. Table 5-1 shows which measures were included in each of the energy efficiency kits distributed to the utility customers.

Table 5-1. Summary of Measures Included in Each Utility Kit Combination

Measure	ComEd Only	ComEd- Peoples Gas	ComEd-North Shore Gas	ComEd- Nicor Gas	Nicor Gas Only
Low Flow Showerhead	✓	✓	✓	✓	✓
Kitchen Faucet Aerators	✓	✓	✓	✓	✓
Bathroom Faucet Aerators	✓	✓	✓	✓	✓
LED Light Bulb BR30	✓	✓	✓	✓	
LED Nightlight	✓	✓	✓	✓	
Water Heater Temperature Setback	✓	✓	✓	✓	✓
Shower Timer	✓	✓	✓	✓	✓

Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

5.1 ComEd

The program included the measures shown in Table 5-2 and Figure 5-1.

Table 5-2. Number of Measures by Type

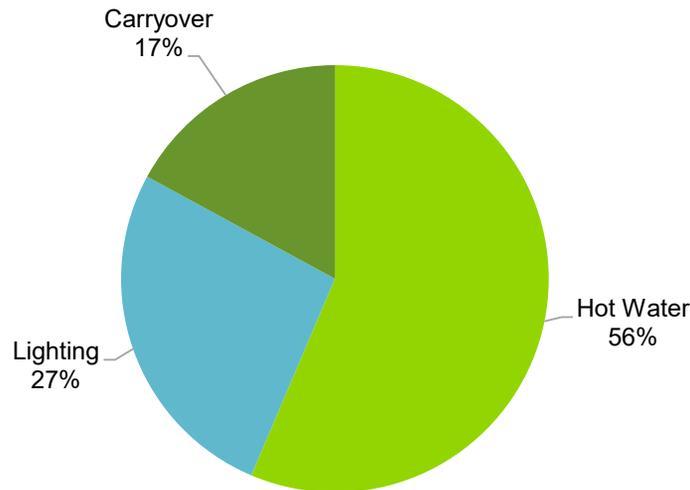
Distribution Channel	End Use Type	Research Category	Quantity Unit
Kit	Hot Water	Showerhead (1.5 GPM)	37,091 Each
Kit	Hot Water	Kitchen Aerator (1.5 GPM)	37,091 Each
Kit	Hot Water	Bathroom Aerator (1.0 GPM)	74,182 Each
Kit	Lighting	LED Light Bulb BR30	35,871 Bulb
Kit	Lighting	LED Nightlight	35,871 Each
Kit	Hot Water	Water Heater Temperature Setback	37,091 Each
Kit	Hot Water	Shower Timer Install	37,091 Each
Online Portal	Lighting	LED Light Bulb A19	2,528 Bulb
Online Portal	Lighting	LED Light Bulb BR30	1,418 Bulb
Online Portal	Lighting	LED Light Bulb Candelabra	482 Bulb
Online Portal	Lighting	LED Light Bulb Globe	570 Bulb
Online Portal	Lighting	LED Light Bulb Mini Globe	244 Bulb
Total			299,530

Notes: This is the same table as Table 2-2.

The rows are sorted by verified gross savings.

Source: ComEd, Nicor Gas, Peoples Gas, and North Shore Gas tracking data and evaluation team analysis

Figure 5-1. Verified Net Savings by End Use Type – Electric



Source: ComEd tracking data and evaluation team analysis

Measure-level energy and demand savings are provided in the following tables.

Table 5-3. Energy Savings by Measure – Electric

End Use Type	Research Category	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)	EUL (years)
Hot Water	Showerhead (1.5 GPM) - Single Family	975,153	1.00	975,153	1.00	975,153	10.0
Hot Water	Showerhead (1.5 GPM) - Multifamily	654,912	1.00	654,912	1.00	654,912	10.0
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	615,918	1.00	615,918	1.00	615,918	10.0
Lighting	LED Light Bulb BR30 - Single Family	576,158	1.00	577,119	0.84	484,780	10.0
Lighting	LED Nightlight - Single Family	419,155	1.00	419,855	1.00	419,855	8.0
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	312,733	1.00	312,733	1.00	312,733	10.0
Lighting	LED Light Bulb BR30 - Multifamily	255,148	1.00	255,583	0.84	214,690	10.0
Lighting	LED Nightlight - Multifamily	175,904	1.00	176,204	1.00	176,204	8.0
Hot Water	Shower Timer Install - Single Family	139,294	1.00	139,294	1.00	139,294	2.0
Lighting	Portal Pick Bulb - A19	66,261	0.91	60,471	0.84	50,796	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	55,502	1.00	55,502	1.00	55,502	10.0
Hot Water	Shower Timer Install - Multifamily	46,911	1.00	46,911	1.00	46,911	2.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	46,310	1.00	46,310	1.00	46,310	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	46,306	1.00	46,306	1.00	46,306	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	44,672	1.00	44,672	1.00	44,672	10.0
Lighting	Portal Pick Bulb - BR30	39,701	0.92	36,390	0.84	30,568	10.0
Hot Water	Water Heater Temperature Setback - Single Family	17,220	1.00	17,220	1.00	17,220	2.0
Hot Water	Water Heater Temperature Setback - Multifamily	9,482	1.00	9,482	1.00	9,482	2.0
Lighting	Portal Pick Bulb - Globe	10,007	0.92	9,210	0.84	7,737	10.0
Lighting	Portal Pick Bulb - Candelabra	8,690	0.92	8,017	0.84	6,735	10.0
Lighting	Portal Pick Bulb - Mini	4,397	0.92	4,059	0.84	3,409	10.0
Carryover	CY2019 and CY2020 Carryover	NR	N/A	1,032,384	0.85	879,747	9.8
Total†		4,519,834	1.23	5,543,705		5,238,932	

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

NR = not reported (refers to a piece of data that was not included in the program tracking data).

Note: The savings in this table include secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd. The savings account for electric heating penalties, where applicable.

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

† The realization rate includes verified gross savings from carryover. Table 3-1 shows that the gross electric savings realization rate excluding carryover is 1.00.

Source: ComEd tracking data and evaluation team analysis

Table 5-4. Summer Peak Demand Savings by Measure

End Use Type	Research Category	Ex Ante Gross Peak Demand Reduction (kW)	Verified Gross Realization Rate	Verified Gross Peak Demand Reduction (kW)	NTG*	Verified Net Peak Demand Reduction (kW)
Hot Water	Showerhead (1.5 GPM) - Single Family	52.70	1.00	52.70	1.00	52.70
Hot Water	Showerhead (1.5 GPM) - Multifamily	35.31	1.00	35.31	1.00	35.31
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	68.30	1.00	68.30	1.00	68.30
Lighting	LED Light Bulb BR30 - Single Family	96.36	1.00	96.36	0.84	80.94
Lighting	LED Nightlight - Single Family	0.00	N/A	0.00	1.00	0.00
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	34.60	1.00	34.60	1.00	34.60
Lighting	LED Light Bulb BR30 - Multifamily	42.02	1.00	42.02	0.84	35.30
Lighting	LED Nightlight - Multifamily	0.00	N/A	0.00	1.00	0.00
Hot Water	Shower Timer Install - Single Family	15.63	1.00	15.63	1.00	15.63
Lighting	Portal Pick Bulb - A19	10.05	1.00	10.05	0.84	8.44
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	43.19	1.00	43.19	1.00	43.19
Hot Water	Shower Timer Install - Multifamily	5.17	1.00	5.17	1.00	5.17
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	36.04	1.00	36.04	1.00	36.04
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	19.06	1.00	19.06	1.00	19.06
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	18.38	1.00	18.38	1.00	18.38
Lighting	Portal Pick Bulb - BR30	6.05	1.00	6.05	0.84	5.08
Hot Water	Water Heater Temperature Setback - Single Family	1.96	1.00	1.96	1.00	1.96
Hot Water	Water Heater Temperature Setback - Multifamily	1.08	1.00	1.08	1.00	1.08
Lighting	Portal Pick Bulb - Globe	1.53	1.00	1.53	0.84	1.29
Lighting	Portal Pick Bulb - Candelabra	1.33	1.00	1.33	0.84	1.12
Lighting	Portal Pick Bulb - Mini	0.67	1.00	0.67	0.84	0.57
Carryover	CY2019 and CY2020 Carryover	NR	N/A	90.05	0.84	75.64
Total†		489.44	1.18	579.49		539.80

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

NR = not reported (refers to a piece of data that was not included in the program tracking data).

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

† The realization rate includes verified gross savings from carryover. Table 3-1 shows that the gross electric savings realization rate excluding carryover is 1.00.

Source: ComEd tracking data and evaluation team analysis

The EEE Program includes measures that save water. That reduction in water produces secondary kWh savings from water supply and wastewater treatment. Table 5-5 shows the secondary measure-level savings. The savings in this table are included in the electricity savings in the previous tables in this section.

Table 5-5. Secondary Energy Savings from Water Reduction by Measure – Electric

End Use Type	Research Category	Ex Ante Annual Water Savings (gallons)	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate (RR _{water})	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Hot Water	Showerhead (1.5 GPM) - Single Family	35,858,152	NR	N/A	29,618	1.00	29,618
Hot Water	Showerhead (1.5 GPM) - Multifamily	24,082,289	NR	N/A	19,891	1.00	19,891
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	26,836,322	NR	N/A	22,446	1.00	22,446
Lighting	LED Light Bulb BR30 - Single Family	0	NR	N/A	0	0.84	0
Lighting	LED Nightlight - Single Family	0	NR	N/A	0	1.00	0
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	13,626,166	NR	N/A	11,397	1.00	11,397
Lighting	LED Light Bulb BR30 - Multifamily	0	NR	N/A	0	0.84	0
Lighting	LED Nightlight - Multifamily	0	NR	N/A	0	1.00	0
Hot Water	Shower Timer Install - Single Family	3,515,256	NR	N/A	4,231	1.00	4,231
Lighting	Portal Pick Bulb - A19	0	NR	N/A	0	0.84	0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	2,698,653	NR	N/A	2,446	1.00	2,446
Hot Water	Shower Timer Install - Multifamily	1,183,845	NR	N/A	1,425	1.00	1,425
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	2,209,276	NR	N/A	2,041	1.00	2,041
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	2,251,545	NR	N/A	2,041	1.00	2,041
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	2,131,115	NR	N/A	1,969	1.00	1,969
Lighting	Portal Pick Bulb - BR30	0	NR	N/A	0	0.84	0
Hot Water	Water Heater Temperature Setback - Single Family	0	NR	N/A	0	1.00	0
Hot Water	Water Heater Temperature Setback - Multifamily	0	NR	N/A	0	1.00	0
Lighting	Portal Pick Bulb - Globe	0	NR	N/A	0	0.84	0
Lighting	Portal Pick Bulb - Candelabra	0	NR	N/A	0	0.84	0
Lighting	Portal Pick Bulb - Mini	0	NR	N/A	0	0.84	0
Total		114,392,619	NR	N/A	97,503		97,503

Note: The savings in this table reflect only secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures claimed by ComEd, not those claimed by gas utilities.

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

NR = not reported (refers to a piece of data that was not included in the program tracking data).

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

Source: ComEd tracking data and evaluation team analysis

Table 5-6 shows measure-level natural gas savings.

Table 5-6. Energy Savings by Measure – Gas

End Use Type	Research Category	Ex Ante Gross Savings (Therms)	Verified Gross Realization Rate	Verified Gross Savings (Therms)	NTG*	Verified Net Savings (Therms)	EUL (years)
Hot Water	Showerhead (1.5 GPM) - Single Family	10,607	1.00	10,607	1.00	10,607	10.0
Hot Water	Showerhead (1.5 GPM) - Multifamily	6,253	1.00	6,253	1.00	6,253	10.0
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	6,243	1.00	6,243	1.00	6,243	10.0
Lighting	LED Light Bulb BR30 - Single Family	-651	0.00	0	0.84	0	10.0
Lighting	LED Nightlight - Single Family	-474	0.00	0	1.00	0	8.0
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	2,939	1.00	2,939	1.00	2,939	10.0
Lighting	LED Light Bulb BR30 - Multifamily	-294	0.00	0	0.84	0	10.0
Lighting	LED Nightlight - Multifamily	-203	0.00	0	1.00	0	8.0
Hot Water	Shower Timer Install - Single Family	1,532	1.00	1,532	1.00	1,532	2.0
Lighting	Portal Pick Bulb - A19	0	N/A	0	0.84	0	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	545	1.00	545	1.00	545	10.0
Hot Water	Shower Timer Install - Multifamily	208	1.00	208	1.00	208	2.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	591	1.00	591	1.00	591	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	417	1.00	417	1.00	417	10.0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	398	1.00	398	1.00	398	10.0
Lighting	Portal Pick Bulb - BR30	0	N/A	0	0.84	0	10.0
Hot Water	Water Heater Temperature Setback - Single Family	310	1.00	310	1.00	310	2.0
Hot Water	Water Heater Temperature Setback - Multifamily	109	1.00	109	1.00	109	2.0
Lighting	Portal Pick Bulb - Globe	0	N/A	0	0.84	0	10.0
Lighting	Portal Pick Bulb - Candelabra	0	N/A	0	0.84	0	10.0
Lighting	Portal Pick Bulb - Mini	0	N/A	0	0.84	0	10.0
Carryover	CY2019 and CY2020 Carryover	NR	N/A	0	N/A	0	9.8
Total Therms		28,530	1.06	30,152		30,152	
Total kWh Converted From Therms†		836,205	1.06	883,750		883,750	

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

NR = not reported (refers to a piece of data that was not included in the program tracking data).

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

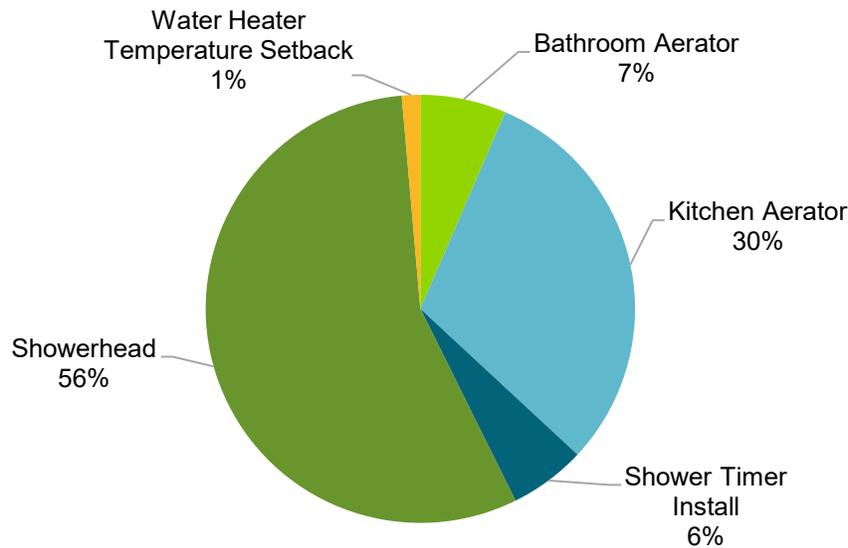
The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

† Gas savings converted to kWh by multiplying therms by 29.31 (which is based on 100,000 Btu/therm and 3,412 Btu/kWh).

Source: ComEd tracking data and evaluation team analysis

Figure 5-2 shows the verified net gas savings for each measure type included in the ComEd Only kits.

Figure 5-2. Verified Net Savings by Measure Type – Gas



Source: ComEd tracking data and evaluation team analysis

Table 5-7 shows the total electric savings (including natural gas converted to electric savings) for the EEE kits distributed to ComEd participants.

Table 5-7. Energy Savings by Measure – Total

End Use Type	Research Category	Ex Ante Gross Savings (kWh)	Verified Gross Realization Rate	Verified Gross Savings (kWh)	NTG*	Verified Net Savings (kWh)
Hot Water	Showerhead (1.5 GPM) - Single Family	1,286,049	1.00	1,286,049	1.00	1,286,049
Hot Water	Showerhead (1.5 GPM) - Multifamily	838,191	1.00	838,191	1.00	838,191
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	798,888	1.00	798,888	1.00	798,888
Lighting	LED Light Bulb BR30 - Single Family	557,077	1.04	577,119	0.84	484,780
Lighting	LED Nightlight - Single Family	405,274	1.04	419,855	1.00	419,855
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	398,879	1.00	398,879	1.00	398,879
Lighting	LED Light Bulb BR30 - Multifamily	246,516	1.04	255,583	0.84	214,690
Lighting	LED Nightlight - Multifamily	169,953	1.04	176,204	1.00	176,204
Hot Water	Shower Timer Install - Single Family	184,194	1.00	184,194	1.00	184,194
Lighting	Portal Pick Bulb - A19	66,261	0.91	60,471	0.84	50,796
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	71,470	1.00	71,470	1.00	71,470
Hot Water	Shower Timer Install - Multifamily	52,999	1.00	52,999	1.00	52,999
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	63,630	1.00	63,630	1.00	63,630
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	58,537	1.00	58,537	1.00	58,537
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	56,347	1.00	56,347	1.00	56,347
Lighting	Portal Pick Bulb - BR30	39,701	0.92	36,390	0.84	30,568
Hot Water	Water Heater Temperature Setback - Single Family	26,301	1.00	26,301	1.00	26,301
Hot Water	Water Heater Temperature Setback - Multifamily	12,679	1.00	12,679	1.00	12,679
Lighting	Portal Pick Bulb - Globe	10,007	0.92	9,210	0.84	7,737
Lighting	Portal Pick Bulb - Candelabra	8,690	0.92	8,017	0.84	6,735
Lighting	Portal Pick Bulb - Mini	4,397	0.92	4,059	0.84	3,409
Carryover	CY2019 and CY2020 Carryover	NR	N/A	1,032,384	0.85	879,747
Total††		5,356,040	1.20	6,427,455		6,122,682

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

NR = not reported (refers to a piece of data that was not included in the program tracking data)

* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

† The total includes the electric equivalent of the total therms.

‡ The realization rate includes verified gross savings from carryover. Table 3-1 shows that the gross electric savings realization rate excluding carryover is 1.00.

Source: ComEd tracking data and evaluation team analysis

5.2 Nicor Gas, Peoples Gas, and North Shore Gas

Table 5-8 to Table 5-10 show measure-level natural gas savings for Nicor Gas, Peoples Gas and North Shore Gas, respectively.

Table 5-8. CY2021 Natural Gas Energy Savings by Measure – Nicor Gas

End Use Type	Research Category	Ex Ante Gross Savings (Therms)	Verified Gross Realization Rate	Verified Gross Savings (Therms)	NTG*	Verified Net Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	81,646	1.00	81,646	1.00	81,646
Hot Water	Showerhead (1.5 GPM) - Multifamily	46,547	1.00	46,547	1.00	46,547
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	47,347	1.00	47,347	1.00	47,347
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	24,255	1.00	24,255	1.00	24,255
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	3,799	1.00	3,799	1.00	3,799
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	3,491	1.00	3,491	1.00	3,491
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	4,707	1.00	4,707	1.00	4,707
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	3,430	1.00	3,430	1.00	3,430
Hot Water	Water Heater Temperature Setback - Single Family	2,421	1.00	2,421	1.00	2,421
Hot Water	Water Heater Temperature Setback - Multifamily	1,037	1.00	1,037	1.00	1,037
Hot Water	Shower Timer Install - Single Family	10,424	1.00	10,424	1.00	10,424
Hot Water	Shower Timer Install - Multifamily	4,005	1.00	4,005	1.00	4,005
	Total†	233,109		233,109		233,109

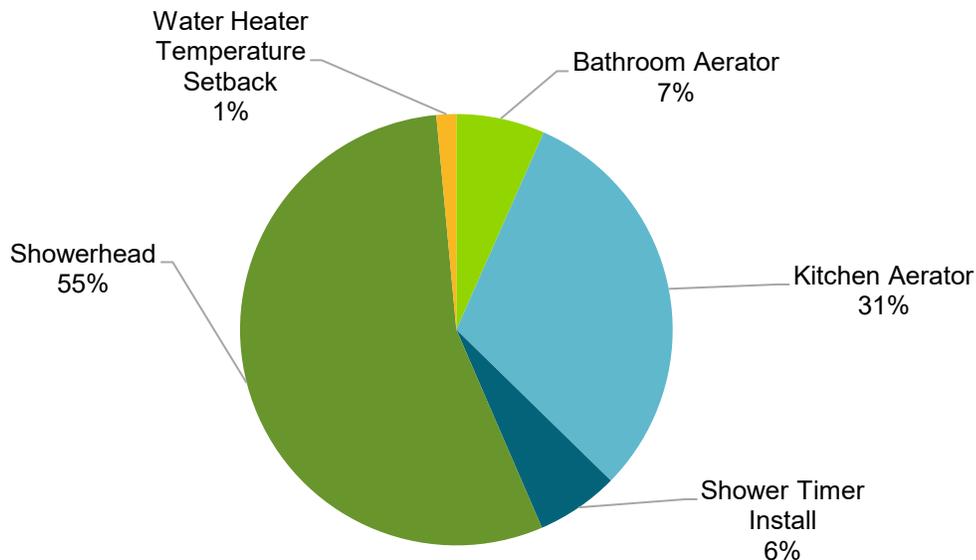
* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

† The total excludes the electric interactive effects on the total therms.

Source: Nicor Gas tracking data and evaluation team analysis

Figure 5-3 shows the percentage of verified net gas savings for each measure type included in the Nicor Gas kits.

Figure 5-3. Verified Net Savings by Measure Type – Nicor Gas



Source: Nicor Gas tracking data and evaluation team analysis

Table 5-9. CY2021 Natural Gas Energy Savings by Measure – Peoples Gas

End Use Type	Research Category	Ex Ante Gross Savings (Therms)	Verified Gross Realization Rate	Verified Gross Savings (Therms)	NTG*	Verified Net Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	33,265	1.27	42,301	1.00	42,301
Hot Water	Showerhead (1.5 GPM) - Multifamily	57,334	1.27	72,909	1.00	72,909
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	20,835	1.27	26,496	1.00	26,496
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	30,790	1.27	39,155	1.00	39,155
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	1,782	1.27	2,266	1.00	2,266
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	4,590	1.27	5,837	1.00	5,837
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	1,615	1.27	2,054	1.00	2,054
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	4,280	1.27	5,443	1.00	5,443
Hot Water	Water Heater Temperature Setback - Single Family	638	1.27	811	1.00	811
Hot Water	Water Heater Temperature Setback - Multifamily	355	1.27	452	1.00	452
Hot Water	Shower Timer Install - Single Family	2,442	1.27	3,105	1.00	3,105
Hot Water	Shower Timer Install - Multifamily	1,372	1.27	1,745	1.00	1,745
Total†		159,298		202,574		202,574

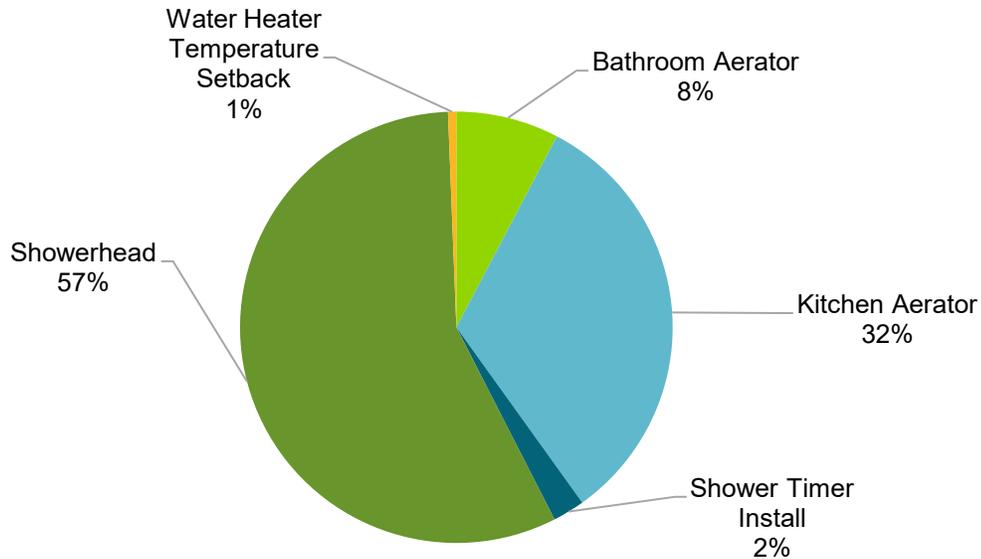
* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

† The total excludes the electric interactive effects on the total therms.

Source: Peoples Gas tracking data and evaluation team analysis

Figure 5-4 shows the percentage of verified net gas savings for each measure type included in the Peoples Gas kits.

Figure 5-4. Verified Net Savings by Measure Type – Peoples Gas



Source: Peoples Gas tracking data and evaluation team analysis

Table 5-10. CY2021 Natural Gas Energy Savings by Measure – North Shore Gas

End Use Type	Research Category	Ex Ante Gross Savings (Therms)	Verified Gross Realization Rate	Verified Gross Savings (Therms)	NTG*	Verified Net Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	10,335	0.99	10,269	1.00	10,269
Hot Water	Showerhead (1.5 GPM) - Multifamily	5,081	0.99	5,048	1.00	5,048
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	6,785	0.99	6,742	1.00	6,742
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	2,054	0.99	2,041	1.00	2,041
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	524	0.99	520	1.00	520
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	328	0.99	326	1.00	326
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	638	0.99	633	1.00	633
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	303	0.99	301	1.00	301
Hot Water	Water Heater Temperature Setback - Single Family	210	0.99	209	1.00	209
Hot Water	Water Heater Temperature Setback - Multifamily	39	0.99	39	1.00	39
Hot Water	Shower Timer Install - Single Family	1,049	0.99	1,042	1.00	1,042
Hot Water	Shower Timer Install - Multifamily	419	0.99	416	1.00	416
Total†		27,765		27,587		27,587

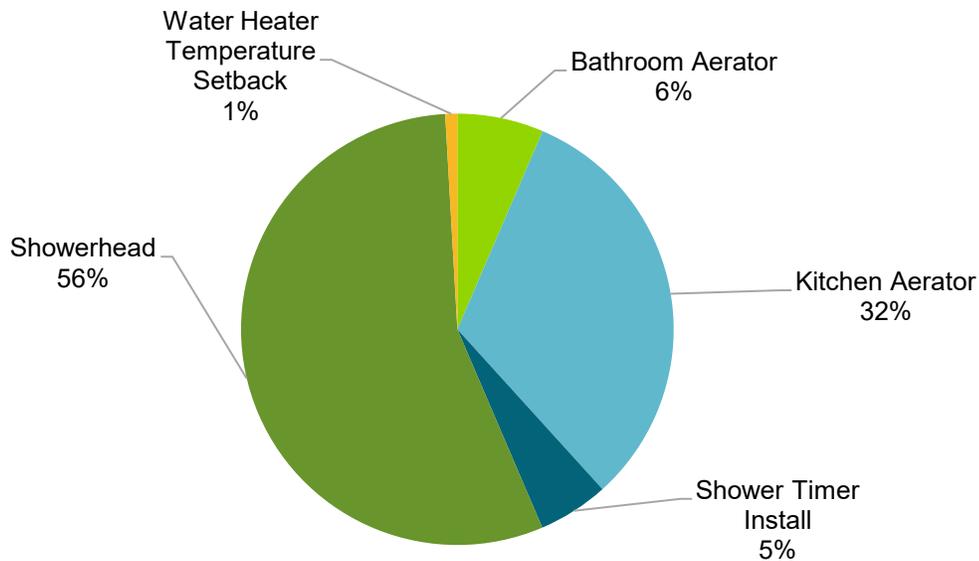
* A deemed value. Source: Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

† The total excludes the electric interactive effects on the total therms.

Source: North Shore Gas tracking data and evaluation team analysis

Figure 5-5 shows the percentage of verified net gas savings for each measure type included in the North Shore Gas kits.

Figure 5-5. Verified Net Savings by Measure Type – North Shore Gas



Source: North Shore Gas tracking data and evaluation team analysis

6. Impact Analysis Findings and Recommendations

The following sections detail the issues that affected realization rates per utility and the recommendations the evaluation team developed based on its findings.

6.1 ComEd

The electric (kWh) realization rate for ComEd is 1.23, including CY2019 and CY2020 carryover electric savings. The electric (kWh) realization rate drops to 1.20 when the electric savings converted from natural gas are included. The electric realization rate for all of the measures except for BR30 LED light bulb, LED nightlight, and all portal bulbs were 1.00.

The issue that had the largest effect on adjusting ex ante gross savings was that the natural gas savings included the natural gas heating penalty for the BR30 LED bulbs and LED nightlights (see Finding 1). Additionally, the calculation and accounting of electric heating penalties for the LED bulbs and LED nightlight measures impacted the verified gross savings, resulting realization rates that ranged from 0.92 to 1.00.

The evaluation team developed several recommendations for ComEd and the program team based on findings from the CY2021 evaluation.

Finding 1. ComEd reported 11.412 therms for each ComEd Only EEE kit distributed in CY2021. This ex ante kit savings value includes the natural gas heating penalty associated with the BR30 LED bulb and LED nightlight measures. When calculating the gross natural gas savings for the ComEd Only kit, the savings should not include the natural gas heating penalty. This adjustment increased the kit-level natural gas savings by 5%. The natural gas heating penalties associated with lighting measures should be accounted for only in the TRC tables.

Recommendation 1. Exclude the natural gas heating penalty due to lighting measures when calculating the kit-level gross natural gas savings for ComEd Only kits.

Finding 2. The verified savings for the BR30 LED bulb and LED nightlight (both single-family and multifamily) resulted in realization rates greater than 1.00. This was due to an incorrect electric heating penalty value listed in the Wave 2 program tracking data. Guidehouse was not able to replicate the electric heating penalty used in the ex ante savings with the supplied program data. While the end of year program data showed the correct per-kit electric heating penalty was used (-4.6548 kWh) for the Wave 1, it also showed that an incorrect electric heating penalty value (-4.765) was used for Wave 2 kits.

Recommendation 2. Update the electric heating penalty value listed in the program data to -4.6548 kWh for each of the combined utility EEE kits.

Finding 3. The verified energy savings for each type of the online portal LED bulbs resulted in realization rates less than 1.00 because the electric heating penalty value listed in the tracking data was not multiplied by the number of two-pack of bulbs distributed for each bulb type. The tracking data listed the correct electric heating penalty value for each two-pack of bulbs, but the total heating penalty for each participant was not multiplied by the number of two-packs distributed. The verified energy savings (kWh) for each of the portal pick bulb types resulted in realization rates between 0.91 and 0.93.

Recommendation 3. Ensure the electric heating penalty values listed in the program tracking data are multiplied by the number of two-bulb packs distributed to each participant for each bulb type.

Finding 4. Guidehouse was not able to replicate the reported per-kit water savings value of 3,189 gallons listed in the ex ante calculator.

- Water savings (gallons) values were hardcoded on the Measures Required tab of the ex ante calculator file.
- The Measures Required tab is a summary of the measure-level savings, which were calculated on the MeasureCalcs_Optional tab in the ex ante calculator.
- Water savings (gallons) listed in the CY2021 program data were not consistent with the water savings (gallons) values used to calculate the secondary energy savings (kWh) from water reduction.

Recommendation 4. Avoid hardcoding values in the ex ante calculator and link all values to the appropriate calculations.

Finding 5. The tracking data provides the gallons of water saved but does not calculate the secondary electric energy (kWh) savings from water supply and wastewater treatment plants for measures reported by ComEd. Guidehouse is aware that ComEd is working to include this information in the tracking data for future program years. This finding did not impact the energy savings as the secondary electric savings are included in the ex ante energy savings values.

6.2 Nicor Gas

The realization rate for all measures in the joint ComEd-Nicor Gas and Nicor Gas Only kits was 1.00. The evaluation team did not make any adjustments to the ex ante savings reported by Nicor Gas in CY2021.

The evaluation team developed the following recommendation for Nicor Gas and the program team based on findings from the CY2021 evaluation.

Finding 6. The evaluation team reviewed the program tracking data supplied by both Nicor Gas and ComEd to confirm the quantity of joint ComEd-Nicor Gas EEE kits distributed in CY2021 matched. The Nicor Gas program data showed 18 fewer joint ComEd-Nicor Gas kits were distributed in CY2021 when compared to the ComEd program data. Using the CY2021 program data from both utilities, the evaluation team identified that the discrepancy occurred in August 2021. To calculate the verified savings for Nicor Gas, the evaluation team used the quantity of joint ComEd-Nicor Gas kits listed in the ComEd program data (16,979 kits), which was 18 more kits than the 16,961 joint ComEd-Nicor Gas kits listed in the Nicor Gas program data. The evaluation team was able to confirm the values in the ComEd program data were not duplicates. Based on this review, the evaluation team used a quantity of 16,979 ComEd-Nicor Gas kits to calculate the verified savings for Nicor Gas.

Recommendation 5. Confirm the mapping of teachers and kit quantities to the appropriate utility combination on an annual basis.

6.3 Peoples Gas and North Shore Gas

The issue that had the largest effect on adjusting ex ante gross savings for Peoples Gas and North Shore Gas was reporting per-kit natural gas savings associated with ComEd Only kits. The evaluation team developed the following recommendation for Peoples Gas and North Shore Gas based on findings from the CY2021 evaluation.

Finding 7. Peoples Gas reported ex ante savings using a per-kit savings value associated with EEE kits distributed to ComEd Only participants (11.412 therms), which was not consistent with the per-kit savings value the evaluation team recommended (14.512 therms) in the “Joint Coordinated CY2021 Elementary Energy Education Interim Impact (Wave 1) Data Review and Analysis” memo. The adjustment increased the ex ante savings by 27%.

Finding 8. North Shore Gas reported ex ante savings using a per-kit savings value associated with EEE kits distributed to ComEd Only participants (11.412 therms), which was not consistent with the per-kit savings value the evaluation team recommended (11.339 therms) in the “Joint Coordinated CY2021 Elementary Energy Education Interim Impact (Wave 1) Data Review and Analysis” memo. This adjustment reduced the ex ante savings by 0.6%.

Recommendation 6. Calculate the natural gas savings for each EEE kit combination (ComEd Only, ComEd-Nicor Gas, ComEd-Peoples Gas, ComEd-North Shore Gas, and Nicor Gas Only) using utility-specific algorithm parameters. The use of utility-specific algorithm parameters ensures the calculated natural gas savings are representative of how utility participants use the energy efficiency measures.

Appendix A. Impact Analysis Methodology

Table A-1 details all the custom and deemed inputs the evaluation team used to calculate the verified energy and demand savings for each measure and the source of these inputs. The team calculated savings for each measure based on the savings algorithms noted in the Illinois Technical Reference Manual, v9.0 (IL-TRM)² and the IL-TRM Errata for each respective measure. The custom inputs for all utilities were calculated using the spring CY2019 and fall CY2019 participant survey data supplied by the implementation contractor.

Table A-1. Savings Parameters

Gross Savings Input Parameters	Custom Input Parameters	Deemed Input Parameters	Source*
Low Flow Showerhead	%DHW, Household, ISR, %SF, %MF, Hours	GPM_base, GPM_low, L_base, L_low, showerheads per household (SPH), showers per capita per day (SPCD), EPG_electric, CF, NTG [†]	IL-TRM – Section 5.4.5
Kitchen Aerators	%DHW, Household, ISR, %SF, %MF, Hours	GPM_base, GPM_low, L_base, L_low, faucets per household (FPH), drain factor (DF), EPG_electric, CF, NTG [†]	IL-TRM – Section 5.4.4
Bathroom Aerators	%DHW, Household, ISR, %SF, %MF, Hours	GPM_base, GPM_low, L_base, L_low, faucets per household (FPH), drain factor (DF), EPG_electric, CF, NTG [†]	IL-TRM – Section 5.4.4
LED Lighting	Watts_EE, ISR, %SF, %MF, %Electric Heat, %Gas Heat	Watts_Base, Hours, WHF_e, WHF_d, CF, HF, η Heat, NTG [†] , midlife baseline adjustment	IL-TRM – Section 5.5.6
LED Nightlight	%SF, %MF, Watts_EE, %Electric Heat, %Gas Heat	Watts_Base, Hours, WHF_e, WHF_d, CF, HF, η Heat, NTG [†]	IL-TRM – Section 5.5.11
Hot Water Temperature Setback	T_pre, T_post, ISR, %DHW, %SF, %MF	U, A, Hours, RE_electric, CF, NTG [†]	IL-TRM – Section 5.4.6
Shower Timer	%DHW, GPM, L_timer, Household, Usage Factor, %SF, %MF, Hours	L_base, SPCD, EPG_electric, CF, GPH, EPG_gas, NTG [†]	IL-TRM – Section 5.4.9

* IL-TRM is the Illinois Technical Reference Manual version 9.0 from <https://www.ilsag.info/technical-reference-manual/il-trm-version-9/>.

† The net-to-gross (NTG) values can be found on the Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>. The NTG value for the LED Nightlight was deemed to be 1.00 based on SAG consensus for new measures included in the EEE kit.

Source: ComEd survey data and evaluation team analysis

² In this report, unless stated otherwise, IL-TRM and IL-TRM Errata refers to version 9.0 (v9.0).

Appendix B. Impact Findings Detailed Results

B.1 CY2022 Carryover Savings Estimates

The evaluation team calculated the CY2022 carryover savings estimates using the IL-TRM (v8.0, v9.0, and v10.0) and the CY2020 and CY2021 EEE Impact Evaluation reports. The energy and demand savings from the CY2020 and CY2021 deferred install bulbs are calculated based on the following parameters:

- **Delta watts:** Verified savings estimate from the year of installation (source: IL-TRM v10.0, CY2020 program data).
- **Quantity:** Number of bulbs from the year of distribution (source: Impact Evaluation reports).
- **Hours of use (HOU) and peak coincidence factor (CF):** Verified savings estimate from the year of installation (source: IL-TRM v10.0).
- **Energy and demand interactive effects:** Verified savings estimate from the year of installation (source: TRM v10.0)
- **Installation rate:** Verified savings estimate from the year of distribution (CY2020 and CY2021 program survey data). The evaluation team subtracted the custom installation rate (ISR) from the lifetime ISR found in the IL-TRM (v8.0 for CY2020 and v9.0 for CY2021) and split the remaining installs between the second and third years using the same ratio found in the IL-TRM (v8.0 for CY2020 and v9.0 for CY2021).
- **NTG:** Evaluation research from the year of purchase (source: CY2020 and CY2021 Impact Reports).

Table B-1 shows that 12,652 bulbs were distributed across CY2020 and CY2021 that are expected to be installed in ComEd’s service territory in CY2022. The table provides both the gross and net energy and demand savings from these bulbs. The evaluation team estimates total CY2022 net carryover savings to be 393,476 kWh and 35 summer peak demand kW.

Table B-1. CY2022 Verified Savings Carryover Estimate

CY2022 Verified Savings Carryover Estimate	CY2020 Bulbs	CY2021 Bulbs	CY2022 Carryover
Carryover Bulbs Installed During CY2022	2,327	10,325	12,652
Average Delta Watts	6.7	33.9	28.9
Average Annual Hours of Use	4,380	2,397	2,761
Energy Interactive Effects	1.054	1.054	1.054
Demand Interactive Effects	1.098	1.099	1.098
Summer Peak Load Coincidence Factor	-	0.060	0.049
Carryover Gross Energy Savings (kWh)	66,339	358,600	424,939
Carryover Gross Demand Savings (kW)	17	384	401
Carryover Gross Summer Peak Demand Savings (kW)	-	38	38
Net-to-Gross Ratio	1.00	0.91	0.93
Carryover Net Energy Savings (kWh)	66,339	327,137	393,476
Carryover Net Summer Peak Demand Savings (kW)	-	35	35
Effective Useful Life	8.0	9.1	8.9

Source: ComEd tracking data and evaluation team analysis

B.2 Verified Measure Per-Unit Savings Tables

Table B-2 through Table B-5 show the verified gross unit savings for each utility.

Table B-2. ComEd CY2021 Verified Measure Per-Unit Savings Findings

End Use Type	Measures	Verified kWh Per unit	Verified kW Per unit	Verified therms Per unit
Hot Water	Showerhead (1.5 GPM) - Single Family	27.185	0.00147	4.243
Hot Water	Showerhead (1.5 GPM) - Multifamily	18.257	0.00098	2.501
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	17.170	0.00190	2.497
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	8.718	0.00096	1.176
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	1.547	0.00120	0.218
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	1.291	0.00053	0.167
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	1.291	0.00100	0.236
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	1.245	0.00051	0.159
Lighting	LED Light Bulb BR30 - Single Family	16.089	0.00269	0.000
Lighting	LED Light Bulb BR30 - Multifamily	7.125	0.00117	0.000
Lighting	LED Nightlight - Single Family	11.705	0.00000	0.000
Lighting	LED Nightlight - Multifamily	4.912	0.00000	0.000
Hot Water	Water Heater Temperature Setback - Single Family	0.480	0.00005	0.124
Hot Water	Water Heater Temperature Setback - Multifamily	0.264	0.00003	0.044
Hot Water	Shower Timer Install - Single Family	3.883	0.00044	0.613
Hot Water	Shower Timer Install - Multifamily	1.308	0.00014	0.083
Total		122.471	0.01310	12.061

Source: ComEd tracking data and evaluation team analysis

Table B-3. Nicor Gas CY2021 Verified Measure Per-Unit Savings Findings

End Use Type	Measures	Verified therms Per unit
Hot Water	Showerhead (1.5 GPM) - Single Family	4.486
Hot Water	Showerhead (1.5 GPM) - Multifamily	2.558
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	2.602
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	1.333
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	0.209
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	0.192
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	0.259
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	0.188
Hot Water	Water Heater Temperature Setback Gas - Single Family	0.133
Hot Water	Water Heater Temperature Setback Gas - Multifamily	0.057
Hot Water	Shower Timer Install - Single Family	0.573
Hot Water	Shower Timer Install - Multifamily	0.220
Total		12.809

Source: Nicor Gas tracking data and evaluation team analysis

Table B-4. Peoples Gas CY2021 Verified Measure Per-Unit Savings Findings

End Use Type	Measures	Verified therms Per unit
Hot Water	Showerhead (1.5 GPM) - Single Family	3.030
Hot Water	Showerhead (1.5 GPM) - Multifamily	5.223
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	1.898
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	2.805
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	0.162
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	0.418
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	0.147
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	0.390
Hot Water	Water Heater Temperature Setback Gas - Single Family	0.058
Hot Water	Water Heater Temperature Setback Gas - Multifamily	0.032
Hot Water	Shower Timer Install - Single Family	0.222
Hot Water	Shower Timer Install - Multifamily	0.125
	Total	14.512

Source: Peoples Gas tracking data and evaluation team analysis

Table B-5. North Shore Gas CY2021 Verified Measure Per-Unit Savings Findings

End Use Type	Measures	Verified therms Per unit
Hot Water	Showerhead (1.5 GPM) - Single Family	4.221
Hot Water	Showerhead (1.5 GPM) - Multifamily	2.075
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	2.771
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	0.839
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	0.214
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	0.134
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	0.260
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	0.124
Hot Water	Water Heater Temperature Setback Gas - Single Family	0.086
Hot Water	Water Heater Temperature Setback Gas - Multifamily	0.016
Hot Water	Shower Timer Install - Single Family	0.428
Hot Water	Shower Timer Install - Multifamily	0.171
	Total	11.339

Source: North Shore Gas tracking data and evaluation team analysis

B.3 ComEd Input and Assumption Comparison

Table B-6 through Table B-12 compare the inputs and assumptions used for ComEd in the ex ante and verified calculations for each measure.

The evaluation team used survey responses that participants submitted to custom calculate algorithm input values for selected variables. The Home Check-Up (HCU) and Home Activities (HA) acronyms in the source column in the tables below represent which survey question the evaluation team used to custom calculate the algorithm input variable. For example, HCU1 signifies the evaluation team used survey responses from the first question in the HCU portion of the survey to calculate the percent of single family and multifamily homes.

Table B-6. Low Flow Showerhead – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
2.35	2.35	GPM_base	IL-TRM 5.4.5	Deemed	-
1.50	1.50	GPM_low	Specifications	Custom	-
7.80	7.80	L_base	IL-TRM 5.4.5	Deemed	-
7.80	7.80	L_low	IL-TRM 5.4.5	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.5	Deemed	-
4.78	4.78	Household SF	Survey - HCU2	Custom	-
4.79	4.79	Household MF	Survey - HCU2	Custom	-
0.60	0.60	SPCD	IL-TRM 5.4.5	Deemed	-
1.79	1.79	SPH SF	IL-TRM 5.4.5	Deemed	-
1.30	1.30	SPH MF	IL-TRM 5.4.5	Deemed	-
0.12	0.12	EPG_electric	IL-TRM 5.4.5	Deemed	-
0.42	0.42	ISR SF	Survey - HA1	Custom	-
0.47	0.47	ISR MF	Survey - HA1	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
498.77	498.77	Hours - SF	IL-TRM 5.4.5	Custom	-
499.92	499.92	Hours - MF	IL-TRM 5.4.5	Custom	-
0.028	0.028	CF	IL-TRM 5.4.5	Deemed	-
3,665	3,665	E_water total	Program Data	Custom	-

Source: Evaluation team analysis

Table B-7. Kitchen Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
1.63	1.63	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
4.50	4.50	L_base	IL-TRM 5.4.4	Deemed	-
4.50	4.50	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.78	4.78	Household SF	Survey - HCU2	Custom	-
4.79	4.79	Household MF	Survey - HCU2	Custom	-
0.75	0.75	DF	IL-TRM 5.4.4	Deemed	-
1.00	1.00	KFPH	IL-TRM 5.4.4	Deemed	-
0.10	0.10	EPG_electric	IL-TRM 5.4.4	Deemed	-
0.30	0.30	ISR SF	Survey - HA2	Custom	-
0.36	0.36	ISR MF	Survey - HA2	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
191.16	191.16	Hours - SF	Survey - HCU2	Custom	-
191.60	191.60	Hours - MF	Survey - HCU2	Custom	-
0.20	0.20	%ElectricDHW	Survey - HCU4	Custom	-
0.02	0.02	CF	IL-TRM 5.4.4	Deemed	-
3,665	3,665	E_water total	Program Data	Custom	-

Source: Evaluation team analysis

Table B-8. Bathroom Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
1.53	1.53	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
1.60	1.60	L_base	IL-TRM 5.4.4	Deemed	-
1.60	1.60	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.78	4.78	Household SF	Survey - HCU2	Custom	-
4.79	4.79	Household MF	Survey - HCU2	Custom	-
0.90	0.90	DF	IL-TRM 5.4.4	Deemed	-
2.83	2.83	BFPH - SF	IL-TRM 5.4.4	Deemed	-
1.50	1.50	BFPH - MF	IL-TRM 5.4.4	Deemed	-
0.08	0.08	EPG_electric	IL-TRM 5.4.4	Deemed	-
0.26	0.26	ISR SF - 1	Survey - HA3	Custom	-
0.26	0.26	ISR MF - 1	Survey - HA3	Custom	-
0.11	0.11	ISR SF - 2	Survey - HA3	Custom	-
0.13	0.13	ISR MF - 2	Survey - HA3	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
27.03	27.03	Hours - SF	IL-TRM 5.4.4	Custom	-
51.10	51.10	Hours - MF	IL-TRM 5.4.4	Custom	-
0.02	0.02	CF	IL-TRM 5.4.4	Deemed	-
3,665	3,665	E_water total	Program Data	Custom	-

Source: Evaluation team analysis

Table B-9. LED Nightlight – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
7.00	7.00	WattsBase	IL-TRM 5.5.11	Deemed	-
0.30	0.30	WattsEE	Specifications	Actual	-
4,380	4,380	Hours	IL-TRM 5.5.11	Deemed	-
1.06	1.06	WHFe - SF	IL-TRM 5.5.11	Deemed	-
1.04	1.04	WHFe - MF	IL-TRM 5.5.11	Deemed	-
0.00	0.00	Leakage	IL-TRM 5.5.11	Actual	-
0.60	0.60	ISR - SF 1	IL-TRM 5.5.11	Deemed	-
0.60	0.60	ISR - MF 1	IL-TRM 5.5.11	Deemed	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
1.11	1.11	WHFd - SF	IL-TRM 5.5.11	Deemed	-
1.07	1.07	WHFd - MF	IL-TRM 5.5.11	Deemed	-
0.00	0.00	CF	IL-TRM 5.5.11	Deemed	-

Source: Evaluation team analysis

Table B-10. BR30 LED Bulb – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
65.00	65.00	WattsBase	IL-TRM 5.5.6	Deemed	-
11.00	11.00	WattsEE	Specifications	Actual	-
763.00	763.00	Hours	IL-TRM 5.5.6	Deemed	-
1.06	1.06	WHFe - SF	IL-TRM 5.5.6	Deemed	-
1.04	1.04	WHFe - MF	IL-TRM 5.5.6	Deemed	-
0.00	0.00	Leakage	IL-TRM 5.5.6	Actual	-
0.59	0.59	ISR - SF 1	Survey - HA4	Custom	-
0.62	0.62	ISR - MF 1	Survey - HA4	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
1.11	1.11	WHFd - SF	IL-TRM 5.5.6	Deemed	-
1.07	1.07	WHFd - MF	IL-TRM 5.5.6	Deemed	-
0.11	0.11	CF	IL-TRM 5.5.6	Deemed	-

Source: Evaluation team analysis

Table B-11. DHW Temperature Setback – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.08	0.08	U (Heat transfer coefficient of tank)	IL-TRM 5.4.6	Deemed	-
24.99	24.99	A (Surface area of storage tank)	IL-TRM 5.4.6	Deemed	-
3.13	3.13	(Tpre-Tpost) SF	Survey - HA13, HA14	Custom	-
3.03	3.03	(Tpre-Tpost) MF	Survey - HA13, HA14	Custom	-
8,766	8,766	Hours	IL-TRM 5.4.6	Deemed	-
3,412	3,412	Conversion from Btu to kWh	IL-TRM 5.4.6	Deemed	-
0.98	0.98	RE_electric	IL-TRM 5.4.6	Deemed	-
1.00	1.00	CF	IL-TRM 5.4.6	Deemed	-
0.20	0.20	ISR SF	Survey - HA12	Custom	-
0.27	0.27	ISR MF	Survey - HA12	Custom	-
0.20	0.20	%ElectricDHW	Survey - HCU4	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-

Source: Evaluation team analysis

Table B-12. Shower Timer – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.20	0.20	%Electric DHW	Survey - HCU4	Custom	-
1.95	1.95	GPM_MF	Survey - HA1	Custom	-
1.99	1.99	GPM_SF	Survey - HA1	Custom	-
7.80	7.80	L_base	IL-TRM 5.4.9	Deemed	-
7.50	7.50	L_timer_MF	Survey - HA9, HA10	Custom	-
2.84	2.84	Household_MF	Survey - HA8	Custom	-
0.51	0.51	UsageFactor_MF	Survey - HA7	Custom	-
7.40	7.40	L_timer_SF	Survey - HA9, HA10	Custom	-
2.84	2.84	Household_SF	Survey - HA8	Custom	-
0.51	0.51	UsageFactor_SF	Survey - HA7	Custom	-
0.70	0.70	%SF	Survey - HCU1	Custom	-
0.30	0.30	%MF	Survey - HCU1	Custom	-
240.24	240.24	Hours_SF	Survey - HA1, HA8	Custom	-
244.72	244.72	Hours_MF	Survey - HA1, HA8	Custom	-
0.03	0.03	CF	IL-TRM 5.4.9	Deemed	-
365.25	365.25	Days/yr	IL-TRM 5.4.9	Deemed	-
0.60	0.60	SPCD	IL-TRM 5.4.9	Deemed	-
0.12	0.12	EPG_Electric	IL-TRM 5.4.9	Deemed	-
3,665	3,665	E_water total	Program Data	Custom	-

Source: Evaluation team analysis

B.4 Nicor Gas Input and Assumption Comparison

Table B-13 through Table B-17 compare the inputs and assumptions used for Nicor Gas in the ex ante and verified calculations for each measure.

The evaluation team used survey responses that participants submitted to custom calculate algorithm input values for selected variables. The Home Check-Up (HCU) and Home Activities (HA) acronyms in the source column in the tables below represent which survey question the evaluation team used to custom calculate the algorithm input variable. For example, HCU1 signifies the evaluation team used survey responses from the first question in the HCU portion of the survey to calculate the percent of single family and multifamily homes.

Table B-13. Low Flow Showerhead – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.35	2.35	GPM_base	IL-TRM 5.4.5	Deemed	-
1.50	1.50	GPM_low	Specifications	Actual	-
7.80	7.80	L_base	IL-TRM 5.4.5	Deemed	-
7.80	7.80	L_low	IL-TRM 5.4.5	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.5	Deemed	-
4.72	4.72	Household SF	Survey - HCU2	Custom	-
4.72	4.72	Household MF	Survey - HCU2	Custom	-
0.60	0.60	SPCD	IL-TRM 5.4.5	Deemed	-
1.79	1.79	SPH SF	IL-TRM 5.4.5	Deemed	-
1.30	1.30	SPH MF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_SF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_MF	IL-TRM 5.4.5	Deemed	-
0.41	0.41	ISR SF	Survey - HA1	Custom	-
0.46	0.46	ISR MF	Survey - HA1	Custom	-
0.76	0.76	%SF	Survey - HCU1	Custom	-
0.24	0.24	%MF	Survey - HCU1	Custom	-

Source: Evaluation team analysis

Table B-14. Kitchen Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.63	1.63	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
4.50	4.50	L_base	IL-TRM 5.4.4	Deemed	-
4.50	4.50	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.72	4.72	Household SF	Survey - HCU2	Custom	-
4.72	4.72	Household MF	Survey - HCU2	Custom	-
0.75	0.75	DF	IL-TRM 5.4.4	Deemed	-
1.00	1.00	KFPH	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.28	0.28	ISR SF	Survey - HA2	Custom	-
0.38	0.38	ISR MF	Survey - HA2	Custom	-
0.76	0.76	%SF	Survey - HCU1	Custom	-
0.24	0.24	%MF	Survey - HCU1	Custom	-

Source: Evaluation team analysis

Table B-15. Bathroom Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.53	1.53	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
1.60	1.60	L_base	IL-TRM 5.4.4	Deemed	-
1.60	1.60	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.72	4.72	Household SF	Survey - HCU2	Custom	-
4.72	4.72	Household MF	Survey - HCU2	Custom	-
0.90	0.90	DF	IL-TRM 5.4.4	Deemed	-
2.83	2.83	BFPH_SF	IL-TRM 5.4.4	Deemed	-
1.50	1.50	BFPH_MF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.21	0.21	ISR SF - 1	Survey - HA2	Custom	-
0.27	0.27	ISR MF - 1	Survey - HA2	Custom	-
0.13	0.13	ISR SF - 2	Survey - HA2	Custom	-
0.13	0.13	ISR MF - 2	Survey - HA2	Custom	-
0.76	0.76	%SF	Survey - HCU1	Custom	-
0.24	0.24	%MF	Survey - HCU1	Custom	-

Source: Evaluation team analysis

Table B-16. DHW Temperature Setback – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.08	0.08	U (Heat transfer coeff of tank)	IL-TRM 5.4.6	Deemed	-
24.99	24.99	A (Surface Area of Tank)	IL-TRM 5.4.6	Deemed	-
6.54	6.54	(Tpre-Tpost)_SF	Survey - HA13, HA14	Custom	-
5.00	5.00	(Tpre-Tpost)_MF	Survey - HA13, HA15	Custom	-
8,766	8,766	Hours	IL-TRM 5.4.6	Deemed	-
3,412	3,412	Conversion from Btu to kWh	IL-TRM 5.4.6	Deemed	-
0.78	0.78	RE_gas_SF	IL-TRM 5.4.6	Deemed	-
0.67	0.67	RE_gas_MF	IL-TRM 5.4.6	Deemed	-
0.15	0.15	ISR_SF	Survey - HA12	Custom	-
0.23	0.23	ISR_MF	Survey - HA12	Custom	-
0.76	0.76	%SF	Survey - HCU1	Custom	-
0.24	0.24	%MF	Survey - HCU1	Custom	-
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-

Source: Evaluation team analysis

Table B-17. Shower Timer – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.00	2.00	GPM_SF	Survey - HA1	Custom	-
1.96	1.96	GPM_MF	Survey - HA1	Custom	-
7.80	7.80	L_base	IL-TRM 5.4.9	Deemed	-
7.42	7.42	L_timer_SF	Survey - HA9, HA10	Custom	-
2.56	2.56	Household_SF	Survey - HA8	Custom	-
0.48	0.48	UsageFactor_SF	Survey - HA7	Custom	-
7.46	7.46	L_timer_MF	Survey - HA9, HA10	Custom	-
2.86	2.86	Household_MF	Survey - HA8	Custom	-
0.49	0.49	UsageFactor_MF	Survey - HA7	Custom	-
0.76	0.76	%SF	Survey - HCU3	Custom	-
0.24	0.24	%MF	Survey - HCU4	Custom	-
365.25	365.25	Days/yr	IL-TRM 5.4.9	Deemed	-
0.60	0.60	SPCD	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_SF	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_MF	IL-TRM 5.4.9	Deemed	-

Source: Evaluation team analysis

B.5 Peoples Gas Input and Assumption Comparison

Table B-18 through Table B-22 compare the inputs and assumptions used for Peoples Gas in the ex ante and verified calculations for each measure.

The evaluation team used survey responses that participants submitted to custom calculate algorithm input values for selected variables. The Home Check-Up (HCU) and Home Activities (HA) acronyms in the source column in the tables below represent which survey question the evaluation team used to custom calculate the algorithm input variable. For example, HCU1 signifies the evaluation team used survey responses from the first question in the HCU portion of the survey to calculate the percent of single family and multifamily homes.

Table B-18. Low Flow Showerhead – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.35	2.35	GPM_base	IL-TRM 5.4.5	Deemed	-
1.50	1.50	GPM_low	Specifications	Actual	-
7.80	7.80	L_base	IL-TRM 5.4.5	Deemed	-
7.80	7.80	L_low	IL-TRM 5.4.5	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.5	Deemed	-
4.87	4.79	Household SF	Survey - HCU2	Custom	Yes
4.84	4.78	Household MF	Survey - HCU2	Custom	Yes
0.60	0.60	SPCD	IL-TRM 5.4.5	Deemed	-
1.79	1.79	SPH SF	IL-TRM 5.4.5	Deemed	-
1.30	1.30	SPH MF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_SF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_MF	IL-TRM 5.4.5	Deemed	-
0.40	0.38	ISR SF	Survey - HA1	Custom	Yes
0.46	0.46	ISR MF	Survey - HA1	Custom	Yes*
0.51	0.77	%SF	Survey - HCU1	Custom	Yes
0.49	0.23	%MF	Survey - HCU1	Custom	Yes

* The values appear to be the same due to rounding.

Source: Evaluation team analysis

Table B-19. Kitchen Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.63	1.63	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
4.50	4.50	L_base	IL-TRM 5.4.4	Deemed	-
4.50	4.50	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.87	4.79	Household SF	Survey - HCU2	Custom	Yes
4.84	4.78	Household MF	Survey - HCU2	Custom	Yes
0.75	0.75	DF	IL-TRM 5.4.4	Deemed	-
1.00	1.00	KFPH	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.29	0.26	ISR SF	Survey - HA2	Custom	Yes
0.39	0.35	ISR MF	Survey - HA2	Custom	Yes
0.51	0.77	%SF	Survey - HCU1	Custom	Yes
0.49	0.23	%MF	Survey - HCU1	Custom	Yes

Source: Evaluation team analysis

Table B-20. Bathroom Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.53	1.53	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
1.60	1.60	L_base	IL-TRM 5.4.4	Deemed	-
1.60	1.60	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.87	4.79	Household SF	Survey - HCU2	Custom	Yes
4.84	4.78	Household MF	Survey - HCU2	Custom	Yes
0.90	0.90	DF	IL-TRM 5.4.4	Deemed	-
2.83	2.83	BFPH_SF	IL-TRM 5.4.4	Deemed	-
1.50	1.50	BFPH_MF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.23	0.21	ISR SF - 1	Survey - HA2	Custom	Yes
0.29	0.25	ISR MF - 1	Survey - HA2	Custom	Yes
0.10	0.11	ISR SF - 2	Survey - HA2	Custom	Yes
0.14	0.12	ISR MF - 2	Survey - HA2	Custom	Yes
0.51	0.77	%SF	Survey - HCU1	Custom	Yes
0.49	0.23	%MF	Survey - HCU1	Custom	Yes

Source: Evaluation team analysis

Table B-21. DHW Temperature Setback – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.08	0.08	U (Heat transfer coeff of tank)	IL-TRM 5.4.6	Deemed	-
24.99	24.99	A (Surface Area of Tank)	IL-TRM 5.4.6	Deemed	-
4.19	5.96	(Tpre-Tpost)_SF	Survey - HA13, HA14	Custom	Yes
1.49	4.49	(Tpre-Tpost)_MF	Survey - HA13, HA15	Custom	Yes
8,766	8,766	Hours	IL-TRM 5.4.6	Deemed	-
3,412	3,412	Conversion from Btu to kWh	IL-TRM 5.4.6	Deemed	-
0.78	0.78	RE_gas_SF	IL-TRM 5.4.6	Deemed	-
0.67	0.67	RE_gas_MF	IL-TRM 5.4.6	Deemed	-
0.15	0.16	ISR_SF	Survey - HA12	Custom	Yes
0.22	0.21	ISR_MF	Survey - HA12	Custom	Yes
0.51	0.77	%SF	Survey - HCU1	Custom	Yes
0.49	0.23	%MF	Survey - HCU1	Custom	Yes
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-

Source: Evaluation team analysis

Table B-22. Shower Timer – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.01	2.03	GPM_SF	Survey - HA1	Custom	Yes
1.96	1.96	GPM_MF	Survey - HA1	Custom	Yes*
7.80	7.80	L_base	IL-TRM 5.4.9	Deemed	-
7.62	7.42	L_timer_SF	Survey - HA9, HA10	Custom	Yes
2.85	2.66	Household_SF	Survey - HA8	Custom	Yes
0.51	0.47	UsageFactor_SF	Survey - HA7	Custom	Yes
7.71	7.65	L_timer_MF	Survey - HA9, HA10	Custom	Yes
2.85	2.79	Household_MF	Survey - HA8	Custom	Yes
0.51	0.47	UsageFactor_MF	Survey - HA7	Custom	Yes
0.51	0.77	%SF	Survey - HCU3	Custom	Yes
0.49	0.23	%MF	Survey - HCU4	Custom	Yes
365.25	365.25	Days/yr	IL-TRM 5.4.9	Deemed	-
0.60	0.60	SPCD	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_SF	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_MF	IL-TRM 5.4.9	Deemed	-

* The values appear to be the same due to rounding.

Source: Evaluation team analysis

B.6 North Shore Gas Input and Assumption Comparison

Table B-23 through Table B-27 compare the inputs and assumptions used for North Shore Gas in the ex ante and verified calculations for each measure.

The evaluation team used survey responses that participants submitted to custom calculate algorithm input values for selected variables. The Home Check-Up (HCU) and Home Activities (HA) acronyms in the source column in the tables below represent which survey question the

evaluation team used to custom calculate the algorithm input variable. For example, HCU1 signifies the evaluation team used survey responses from the first question in the HCU portion of the survey to calculate the percent of single family and multifamily homes.

Table B-23. Low Flow Showerhead – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.35	2.35	GPM_base	IL-TRM 5.4.5	Deemed	-
1.50	1.50	GPM_low	Specifications	Actual	-
7.80	7.80	L_base	IL-TRM 5.4.5	Deemed	-
7.80	7.80	L_low	IL-TRM 5.4.5	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.5	Deemed	-
4.77	4.79	Household SF	Survey - HCU2	Custom	Yes
4.69	4.78	Household MF	Survey - HCU2	Custom	Yes
0.60	0.60	SPCD	IL-TRM 5.4.5	Deemed	-
1.79	1.79	SPH SF	IL-TRM 5.4.5	Deemed	-
1.30	1.30	SPH MF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_SF	IL-TRM 5.4.5	Deemed	-
0.01	0.01	EPG_Gas_MF	IL-TRM 5.4.5	Deemed	-
0.38	0.38	ISR SF	Survey - HA1	Custom	Yes*
0.38	0.46	ISR MF	Survey - HA1	Custom	Yes
0.76	0.77	%SF	Survey - HCU1	Custom	Yes
0.24	0.23	%MF	Survey - HCU1	Custom	Yes

* The values appear to be the same due to rounding.

Source: Evaluation team analysis

Table B-24. Kitchen Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.63	1.63	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
4.50	4.50	L_base	IL-TRM 5.4.4	Deemed	-
4.50	4.50	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.77	4.79	Household SF	Survey - HCU2	Custom	Yes
4.69	4.78	Household MF	Survey - HCU2	Custom	Yes
0.75	0.75	DF	IL-TRM 5.4.4	Deemed	-
1.00	1.00	KFPH	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.29	0.26	ISR SF	Survey - HA2	Custom	Yes
0.24	0.35	ISR MF	Survey - HA2	Custom	Yes
0.76	0.77	%SF	Survey - HCU1	Custom	Yes
0.24	0.23	%MF	Survey - HCU1	Custom	Yes

Source: Evaluation team analysis

Table B-25. Bath Aerator – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
1.53	1.53	GPM_base	IL-TRM 5.4.4	Deemed	-
0.94	0.94	GPM_low	Specifications	Deemed	-
1.60	1.60	L_base	IL-TRM 5.4.4	Deemed	-
1.60	1.60	L_low	IL-TRM 5.4.4	Deemed	-
365.25	365.25	days/year	IL-TRM 5.4.4	Deemed	-
4.77	4.79	Household SF	Survey - HCU2	Custom	Yes
4.69	4.78	Household MF	Survey - HCU2	Custom	Yes
0.90	0.90	DF	IL-TRM 5.4.4	Deemed	-
2.83	2.83	BFPH_SF	IL-TRM 5.4.4	Deemed	-
1.50	1.50	BFPH_MF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_SF	IL-TRM 5.4.4	Deemed	-
0.00	0.00	EPG_gas_MF	IL-TRM 5.4.4	Deemed	-
0.21	0.21	ISR SF - 1	Survey - HA2	Custom	Yes*
0.19	0.25	ISR MF - 1	Survey - HA2	Custom	Yes
0.13	0.11	ISR SF - 2	Survey - HA2	Custom	Yes
0.09	0.12	ISR MF - 2	Survey - HA2	Custom	Yes
0.76	0.77	%SF	Survey - HCU1	Custom	Yes
0.24	0.23	%MF	Survey - HCU1	Custom	Yes

Source: Evaluation team analysis

Table B-26. DHW Temperature Setback – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/Custom	Discrepancy?
0.08	0.08	U (Heat transfer coeff of tank)	IL-TRM 5.4.6	Deemed	-
24.99	24.99	A (Surface Area of Tank)	IL-TRM 5.4.6	Deemed	-
4.19	5.96	(Tpre-Tpost)_SF	Survey - HA13, HA14	Custom	Yes
1.49	4.49	(Tpre-Tpost)_MF	Survey - HA13, HA15	Custom	Yes
8,766	8,766	Hours	IL-TRM 5.4.6	Deemed	-
3,412	3,412	Conversion from Btu to kWh	IL-TRM 5.4.6	Deemed	-
0.78	0.78	RE_gas_SF	IL-TRM 5.4.6	Deemed	-
0.67	0.67	RE_gas_MF	IL-TRM 5.4.6	Deemed	-
0.15	0.16	ISR_SF	Survey - HA12	Custom	Yes
0.22	0.21	ISR_MF	Survey - HA12	Custom	Yes
0.76	0.77	%SF	Survey - HCU1	Custom	Yes
0.24	0.23	%MF	Survey - HCU1	Custom	Yes
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-

Source: Evaluation team analysis

Table B-27. Shower Timer – Custom and Deemed Value Comparison

Verified Value	Reported Value	Variable	Source	Deemed/ Custom	Discrepancy?
0.75	0.75	%FossilDHW	Survey - HCU4	Custom	-
2.02	2.03	GPM_SF	Survey - HA1	Custom	Yes
2.03	1.96	GPM_MF	Survey - HA1	Custom	Yes
7.80	7.80	L_base	IL-TRM 5.4.9	Deemed	-
7.56	7.42	L_timer_SF	Survey - HA9, HA10	Custom	Yes
2.85	2.66	Household_SF	Survey - HA8	Custom	Yes
0.49	0.47	UsageFactor_SF	Survey - HA7	Custom	Yes
7.52	7.65	L_timer_MF	Survey - HA9, HA10	Custom	Yes
2.73	2.79	Household_MF	Survey - HA8	Custom	Yes
0.49	0.47	UsageFactor_MF	Survey - HA7	Custom	Yes
0.76	0.77	%SF	Survey - HCU3	Custom	Yes
0.24	0.23	%MF	Survey - HCU4	Custom	Yes
365.25	365.25	Days/yr	IL-TRM 5.4.9	Deemed	-
0.60	0.60	SPCD	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_SF	IL-TRM 5.4.9	Deemed	-
0.01	0.01	EPG_gas_MF	IL-TRM 5.4.9	Deemed	-

Source: Evaluation team analysis

Appendix C. Total Resource Cost Detail

Table C-1 through Table C-4 show the TRC cost-effectiveness analysis inputs available at the time of finalizing this impact evaluation report. These tables do not include additional required cost data (e.g., measure costs, program-level incentives, and non-incentive costs). ComEd will provide this data to the evaluation team later.

Table C-1. Total Resource Cost Savings Summary – ComEd

End Use Type	Research Category	Units	Quantity	EUL (years)*	ER Flag†	Gross Electric Energy Savings (kWh)§	Gross Peak Demand Reduction (kW)	Gross Gas Savings (Therms)	Gross Secondary Savings due to Water Reduction (kWh)	Gross Heating Penalty (kWh)§	Gross Heating Penalty (Therms)	NTG (kWh)	NTG (kW)	NTG (Therms)	Net Electric Energy Savings (kWh)	Net Peak Demand Reduction (kW)	Net Gas Savings (Therms)	Net Secondary Savings due to Water Reduction (kWh)	Net Heating Penalty (kWh)§	Net Heating Penalty (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	Each	35,871	10.0	No	945,535	52.70	10,607	29,618	0	0	1.00	1.00	1.00	945,535	52.70	10,607	29,618	0	0
Hot Water	Showerhead (1.5 GPM) - Multifamily	Each	35,871	10.0	No	635,020	35.31	6,253	19,891	0	0	1.00	1.00	1.00	635,020	35.31	6,253	19,891	0	0
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	Each	35,871	10.0	No	593,472	68.30	6,243	22,446	0	0	1.00	1.00	1.00	593,472	68.30	6,243	22,446	0	0
Lighting	LED Light Bulb BR30 - Single Family‡	Bulb	35,871	10.0	No	577,119	96.36	0	0	-67,010	-9,341	0.84	0.84	0.84	484,780	80.94	0	0	-56,289	-7,846
Lighting	LED Nightlight - Single Family	Each	35,871	8.0	No	419,855	0.00	0	0	-48,750	-6,795	1.00	1.00	1.00	419,855	0.00	0	0	-48,750	-6,795
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	Each	35,871	10.0	No	301,336	34.60	2,939	11,397	0	0	1.00	1.00	1.00	301,336	34.60	2,939	11,397	0	0
Lighting	LED Light Bulb BR30 - Multifamily‡	Bulb	35,871	10.0	No	255,583	42.02	0	0	-30,314	-4,226	0.84	0.84	0.84	214,690	35.30	0	0	-25,464	-3,550
Lighting	LED Nightlight - Multifamily	Each	35,871	8.0	No	176,204	0.00	0	0	-20,899	-2,913	1.00	1.00	1.00	176,204	0.00	0	0	-20,899	-2,913
Hot Water	Shower Timer Install - Single Family	Each	35,871	2.0	No	135,063	15.63	1,532	4,231	0	0	1.00	1.00	1.00	135,063	15.63	1,532	4,231	0	0
Lighting	Portal Pick Bulb - A19†	Each	2,528	10.0	No	60,471	10.05	0	0	-7,066	-985	0.84	0.84	0.84	50,796	8.44	0	0	-5,935	-827
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	Each	35,871	10.0	No	53,056	43.19	545	2,446	0	0	1.00	1.00	1.00	53,056	43.19	545	2,446	0	0
Hot Water	Shower Timer Install - Multifamily	Each	35,871	2.0	No	45,486	5.17	208	1,425	0	0	1.00	1.00	1.00	45,486	5.17	208	1,425	0	0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	Each	35,871	10.0	No	44,270	36.04	591	2,041	0	0	1.00	1.00	1.00	44,270	36.04	591	2,041	0	0
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	Each	35,871	10.0	No	44,266	19.06	417	2,041	0	0	1.00	1.00	1.00	44,266	19.06	417	2,041	0	0
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	Each	35,871	10.0	No	42,703	18.38	398	1,969	0	0	1.00	1.00	1.00	42,703	18.38	398	1,969	0	0
Lighting	Portal Pick Bulb - BR30‡	Bulb	1,418	10.0	No	36,390	6.05	0	0	-4,252	-593	0.84	0.84	0.84	30,568	5.08	0	0	-3,572	-498
Hot Water	Water Heater Temperature Setback - Single Family	Bulb	35,871	2.0	No	17,220	1.96	310	0	0	0	1.00	1.00	1.00	17,220	1.96	310	0	0	0
Hot Water	Water Heater Temperature Setback - Multifamily	Each	35,871	2.0	No	9,482	1.08	109	0	0	0	1.00	1.00	1.00	9,482	1.08	109	0	0	0
Lighting	Portal Pick Bulb - Globe‡	Bulb	570	10.0	No	9,210	1.53	0	0	-1,076	-150	0.84	0.84	0.84	7,737	1.29	0	0	-904	-126
Lighting	Portal Pick Bulb - Candelabra‡	Bulb	482	10.0	No	8,017	1.33	0	0	-937	-131	0.84	0.84	0.84	6,735	1.12	0	0	-787	-110
Lighting	Portal Pick Bulb - Mini‡	Bulb	244	10.0	No	4,059	0.67	0	0	-474	-66	0.84	0.84	0.84	3,409	0.57	0	0	-398	-56
Carryover	CY2019 and CY2020 Carryover			9.8	No	1,032,384	90.05	0	0	-87,416	-18,551	0.85	0.84	N/A	879,747	75.64	0	0	-74,492	-15,809
Total				9.4		5,446,202	579	30,152	97,503	-268,195	-43,751				5,141,429	540	30,152	97,503	-237,490	-38,529

Note: To avoid double counting, the verified gross kWh and net kWh used in the TRC analysis exclude secondary energy savings from water reduction measures.

N/A = not applicable (refers to a piece of data that cannot be produced or does not apply).

* The total of the EUL column is the weighted average measure life (WAML) and is calculated as the sum product of EUL and measure savings divided by total program savings.

† Early replacement (ER) measures are flagged as YES, otherwise a NO is indicated in the column.

‡ The EUL for this measure varies over time. See the CPAS tables (Table 4-1 to Table 4-3).

§ The kWh savings account for electric heating penalties, where applicable. The electric heating penalties columns show the magnitude of adjustments applied to the program savings. Gas heating penalties represent the program therms heating penalties. The therms penalties are not required to be applied to the program savings.

Source: ComEd tracking data and evaluation team analysis

Table C-2. Total Resource Cost Savings Summary – Nicor Gas

End Use Type	Research Category	Units	Quantity	EUL (years)*	ER Flag†	Ex Ante Savings (Therms)	Gross Verified Savings (Therms)	NTG‡	Verified Net Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	Each	18,199	10	No	81,646	81,646	1.00	81,646
Hot Water	Showerhead (1.5 GPM) - Multifamily	Each	18,199	10	No	46,547	46,547	1.00	46,547
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	Each	18,199	10	No	47,347	47,347	1.00	47,347
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	Each	18,199	10	No	24,255	24,255	1.00	24,255
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	Each	18,199	10	No	3,799	3,799	1.00	3,799
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	Each	18,199	10	No	3,491	3,491	1.00	3,491
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	Each	18,199	10	No	4,707	4,707	1.00	4,707
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	Each	18,199	10	No	3,430	3,430	1.00	3,430
Hot Water	Water Heater Temperature Setback - Single Family	Each	18,199	2	No	2,421	2,421	1.00	2,421
Hot Water	Water Heater Temperature Setback - Multifamily	Each	18,199	2	No	1,037	1,037	1.00	1,037
Hot Water	Shower Timer Install - Single Family	Each	18,199	2	No	10,424	10,424	1.00	10,424
Hot Water	Shower Timer Install - Multifamily	Each	18,199	2	No	4,005	4,005	1.00	4,005
9.39						233,109	233,109		233,109

* The total of the EUL column is the WAML and is calculated as the sum product of EUL and measure savings divided by total program savings.

† ER measures are flagged as YES, otherwise a NO is indicated in the column.

‡ The NTG values can be found on the Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

Source: Evaluation team analysis of Nicor Gas tracking data

Table C-3. Total Resource Cost Savings Summary – Peoples Gas

End Use Type	Research Category	Units	Quantity	EUL (years)*	ER Flag†	Ex Ante Savings (Therms)	Gross Verified Savings (Therms)	NTG‡	Verified Net Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	Each	13,959	10	No	33,265	42,301	1.00	42,301
Hot Water	Showerhead (1.5 GPM) - Multifamily	Each	13,959	10	No	57,334	72,909	1.00	72,909
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	Each	13,959	10	No	20,835	26,496	1.00	26,496
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	Each	13,959	10	No	30,790	39,155	1.00	39,155
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	Each	13,959	10	No	1,782	2,266	1.00	2,266
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	Each	13,959	10	No	4,590	5,837	1.00	5,837
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	Each	13,959	10	No	1,615	2,054	1.00	2,054
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	Each	13,959	10	No	4,280	5,443	1.00	5,443
Hot Water	Water Heater Temperature Setback - Single Family	Each	13,959	2	No	638	811	1.00	811
Hot Water	Water Heater Temperature Setback - Multifamily	Each	13,959	2	No	355	452	1.00	452
Hot Water	Shower Timer Install - Single Family	Each	13,959	2	No	2,442	3,105	1.00	3,105
Hot Water	Shower Timer Install - Multifamily	Each	13,959	2	No	1,372	1,745	1.00	1,745
9.76						159,298	202,574		202,574

* The total of the EUL column is the WAML and is calculated as the sum product of EUL and measure savings divided by total program savings.

† ER measures are flagged as YES, otherwise a NO is indicated in the column.

‡ The NTG values can be found on the Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

Source: Evaluation team analysis of Peoples Gas tracking data

Table C-4. Total Resource Cost Savings Summary – North Shore Gas

End Use Type	Research Category	Units	Quantity	EUL (years)*	ER Flag†	Ex Ante	Gross Verified	Gross	NTG‡	Verified Net
						Savings (Therms)	Savings (Therms)	Savings (Therms)		Savings (Therms)
Hot Water	Showerhead (1.5 GPM) - Single Family	Each	2,433	10	No	10,335	10,269	1.00	10,269	
Hot Water	Showerhead (1.5 GPM) - Multifamily	Each	2,433	10	No	5,081	5,048	1.00	5,048	
Hot Water	Kitchen Aerator (1.5 GPM) - Single Family	Each	2,433	10	No	6,785	6,742	1.00	6,742	
Hot Water	Kitchen Aerator (1.5 GPM) - Multifamily	Each	2,433	10	No	2,054	2,041	1.00	2,041	
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Single Family	Each	2,433	10	No	524	520	1.00	520	
Hot Water	Bathroom Aerator (1.0 GPM) Installed One - Multifamily	Each	2,433	10	No	328	326	1.00	326	
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Single Family	Each	2,433	10	No	638	633	1.00	633	
Hot Water	Bathroom Aerator (1.0 GPM) Installed Both - Multifamily	Each	2,433	10	No	303	301	1.00	301	
Hot Water	Water Heater Temperature Setback - Single Family	Each	2,433	2	No	210	209	1.00	209	
Hot Water	Water Heater Temperature Setback - Multifamily	Each	2,433	2	No	39	39	1.00	39	
Hot Water	Shower Timer Install - Single Family	Each	2,433	2	No	1,049	1,042	1.00	1,042	
Hot Water	Shower Timer Install - Multifamily	Each	2,433	2	No	419	416	1.00	416	
				9.51		27,765	27,587		27,587	

* The total of the EUL column is the WAML and is calculated as the sum product of EUL and measure savings divided by total program savings.

† ER measures are flagged as YES, otherwise a NO is indicated in the column.

‡ The NTG values can be found on the Illinois SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2021>.

Source: Evaluation team analysis of North Shore Gas tracking data