



Ameren Illinois Company 2018-2021 Summary Impact Evaluation Report

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1. Executive Summary

Illinois state law mandates that Ameren Illinois Company (AIC) conduct an independent evaluation of each multi-year energy efficiency portfolio.¹ In fulfillment of this requirement, this report presents impact evaluation results from AIC's portfolio of electric and gas energy efficiency programs implemented as part of its 2018-2021 Energy Efficiency and Demand Response Plan ("Plan 5").

The overarching objective of the annual impact evaluations is to determine the gross and net electric energy, electric demand, and natural gas impacts associated with the AIC energy efficiency portfolio. The purpose of this report is to aggregate results from AIC's Residential, Business, and Voltage Optimization Programs across each year of Plan 5 and to summarize the utility's performance relative to its statutory energy and demand savings goals. For additional detail on how the results presented in this report were developed, please see the separate annual impact evaluation reports.²

1.1 Program Offerings

The portfolio of energy efficiency programs offered by AIC remained relatively consistent across the Plan 5 period, with some minor changes on a year-to-year basis. During Plan 5, the portfolio consisted of the Residential, Business, and Voltage Optimization Programs. The Residential and Business Programs were further subdivided into a number of initiatives that served specific target markets and/or provided program services through specific delivery channels. Most components of the Residential and Business Programs carried over from AIC's previous energy efficiency portfolio with some adjustments.

- The Residential Program's core initiatives included Retail Products, Income Qualified, Public Housing, Behavioral Modification, Multifamily, Heating and Cooling (HVAC), Appliance Recycling (AR), Direct Distribution, and Home Efficiency – Market Rate during Plan 5.
 - The Income Qualified Initiative included a number of distinct channels, such as (but not limited to) Single Family, Multifamily, Community Action Agency (AIC's offering braiding funding from the Illinois Home Weatherization Assistance Program [IHWAP]), and Smart Savers.
 - The Behavioral Modification Initiative was discontinued after 2019 as part of AIC's strategy to focus on program offerings providing longer persisting savings.
 - The Home Efficiency – Market Rate Initiative was piloted in 2020 and became a full component of the Residential Program in 2021.
 - The HVAC Initiative transitioned from a contractor-based downstream model to a distributor-based midstream model in 2021.
 - AIC also piloted the Efficient Choice Tool offering during Plan 5, claiming savings for the first time in 2021.
 - Finally, the Residential Program claimed savings on a one-time basis in 2018 from new construction project commitments originally made by the Illinois Department of Commerce and Economic Opportunity (DCEO) and transitioned to AIC as part of the Future Energy Jobs Act (FEJA).

¹ 220 ILCS 5/8-103B(g)(6) and 220 ILCS 5/8-104(f)(8).

² The annual impact evaluation reports are filed in AIC's annual Rider EE dockets and can also be found on the Illinois SAG website: <https://www.ilsag.info/evaluation-documents/final-evaluation-reports/>.

- The Business Program’s core initiatives included Standard, Custom, Retro-Commissioning, and Streetlighting.
 - The Standard Initiative included a number of distinct channels, including downstream rebates, Small Business Direct Install (SBDI), an online store, and midstream incentives for lighting and HVAC.
 - The Retro-Commissioning Initiative included a Virtual Commissioning channel, which was originally piloted in 2020 and became a full component of the Initiative in 2021.
 - In 2019 through 2021, the Business Program also claimed savings from Building Operator Certification (BOC).
- The Voltage Optimization Program, a new addition to the AIC portfolio in Plan 5, claimed savings for the first time in 2019 and continued throughout the remainder of the cycle.

Table 1 outlines the energy efficiency programs and initiatives AIC operated during Plan 5 by program year.

Table 1. AIC Plan 5 Energy Efficiency Programs and Initiatives by Program Year

Program	Initiative	2018	2019	2020	2021
Residential	Retail Products	✓	✓	✓	✓
	Income Qualified	✓	✓	✓	✓
	Behavioral Modification	✓	✓		
	Public Housing	✓	✓	✓	✓
	Multifamily	✓	✓	✓	✓
	Home Efficiency – Market Rate			a	✓
	HVAC	✓	✓	✓	✓
	Appliance Recycling	✓	✓	✓	✓
	Direct Distribution	✓	✓	✓	✓
	DCEO New Construction	✓			
	Efficient Choice Tool			b	✓
Business	Standard	✓	✓	✓	✓
	Custom	✓	✓	✓	✓
	RCx	✓	✓	✓	✓
	Streetlighting	✓	✓	✓	✓
	Building Operator Certification	c	✓	✓	✓
Voltage Optimization	d	✓	✓	✓	

^a Home Efficiency – Market Rate was piloted in 2020, but savings were claimed under the umbrella of the HVAC Initiative.

^b The Efficient Choice Tool was piloted beginning in 2020, but savings were not claimed until 2021.

^c AIC funded Building Operator Certification training in 2018, but based on evaluation methodology, savings were not claimed until 2019.

^d The Voltage Optimization Program began construction of feeders in 2018 but did not claim savings until 2019 in accordance with AIC’s stipulated agreement around Voltage Optimization.

1.2 Portfolio Goal Achievement During Plan 5

AIC’s portfolio was measured against four separate categories of savings goals for Plan 5:

- Applicable Annual Incremental Goal (AAIG), measured in megawatt-hours (MWh) of electric energy savings
- Cumulative Annual Persisting Savings (CPAS) goals, measured in cumulative persisting MWh of electric energy savings
- Demand response goals, measured in megawatts (MW) of peak demand savings
- Annual incremental savings goal for gas, measured in therms

Within the following sections, we report on portfolio performance in each category.

1.2.1 Applicable Annual Incremental Goal Achievement

Table 2 presents AIC’s achievement towards its AAIG in each year of Plan 5. AIC exceeded its AAIG in each year of Plan 5 with the exception of 2019, in which it achieved 93% of its AAIG.

Table 2. 2021 AIC Portfolio AAIG Achievement for Plan 5

Metric	2018	2019	2020	2021
Annual Net Savings	377,776	344,447	442,517	451,995
Expiring CPAS from Legislation	223,286	167,464	195,375	139,554
Expiring CPAS from 2020 Portfolio	N/A	N/A	N/A	37
Expiring CPAS from 2019 Portfolio	N/A	N/A	213	38,178
Expiring CPAS from 2018 Portfolio	N/A	6,984	3,120	57,665
Annual Incremental Savings Achieved	154,490	169,999	243,809	216,561
AAIG ^a	134,859	182,214	172,011	211,331
% of AAIG Achieved	115%	93%	142%	102%

^a Source: Appendix B (Rev.3) to AIC's "Errata to Compliance dated November 12, 2020" filed March 3, 2021 in ICC Docket 17-0311: <https://icc.illinois.gov/docket/P2017-0311/documents/308601/files/537949.pdf>

1.2.2 Cumulative Persisting Annual Savings Goal Achievement

AIC achieved its CPAS goals in each year of Plan 5. Table 3 presents AIC's achievements toward its CPAS goals in each year of Plan 5.

Table 3. AIC Portfolio CPAS Achievement for Plan 5

Metric	2018	2019	2020	2021
CPAS from 2021 Portfolio	N/A	N/A	N/A	451,995
CPAS from 2020 Portfolio	N/A	N/A	442,517	442,480
CPAS from 2019 Portfolio	N/A	344,447	344,234	306,057
CPAS from 2018 Portfolio	377,775	370,791	367,672	310,007
CPAS from Legislation	1,618,821	1,451,357	1,255,982	1,116,428
CPAS Achieved	1,996,596	2,166,595	2,410,405	2,626,966
CPAS Goal ^a	1,976,966	2,159,180	2,331,191	2,542,522
% of CPAS Achieved	101%	100%	103%	103%

^a Source: Appendix B (Rev.3) to AIC's "Errata to Compliance dated November 12, 2020" filed March 3, 2021 in ICC Docket 17-0311: <https://icc.illinois.gov/docket/P2017-0311/documents/308601/files/537949.pdf>

1.2.3 Demand Response Goal Achievement

AIC achieved its demand response goals individually in each year of Plan 5 as well as cumulatively. Table 4 presents AIC's achievements toward its demand response goals for Plan 5.

Table 4. AIC Portfolio Demand Response Goal Achievement for Plan 5

	2018	2019	2020	2021	Total
Demand Response Goal (MW) ^a	1.8	1.8	1.8	1.8	7.2
Verified Portfolio Savings (MW)	51.2	54.5	66.6	69.0	241.2
% of Demand Response Goal Achieved	2,842%	3,027%	3,697%	3,832%	3,350%

^a Source: AIC's February 19, 2019 compliance filing in ICC Docket 17-0311: <https://icc.illinois.gov/docket/P2017-0311/documents/282704/files/492912.pdf>

1.2.4 Gas Annual Incremental Savings Goal Achievement

AIC achieved its annual incremental gas savings goals individually in each year of Plan 5 as well as cumulatively. Table 5 presents AIC's achievements toward its gas annual incremental savings goals for Plan 5.

Table 5. AIC Portfolio Gas Annual Incremental Savings Goal Achievement for Plan 5

	2018	2019	2020	2021	Total
Gas Savings Goal (Therms) ^a	3,716,492	3,502,780	3,134,293	3,209,155	13,562,721
Verified Portfolio Savings (Therms) ^b	7,353,769	4,188,155	4,296,545	3,407,122	19,245,591
% of Gas Savings Goal Achieved	198%	120%	137%	106%	142%

^a Gas savings goals reflect modifications pursuant to 220 ILCS 5/8-104(d) and annual adjustments pursuant to the Illinois Energy Efficiency Policy Manual V2.0 policy on adjustable savings goals. Source: AIC's March 2, 2019 compliance filing in ICC Docket 17-0311: <https://icc.illinois.gov/docket/P2017-0311/documents/308497/files/537791.pdf>

^b Verified gas savings reflect gas-to-electric savings conversions per FEJA.

2. Plan 5 Verified Savings Detail

Within the following sections, the evaluation team presents additional detail around portfolio, program, initiative, and channel savings achievement in Plan 5.

2.1 Plan 5 Annual Savings Summary

Table 6, Table 7, and Table 8 present the annual savings achieved by AIC’s portfolio during Plan 5.

Table 6. AIC Plan 5 Portfolio Energy Savings (MWh)

	2018	2019	2020	2021
Ex Ante Gross Savings	452,955	390,829	461,634	468,361
Gross Realization Rate ^a	100%	101%	104%	103%
Verified Gross Savings	455,079	394,715	479,941	482,810
Net-to-Gross Ratio (NTGR)	0.800	0.824	0.882	0.890
Verified Net Savings Before Conversion, NPSO, BOC	364,290	325,354	423,348	429,666
Verified Net Savings with NPSO Adder and BOC	N/A	328,643	425,316	430,862
Converted Savings	13,486	15,805	17,201	21,133
Verified Net Savings After Conversion	377,776	344,447	442,517	451,995

^a The gross realization rate for 2021 does not consider ECT savings because this offering does not report ex ante savings. Therefore, gross realization rates cannot be directly calculated from values presented in this table.

Table 7. AIC Plan 5 Portfolio Peak Demand Savings (MW)

	2018	2019	2020	2021
Ex Ante Gross Savings	66.30	62.47	64.55	64.58
Gross Realization Rate ^a	94%	102%	117%	96%
Verified Gross Savings	63.58	64.77	75.39	78.11
NTGR	0.805	0.833	0.878	0.880
Verified Net Savings Before Conversion, NPSO, BOC	51.16	53.94	66.17	68.76
Verified Net Savings with NPSO Adder and BOC	N/A	54.49	66.55	68.97
Converted Savings	0.00	N/A	N/A	N/A
Verified Net Savings After Conversion	51.16	54.49	66.55	68.97

^a The gross realization rates do not consider savings for ECT, Behavioral Modification, or Voltage Optimization, as these offerings do not report ex ante savings. Therefore, gross realization rates cannot be directly calculated from values presented in this table.

Table 8. AIC Plan 5 Portfolio Gas Savings (Therms)

	2018	2019	2020	2021
Ex Ante Gross Savings	10,089,970	6,072,355	5,073,828	5,076,708
Gross Realization Rate ^a	102%	93%	106%	94%
Verified Gross Savings	10,280,644	5,676,341	5,364,649	4,814,208
NTGR	0.760	0.823	0.897	0.848
Verified Net Savings Before Conversion, NPSO, BOC	7,813,883	4,673,230	4,813,178	4,082,972
Verified Net Savings with NPSO Adder and BOC	N/A	4,727,559	4,883,613	4,128,388
Converted Savings	-460,114	-539,404	-587,068	-721,266
Verified Net Savings After Conversion	7,353,769	4,188,155	4,296,545	3,407,122

^a The gross realization rates do not consider savings for ECT or Behavioral Modification, as these offerings do not report ex ante savings. Therefore, gross realization rates cannot be directly calculated from values presented in this table.

2.2 Cumulative Persisting Annual Savings

2.2.1 Plan 5 Portfolio CPAS Summary

Table 9 summarizes CPAS achieved by AIC’s Plan 5 portfolio.

Table 9. AIC Plan 5 Portfolio CPAS

Program	CPAS - Verified Net Savings (MWh)						
	2018	2019	2020	2021	...	2030	...
2018 Portfolio CPAS	377,775	370,791	367,672	310,007	...	96,965	...
Expiring 2018 CPAS	0	6,984	3,120	57,665	...	9,048	...
Expired 2018 CPAS	0	6,984	10,104	67,769	...	280,811	...
2019 Portfolio CPAS		344,447	344,234	306,057	...	173,322	...
Expiring 2019 CPAS		0	213	38,178	...	45,128	...
Expired 2019 CPAS		0	213	38,391	...	171,125	...
2020 Portfolio CPAS			442,517	442,480	...	326,073	...
Expiring 2020 CPAS			0	37	...	36,837	...
Expired 2020 CPAS			0	37	...	116,444	...
2021 Portfolio CPAS				451,995	...	388,631	...
Expiring 2021 CPAS				0	...	5,808	...
Expired 2021 CPAS				0	...	63,363	...
Total CPAS Achieved	1,996,596	2,166,595	2,410,405	2,626,966	...	984,991	...

2.2.2 2018 Portfolio CPAS

Table 10 summarizes overall CPAS and WAML for the 2018 AIC portfolio by Program. The overall WAML for the portfolio was 11.8 years.

Table 10. 2018 AIC Portfolio CPAS and WAML

Program	WAML	First-Year Verified Gross Savings (MWh)	NTGR	CPAS - Verified Net Savings (MWh)							Lifetime Savings (MWh)
				2018	2019	2020	2021	...	2030	...	
Residential	11.2	202,255	0.766	154,983	153,235	151,122	95,589	...	23,659	...	1,256,396
Business	12.2	266,310	0.837	222,792	217,556	216,550	214,417	...	73,306	...	2,492,475
2018 Portfolio CPAS		468,565	0.806	377,775	370,791	367,672	310,007	...	96,965	...	3,748,871
Expiring 2018 CPAS				0	6,984	3,120	57,665	...	9,048	...	
Expired 2018 CPAS				0	6,984	10,104	67,769	...	280,811	...	
WAML	11.8										

2.2.3 2019 Portfolio CPAS

Table 11 summarizes overall CPAS and WAML for the 2019 AIC portfolio by Program. The overall WAML for the portfolio was 12.2 years including Voltage Optimization and 12.2 years excluding Voltage Optimization.

Table 11. 2019 AIC Portfolio CPAS and WAML

Program	WAML	First-Year Verified Gross Savings (MWh)	NTGR	CPAS - Verified Net Savings (MWh)							Lifetime Savings (MWh)
				2018	2019	2020	2021	...	2030	...	
Residential	10.6	167,007	0.770		128,644	128,358	91,801	...	15,553	...	931,666
Business	13.3	238,954	0.865		206,629	206,592	204,997	...	148,578	...	2,602,116
Voltage Optimization	15.0	9,175	N/A		9,175	9,175	9,175	...	9,175	...	137,619
2019 Portfolio CPAS		415,135	0.830		344,447	344,124	305,972	...	173,305	...	3,671,401
Expiring 2019 CPAS					0	323	38,153	...	45,102	...	
Expired 2019 CPAS					0	323	38,476	...	171,142	...	
WAML	12.2										
WAML without VO	12.2										

2.2.4 2020 Portfolio CPAS

Table 12 summarizes overall CPAS and WAML for the 2020 AIC portfolio by Program. The overall WAML for the portfolio is 12.6 years including Voltage Optimization and 12.2 years excluding Voltage Optimization.

Table 12. 2020 AIC Portfolio CPAS and WAML

Program	WAML	First-Year Verified Gross Savings (MWh)	NTGR	CPAS - Verified Net Savings (MWh)							Lifetime Savings (MWh)
				2018	2019	2020	2021	...	2030	...	
Residential	10.3	151,507	0.824			124,892	124,892	...	44,143	...	1,127,877
Business	13.2	275,690	0.889			244,956	244,919	...	209,261	...	3,009,032
Voltage Optimization	15.0	72,669	N/A			72,669	72,669	...	72,669	...	1,090,030
2020 Portfolio CPAS		499,865	0.885			442,517	442,480	...	326,073	...	5,226,939
Expiring 2020 CPAS						0	37	...	36,837	...	
Expired 2020 CPAS						0	37	...	116,444	...	
WAML	12.6										
WAML without VO	12.2										

2.2.5 2021 Portfolio CPAS

Table 13 summarizes overall CPAS and WAML for the 2021 AIC portfolio by Program. The overall WAML for the portfolio is 13.3 years including Voltage Optimization and 12.9 years excluding Voltage Optimization.

Table 13. 2021 AIC Portfolio CPAS and WAML

Program	WAML	First-Year Verified Gross Savings (MWh)	NTGR	CPAS - Verified Net Savings (MWh)							Lifetime Savings (MWh)
				2021	2022	2023	2024	...	2030	...	
Residential	10.2	141,554	0.854	120,941	120,941	120,596	120,596	...	84,783	...	1,146,997
Business	14.4	269,320	0.875	235,622	235,622	235,059	230,301	...	208,417	...	3,172,530
Voltage Optimization	15.0	95,431	N/A	95,431	95,431	95,431	95,431	...	95,431	...	1,431,469
2021 Portfolio CPAS		506,305	0.893	451,995	451,995	451,086	446,329	...	388,631	...	5,750,997
Expiring 2021 CPAS				0	0	908	4,758	...	5,808	...	
Expired 2021 CPAS				0	0	908	5,666	...	63,363	...	
WAML	13.3										
WAML without VO	12.9										

2.3 Plan 5 Savings Conversions

Illinois state law allows electric utilities, in certain cases, to “convert” non-electric energy savings achieved through efficiency measures or programs funded with electric dollars to electric savings, for the purposes of goal attainment.³ The total amount of savings allowed to be converted was capped at a maximum of 10% of the utility’s AAIG in a given year during Plan 5. Pursuant to this, AIC converted gas savings to electric savings in each year of Plan 5. Table 14 includes a summary of AIC’s gas conversions on an annual basis.

Table 14. AIC Plan 5 Gas Conversion Summary

Year	Therms Converted	MWh Equivalent	Conversion Cap (MWh Equivalent)	% of Cap
2018	460,114	13,486	13,486	100%
2019	539,404	15,805	18,221	87%
2020	587,068	17,201	17,201	100%
2021	721,266	21,133	21,133	100%

2.3.1 2018 Gas Conversions

AIC met the conversion criteria in 2018 and chose to convert savings from the Income Qualified and Smart Savers initiatives. Per FEJA, AIC was capped at a total conversion of no more than 13,486 MWh in electric savings (10% of AIC’s 2018 AAIG of 134,859 MWh). Using the SAG-approved conversion factor of 29.31 kWh per therm, this equaled 460,114 therms that could be converted to electric savings.

AIC identified a number of specific gas measures included in the Income Qualified Initiative for conversion to the evaluation team. We determined that these measures accounted for 428,888 therms in verified net savings. AIC also indicated to the evaluation team that 31,226 therms in verified net savings from the Smart Savers pilot should be converted to electric energy. These conversions reached AIC’s cap of 460,114 therms, and therefore no more savings were converted in 2018.

Table 15 includes a summary of the 2018 gas conversions. The conversions are also reflected in the annual savings tables in Section 2.4.2.

³ 220 ILCS 5/8-103B(b-25).

Table 15. 2018 AIC Gas Conversion

Initiative	Therms Converted	MWh Equivalent
Income Qualified	428,888	12,571
Smart Savers	31,226	915
Total	460,114	13,486
Conversion Cap	460,114	13,486
% of Cap	100%	100%

2.3.2 2019 Gas Conversions

AIC also met the conversion criteria in 2019 and chose to convert savings from the Residential Program’s Income Qualified – Single Family Initiative and the Business Program’s Custom Initiative. Per FEJA, AIC was capped at a total conversion of no more than 18,221 MWh (10% of AIC’s 2019 AAIG of 182,214 MWh). Using the SAG-approved conversion factor of 29.3 kWh per therm, this equaled 621,891 therms that could be converted to electric savings.

AIC identified five gas projects included in the Custom Initiative and a number of specific gas measures included in the Income Qualified – Single Family Initiative for conversion to the evaluation team. We determined that these measures accounted for 539,404 therms in verified net savings. These conversions reached 87% of AIC’s allowable cap for 2019.

Table 16 includes a summary of the 2019 gas conversions. The conversions are also reflected in the annual savings tables in section 2.4.3 and 2.5.3.

Table 16. 2019 AIC Gas Conversion

Initiative	Therms Converted	MWh Equivalent
Income Qualified - Single Family	447,806	13,121
Custom	91,598	2,684
Total	539,404	15,805
Conversion Cap	621,891	18,221
% of Cap	87%	87%

2.3.3 2020 Gas Conversions

AIC met the conversion criteria again in 2020 and chose to convert savings from the Residential Program’s Retail Products Initiative, the Smart Savers channel of the Income Qualified Initiative, and the Small Business Energy Performance (SBEP) channel of the Business Program’s Standard Initiative. Per FEJA, AIC was capped at a total conversion of no more than 17,201.1 MWh (10% of AIC’s 2020 AAIG of 172,011 MWh). Using the SAG-approved conversion factor of 29.3 kWh per therm, this equaled 587,068 therms that could be converted to electric savings.

AIC identified specific measures in Retail Products and Smart Savers, as well as specific projects in SBEP to the evaluation team for conversion. We determined that verified net savings for these measures exceeded AIC’s allowable conversion cap and therefore prioritized measures delivered through these channels to align with Illinois guidance around the conversion. All gas savings eligible for conversion were converted for Smart

Savers and SBEP, and some Retail Products savings eligible for conversion were converted (Retail Products savings in income qualified ZIP codes were prioritized).

Table 17 includes a summary of the 2020 gas conversions. The conversions are also reflected in the annual savings tables in Sections 2.4.4 and 2.5.4.

Table 17. 2020 AIC Gas Conversion

Initiative	Channel	Therms Converted	MWh Equivalent
Income Qualified	Smart Savers	326,697	9,572
Standard	SBEP	57,857	1,695
Retail Products	Retail Products	202,514	5,934
Total		587,068	17,201
<i>Conversion Cap</i>		587,068	17,201
<i>% of Cap</i>		100%	100%

2.3.4 2021 Gas Conversions

AIC met the conversion criteria in 2021, as well, and chose to convert savings from the Smart Savers channel of the Income Qualified Initiative, the Retail Products Initiative, and the Custom Initiative. Per FEJA, AIC was capped at a total conversion of no more than 21,133 MWh. Using the SAG-approved conversion factor of 29.3 kWh per therm, this equaled 721,266 therms that could be converted to electric savings.

AIC identified specific measures in Retail Products and Smart Savers, as well as specific projects in Custom for the evaluation team to convert. We determined that verified net savings for these measures exceeded AIC’s allowable conversion cap and therefore prioritized measures delivered through these channels to align with Illinois guidance around the conversion. All gas savings eligible for conversion were converted for Smart Savers and Custom, and some Retail Products savings eligible for conversion were converted.

Table 18 includes a summary of the 2021 gas conversions. The conversions are also reflected in the annual savings tables in section 2.4.5 and 2.5.5.

Table 18. 2021 AIC Gas Conversion

Initiative	Channel	Therms Converted	MWh Equivalent
Income Qualified	Smart Savers	370,114	10,844
Custom	Custom Incentives	127,128	3,725
Retail Products	Retail Products	224,024	6,564
Total		721,266	21,133
<i>Conversion Cap</i>		721,266	21,133
<i>% of Cap</i>		100%	100%

2.4 Residential Program Annual Savings

This section presents the aggregated annual savings results for the Residential Program during Plan 5, as well as the detailed results for each year of the Plan 5 cycle.

2.4.1 Plan 5 Residential Program Summary

The Residential Program achieved 529,460 MWh, 79.04 MW, and 7,956,716 therms in annual verified net savings in Plan 5. These savings include a non-participant spillover (NPSO) “adder” on net savings. These savings are also reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 19, Table 20, and Table 21 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative and channel for the Residential Program for Plan 5. Note that for brevity, we have aggregated savings to the most condensed level that they are presented in the 2018-2021 evaluation reports.

Table 19. Plan 5 Residential Program Electric Energy Annual Savings Summary

Initiative/Channel	Ex Ante Gross MWh	Gross Realization Rate ^a	Verified Gross MWh	NTGR	Verified Net MWh
Retail Products ^a	428,063	103%	439,676	0.742	326,346
Income Qualified ^b	61,669	103%	63,660	1.000	63,660
Behavioral Modification	10,346	75%	7,741	1.000	7,741
Public Housing	4,467	97%	4,325	1.000	4,325
Multifamily	5,666	100%	5,693	0.923	5,254
Market Rate	124	109%	135	0.833	112
HVAC	23,475	116%	27,123	0.758	20,565
Appliance Recycling ^c	19,456	102%	19,870	0.568	11,287
Direct Distribution ^d	23,314	102%	23,809	0.987	23,491
DCEO NC Commitments	1,011	82%	826	1.000	826
Efficient Choice Tool ^e	N/A	N/A	630	0.683	430
<i>Residential Program Subtotal</i>	<i>577,591</i>	<i>103%</i>	<i>593,487</i>	<i>0.782</i>	<i>464,036</i>
Residential NPSO Adder					5,903
Gas Conversions ^f					59,521
Residential Program Total					529,460

^a Includes carryover savings.

^b Includes IQ-Single Family, IQ-CAA, IQ-Multifamily, and Smart Savers channel savings, as well as carryover savings.

^c Includes savings from 2021 Appliance Recycling Kits. From 2018-2020, Appliance Recycling Kits were considered part of the Direct Distribution Initiative.

^d Includes savings from School Kits, Community Kits, Smart Home Kits, and Appliance Recycling Kits (2018-2020 only), as well as associated carryover savings.

^e Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

^f See Section 2.3 for more details.

Table 20. Plan 5 Residential Program Electric Demand Annual Savings Summary

Initiative/Channel	Ex Ante Gross MW	Gross Realization Rate ^a	Verified Gross MW	NTGR	Verified Net MW
Retail Products	63.13	97%	61.27	0.755	46.27
Income Qualified	14.55	101%	14.68	1.000	14.68
Behavioral Modification	N/A	N/A	1.33	1.000	1.33
Public Housing	0.62	100%	0.62	1.000	0.62
Multifamily	0.65	115%	0.75	0.924	0.70
Market Rate	0.06	111%	0.07	0.821	0.05
HVAC	11.50	110%	12.69	0.748	9.48
Appliance Recycling	2.51	102%	2.56	0.565	1.45
Direct Distribution	3.23	103%	3.31	0.990	3.28
DCEO NC Commitments	0.04	141%	0.05	1.000	0.05
Efficient Choice Tool	N/A	N/A	0.09	0.650	0.06
<i>Residential Program Subtotal</i>	96.28	101%	97.43	0.800	77.98
Residential NPSO Adder					1.06
Residential Program Total					79.04

^a Includes carryover savings.

^b Includes IQ-Single Family, IQ-CAA, and IQ-Multifamily channel savings, as well as carryover savings.

^c Includes savings from 2021 Appliance Recycling Kits. From 2018-2020, Appliance Recycling Kits were considered part of the Direct Distribution Initiative.

^d Includes savings from School Kits, Community Kits, Smart Home Kits, and Appliance Recycling Kits (2018-2020 only), as well as associated carryover savings.

^e Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

^f See Section 2.3 for more details.

Table 21. Plan 5 Residential Program Gas Annual Savings Summary

Initiative/Channel	Ex Ante Therms	Gross Realization Rate ^a	Verified Therms	NTGR	Verified Net Therms
Retail Products	4,421,043	94%	4,147,688	0.975	4,042,618
Income Qualified	4,730,978	101%	4,774,839	1.000	4,774,839
Behavioral Modification	213,284	100%	212,435	1.000	212,435
Public Housing	85,650	101%	86,447	1.000	86,447
Multifamily	77,722	100%	77,827	0.989	77,010
Market Rate	27,029	104%	28,084	0.869	24,406
HVAC	242,295	107%	259,809	0.958	248,899
Appliance Recycling	27,960	100%	27,960	1.000	27,960
Direct Distribution	336,224	88%	296,417	1.003	297,167
DCEO NC Commitments	24,878	92%	22,851	1.000	22,851
Efficient Choice Tool	N/A	N/A	45,738	0.529	24,209
<i>Residential Program Subtotal</i>	10,187,064	98%	9,980,095	0.986	9,838,840

Initiative/Channel	Ex Ante Therms	Gross Realization Rate ^a	Verified Therms	NTGR	Verified Net Therms
Residential NPSO Adder					149,145
Gas Conversions					-2,031,269
Residential Program Total					7,956,716

^a Includes carryover savings.

^b Includes IQ-Single Family, IQ-CAA, and IQ-Multifamily channel savings, as well as carryover savings.

^c Includes savings from 2021 Appliance Recycling Kits. From 2018-2020, Appliance Recycling Kits were considered part of the Direct Distribution Initiative.

^d Includes savings from School Kits, Community Kits, Smart Home Kits, and Appliance Recycling Kits (2018-2020 only), as well as associated carryover savings.

^e Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

^f See Section 2.3 for more details.

2.4.2 2018 Annual Savings

The 2018 Residential Program achieved 154,983 MWh, 21.43 MW, and 1,847,931 therms in verified net savings. These savings are reported after accounting for the FEJA-allowed “conversion” of gas savings to electric energy savings for the purpose of goal attainment. Table 22, Table 23, and Table 24 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2018 Residential Program.

Table 22. 2018 Residential Program Electric Energy Annual Savings Summary

Initiative/Effort	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Retail Products	141,201	105%	148,825	0.713	106,060
Income Qualified	11,615	100%	11,576	1.000	11,576
Public Housing	1,742	96%	1,675	1.000	1,675
Behavioral Modification	6,729	99%	6,680	N/A	6,680
HVAC	6,718	104%	6,955	0.752	5,230
Appliance Recycling	5,108	104%	5,321	0.538	2,862
Multifamily	2,558	99%	2,539	0.924	2,345
Direct Distribution	1,485	117%	1,740	0.926	1,612
Smart Savers	2,560	103%	2,631	1.000	2,631
DCEO NC Commitments	1,011	82%	826	1.000	826
<i>Residential Program Subtotal</i>	<i>180,726</i>	<i>104%</i>	<i>188,769</i>	<i>0.750</i>	<i>141,497</i>
Income Qualified (gas conversion)	N/A	N/A	N/A	N/A	12,571
Smart Savers (gas conversion)	N/A	N/A	N/A	N/A	915
Residential Program Total					154,983

Table 23. 2018 Residential Program Electric Demand Annual Savings Summary

Initiative/Effort	Ex Ante Gross MW	Gross Realization Rate ^a	Verified Gross MW	NTGR	Verified Net MW
Retail Products	19.92	94%	18.77	0.722	13.54
Income Qualified	3.62	89%	3.21	1.000	3.21
Public Housing	0.24	89%	0.21	1.000	0.21
Behavioral Modification	N/A	N/A	1.15	N/A	1.15
HVAC	2.25	110%	2.48	0.748	1.85
Appliance Recycling	0.62	105%	0.65	0.537	0.35
Multifamily	0.27	117%	0.31	0.930	0.29
Direct Distribution	0.18	132%	0.23	0.952	0.22
Smart Savers	0.36	155%	0.56	1.000	0.56
DCEO NC Commitments	0.04	141%	0.05	1.000	0.05
Residential Program Total	27.49	96%	27.61	0.776	21.43

^a Because the implementer did not provide ex ante demand savings, we do not include the Behavioral Modification Initiative in calculations of gross realization rate for demand.

Table 24. 2018 Residential Program Gas Annual Savings Summary

Initiative/Effort	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Retail Products	682,501	75%	510,661	1.000	510,661
Income Qualified	1,208,020	96%	1,155,691	1.000	1,155,691
Public Housing	41,235	102%	42,243	1.000	42,243
Behavioral Modification	177,590	120%	212,435	N/A	212,435
HVAC	57,136	115%	65,737	0.930	61,151
Appliance Recycling	0	N/A	0	N/A	0
Multifamily	37,383	100%	37,480	1.000	37,480
Direct Distribution	54,877	36%	19,543	1.038	20,294
Smart Savers	247,233	99%	245,238	1.000	245,238
DCEO NC Commitments	24,878	92%	22,851	1.000	22,851
<i>Residential Program Subtotal</i>	<i>2,530,853</i>	<i>91%</i>	<i>2,311,881</i>	<i>0.998</i>	<i>2,308,045</i>
Income Qualified (gas conversion)	N/A	N/A	N/A	N/A	-428,888
Smart Savers (gas conversion)	N/A	N/A	N/A	N/A	-31,226
Residential Program Total					1,847,931

2.4.3 2019 Annual Savings

The 2019 Residential Program achieved 128,644 MWh, 20.42 MW, and 1,742,952 therms in verified net savings. These savings are reported after accounting for the FEJA-allowed “conversion” of gas savings to electric energy savings for the purpose of goal attainment. Table 25, Table 26, and Table 27 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2019 Residential Program.

Table 25. 2019 Residential Program Electric Energy Annual Savings Summary

Initiative/Channel	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Retail Products	109,992	104%	114,126.69	0.716	81,770
Income Qualified - CAA	955	85%	814.94	1.000	815
Income Qualified - Single Family	8,746	107%	9,332.50	1.000	9,332
Income Qualified - Multifamily	1,562	104%	1,629.97	1.000	1,630
Income Qualified - Smart Savers	3,059	92%	2,824.24	1.000	2,824
Public Housing	1,164	100%	1,161.78	1.000	1,162
Behavioral Modification	3,617	29%	1,060.96	N/A	1,061
HVAC	7,478	122%	9,129.85	0.755	6,890
Appliance Recycling	4,714	109%	5,147.49	0.541	2,786
Multifamily	1,335	107%	1,424.12	0.921	1,311
Direct Distribution - School Kits	2,007	100%	2,013.79	0.931	1,874
Direct Distribution - AR Kits	126	95%	120.17	1.000	120
Direct Distribution - Comm. Kits	980	100%	980.22	1.000	980
<i>Residential Program Subtotal</i>	<i>145,736</i>	<i>103%</i>	<i>149,766.73</i>	<i>0.752</i>	<i>112,557</i>
Residential NPSO Adder (3.1%)					2,966
Income Qualified - Single Family (gas conversion)					13,121
Residential Program Total					128,644

Table 26. 2019 Residential Program Electric Demand Annual Savings Summary

Initiative/Effort	Ex Ante Gross MW	Gross Realization Rate ^a	Verified Gross MW	NTGR	Verified Net MW
Retail Products	14.60	106%	15.48	0.729	11.29
Income Qualified - CAA	0.24	89%	0.22	1.000	0.22
Income Qualified - Single Family	2.84	107%	3.04	1.000	3.04
Income Qualified - Multifamily	0.19	124%	0.24	1.000	0.24
Income Qualified - Smart Savers	0.62	107%	0.66	1.000	0.66
Public Housing	0.17	108%	0.19	1.000	0.19
Behavioral Modification	N/A	N/A	0.18	N/A	0.18
HVAC	3.84	111%	4.27	0.741	3.16
Appliance Recycling	0.58	109%	0.63	0.540	0.34
Multifamily	0.15	135%	0.21	0.935	0.19
Direct Distribution - School Kits	0.28	101%	0.28	0.942	0.27
Direct Distribution - AR Kits	0.02	96%	0.02	1.000	0.02
Direct Distribution - Comm. Kits	0.13	113%	0.14	1.000	0.14
<i>Residential Program Subtotal</i>	<i>23.67</i>	<i>107%</i>	<i>25.56</i>	<i>0.778</i>	<i>19.94</i>
Residential NPSO Adder (3.1%)					0.48
Residential Program Total					20.42

Table 27. 2019 Residential Program Gas Annual Savings Summary

Initiative/Effort	Ex Ante Gross Therms	Gross Realization Rate ^a	Verified Gross Therms	NTGR	Verified Net Therms
Retail Products	739,243	95%	700,639	1.000	700,595
Income Qualified - CAA	89,141	102%	90,739	1.000	90,739
Income Qualified - Single Family	815,506	103%	837,672	1.000	837,672
Income Qualified - Multifamily	25,361	102%	25,743	1.000	25,743
Income Qualified - Smart Savers	300,262	95%	285,545	1.000	285,545
Public Housing	31,662	102%	32,181	1.000	32,181
Behavioral Modification	35,694	0%	0	N/A	0
HVAC	69,492	100%	69,775	1.000	69,775
Appliance Recycling	0	N/A	0	N/A	0
Multifamily	27,626	100%	27,650	0.998	27,604
Direct Distribution - School Kits	25,825	101%	25,965	1.000	25,965
Direct Distribution - AR Kits	5,724	100%	5,726	1.000	5,726
Direct Distribution - Comm. Kits	50,698	104%	52,959	1.000	52,959
<i>Residential Program Subtotal</i>	<i>2,216,235</i>	<i>97%</i>	<i>2,154,595</i>	<i>1.000</i>	<i>2,154,505</i>
Residential NPSO Adder (4.4%)					36,253
Income Qualified (gas conversion)					-447,806
Residential Program Total					1,742,952

2.4.4 2020 Annual Savings

The 2020 Residential Program achieved 124,892 MWh, 19.82 MW, and 2,339,137 therms in verified net savings. These savings include a NPSO adder on net savings. These savings are also reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 28, Table 29, and Table 30 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative and channel for the 2020 Residential Program.

Table 28. 2020 Residential Program Electric Energy Annual Savings Summary

Initiative	Channel	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Retail Products	Retail Products	78,543	100%	78,572	0.774	60,846
	Retail Products Carryover ^a	16,929	100%	16,929	0.693	11,739
Income Qualified	Single Family	9,253	105%	9,760	1.000	9,760
	CAA	565	102%	574	1.000	574
	Smart Savers	5,826	102%	5,923	1.000	5,923
	Multifamily	1,224	95%	1,158	1.000	1,158
Public Housing	Public Housing	735	92%	680	1.000	680
Multifamily	Multifamily	398	89%	354	0.989	350
HVAC	HVAC	6,103	129%	7,867	0.748	5,884
Appliance Recycling	Appliance Recycling	3,517	101%	3,543	0.695	2,461
Direct Distribution	School Kits	2,075	94%	1,955	1.000	1,955

Initiative	Channel	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
	School Kits Carryover ^a	274	100%	274	0.836	229
	AR Kits	98	100%	98	1.000	98
	AR Kits Carryover ^a	11	100%	11	1.000	11
	Community Kits	5,728	101%	5,762	1.000	5,762
	Smart Home Kits	140	121%	169	1.000	169
<i>Residential Program Subtotal</i>		<i>131,417</i>	<i>102%</i>	<i>133,629</i>	<i>0.805</i>	<i>107,599</i>
Residential NPSO Adder						1,788
Retail Products (gas conversion)						5,934
Smart Savers (gas conversion)						9,572
Residential Program Total						124,892

^a Carryover savings are those achieved through installation of measures during 2020 that were distributed or rebated in prior program years. We break out carryover separately throughout this report for clarity.

Table 29. 2020 Residential Program Electric Demand Annual Savings Summary

Initiative	Channel	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Retail Products	Retail Products	11.86	102%	12.06	0.803	9.68
	Retail Products Carryover	2.03	100%	2.03	0.693	1.41
Income Qualified	Single Family	1.82	95%	1.73	1.000	1.73
	CAA	0.16	102%	0.17	1.000	0.17
	Smart Savers	1.19	106%	1.26	1.000	1.26
	Multifamily	0.18	99%	0.17	1.000	0.17
Public Housing	Public Housing	0.11	115%	0.13	1.000	0.13
Multifamily	Multifamily	0.05	100%	0.05	0.986	0.05
HVAC	HVAC	4.12	112%	4.63	0.736	3.41
Appliance Recycling	Appliance Recycling	0.46	100%	0.46	0.684	0.31
Direct Distribution	School Kits	0.31	92%	0.28	1.000	0.28
	School Kits Carryover	0.03	100%	0.03	1.000	0.03
	AR Kits	0.01	101%	0.01	1.000	0.01
	AR Kits Carryover	0.00	100%	0.00	1.000	0.00
	Community Kits	0.78	99%	0.78	1.000	0.78
	Smart Home Kits	0.02	122%	0.02	1.000	0.02
<i>Residential Program Subtotal</i>		<i>23.13</i>	<i>103%</i>	<i>23.82</i>	<i>0.816</i>	<i>19.44</i>
Residential NPSO Adder						0.37
Residential Program Total						19.82

Table 30. 2020 Residential Program Gas Annual Savings Summary

Initiative	Channel	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Retail Products	Retail Products	1,503,202	97%	1,457,318	0.999	1,456,548
	Retail Products Carryover	0	N/A	0	N/A	0
Income Qualified	Single Family	594,194	115%	682,068	1.000	682,068
	CAA	45,361	100%	45,435	1.000	45,435
	Smart Savers	434,093	102%	440,873	1.000	440,873
	Multifamily	5,267	95%	4,996	1.000	4,996
Public Housing	Public Housing	8,232	100%	8,254	1.000	8,254
Multifamily	Multifamily	3,214	100%	3,214	1.000	3,214
HVAC	HVAC	71,996	104%	75,185	0.981	73,773
Appliance Recycling	Appliance Recycling	0	N/A	0	N/A	0
Direct Distribution	School Kits	66,574	90%	60,128	1.000	60,128
	School Kits Carryover	0	N/A	0	N/A	0
	AR Kits	4,059	101%	4,100	1.000	4,100
	AR Kits Carryover	0	N/A	0	N/A	0
	Community Kits	21,959	98%	21,486	1.000	21,486
	Smart Home Kits	0	N/A	0	N/A	0
<i>Residential Program Subtotal</i>		<i>2,758,150</i>	<i>102%</i>	<i>2,803,055</i>	<i>0.999</i>	<i>2,800,872</i>
Residential NPSO Adder						67,476
Retail Products (gas conversion)						-202,514
Smart Savers (gas conversion)						-326,697
Residential Program Total						2,339,137

2.4.5 2021 Annual Savings

The 2021 Residential Program achieved 120,941 MWh, 17.44 MW, and 2,026,696 therms in verified net savings. These savings include a non-participant spillover (NPSO) “adder” on net savings. These savings are also reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 31, Table 32, and Table 33 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative and channel for the 2021 Residential Program.

Table 31. 2021 Residential Program Electric Energy Annual Savings Summary

Initiative	Channel	Ex Ante Gross MWh	Gross Realization Rate ^a	Verified Gross MWh	NTGR	Verified Net MWh
Retail Products	Retail Products	65,944	101%	66,523	0.831	55,264
	Retail Products Carryover	15,454	100%	15,454	0.690	10,666
Income Qualified	Single Family	7,169	115%	8,216	1.000	8,216
	CAA	652	99%	642	1.000	642

Initiative	Channel	Ex Ante Gross MWh	Gross Realization Rate ^a	Verified Gross MWh	NTGR	Verified Net MWh
	Smart Savers	4,052	103%	4,163	1.000	4,163
	Multifamily	3,795	100%	3,777	1.000	3,777
	IQ Carryover	638	100%	638	1.000	638
Public Housing		826	98%	808	1.000	808
Multifamily		1,376	100%	1,375	0.906	1,247
Home Efficiency – Market Rate		124	109%	135	0.833	112
Midstream HVAC		3,177	100%	3,171	0.807	2,561
Appliance Recycling	Appliance Recycling	5,453	95%	5,167	0.487	2,515
	AR Kits	663	104%	691	0.961	663
Direct Distribution	School Kits	2,389	100%	2,389	1.000	2,389
	School Kits Carryover	188	100%	188	0.977	184
	AR Kits Carryover	10	100%	10	1.000	10
	Community Kits	7,262	104%	7,558	1.000	7,558
	Community Kits Carryover	540	100%	540	1.000	540
Efficient Choice Tool		N/A	N/A	630	0.683	430
<i>Residential Program Subtotal</i>		<i>119,712</i>	<i>101%</i>	<i>122,075</i>	<i>0.839</i>	<i>102,384</i>
Residential NPSO Adder						1,149
Retail Products (gas conversion)						6,564
Smart Savers (gas conversion)						10,844
Residential Program Total						120,941

^a Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

Table 32. 2021 Residential Program Electric Demand Annual Savings Summary

Initiative	Channel	Ex Ante Gross MW	Gross Realization Rate ^a	Verified Gross MW	NTGR	Verified Net MW
Retail Products	Retail Products	12.67	86%	10.88	0.827	9.00
	Retail Products Carryover	2.05	100%	2.05	0.690	1.41
Income Qualified	Single Family	1.43	100%	1.43	1.000	1.43
	CAA	0.18	100%	0.18	1.000	0.18
	Smart Savers	1.07	110%	1.18	1.000	1.18
	Multifamily	0.57	99%	0.56	1.000	0.56
	IQ Carryover	0.08	100%	0.08	1.000	0.08
Public Housing		0.09	99%	0.09	1.000	0.09
Multifamily		0.18	100%	0.18	0.886	0.16
Home Efficiency – Market Rate		0.06	111%	0.07	0.821	0.05
Midstream HVAC		1.30	101%	1.31	0.806	1.06
	Appliance Recycling	0.77	95%	0.73	0.488	0.36

Initiative	Channel	Ex Ante Gross MW	Gross Realization Rate ^a	Verified Gross MW	NTGR	Verified Net MW
Appliance Recycling	AR Kits	0.09	104%	0.09	0.963	0.09
Direct Distribution	School Kits	0.55	100%	0.55	1.000	0.55
	School Kits Carryover	0.02	100%	0.02	0.979	0.02
	AR Kits Carryover	<0.01	100%	<0.01	1.000	<0.01
	Community Kits	0.82	105%	0.86	1.000	0.86
	Community Kits Carryover	0.08	100%	0.08	1.000	0.08
Efficient Choice Tool		N/A	N/A	0.09	0.650	0.06
<i>Residential Program Subtotal</i>		<i>22.01</i>	<i>93%</i>	<i>20.44</i>	<i>0.843</i>	<i>17.23</i>
Residential NPSO Adder						0.21
Residential Program Total						17.44

^a Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

Table 33. 2021 Residential Program Gas Annual Savings Summary

Initiative	Channel	Ex Ante Therms	Gross Realization Rate ^a	Verified Therms	NTGR	Verified Net Therms
Retail Products	Retail Products	1,496,096	99%	1,479,070	0.930	1,374,813
	Retail Products Carryover	0	N/A	0	N/A	0
Income Qualified	Single Family	524,855	99%	519,519	1.000	519,519
	CAA	56,556	100%	56,491	1.000	56,491
	Smart Savers	370,228	100%	370,114	1.000	370,114
	Multifamily	14,901	99%	14,716	1.000	14,716
	IQ Carryover	0	N/A	0	N/A	0
Public Housing		4,521	83%	3,769	1.000	3,769
Multifamily		9,500	100%	9,483	0.919	8,712
Home Efficiency – Market Rate		27,029	104%	28,084	0.869	24,406
Midstream HVAC		43,670	112%	49,111	0.900	44,200
Appliance Recycling	Appliance Recycling	0	N/A	0	N/A	0
	AR Kits	27,960	100%	27,960	1.000	27,960
Direct Distribution	School Kits	67,322	100%	67,322	1.000	67,322
	School Kits Carryover	0	N/A	0	N/A	0
	AR Kits Carryover	0	N/A	0	N/A	0
	Community Kits	39,188	100%	39,188	1.000	39,188
	Community Kits Carryover	0	N/A	0	N/A	0
Efficient Choice Tool		N/A	N/A	45,738	0.529	24,209
<i>Residential Program Subtotal</i>		<i>2,681,826</i>	<i>101%</i>	<i>2,710,564</i>	<i>0.950</i>	<i>2,575,417</i>
Residential NPSO Adder						45,416
Retail Products (gas conversion)						-224,024
Smart Savers (gas conversion)						-370,114
Residential Program Total						2,026,696

^a Efficient Choice Tool does not report ex ante savings and therefore calculations of gross realization rate at the Residential Program level exclude it entirely.

2.5 Business Program Annual Savings

This section presents the aggregated annual savings results for the Business Program during Plan 5, as well as the detailed results for each year of the Plan 5 cycle.

2.5.1 Plan 5 Business Program Summary

The Business Program achieved 909,880 MWh, 133.79 MW, and 11,288,875 therms in annual verified net savings in Plan 5. These savings are reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 34, Table 35, and Table 36 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the Business Program for Plan 5. Note that for brevity, we have aggregated savings to the most condensed level that they are presented in the 2018-2021 evaluation reports.

Table 34. Plan 5 Business Program Electric Energy Annual Savings Summary

Initiative/Channel	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Standard ^a	826,895	100%	823,247	0.862	709,507
Custom	148,054	91%	134,356	0.823	110,537
Retro-Commissioning ^b	22,324	92%	20,468	0.925	18,926
Streetlighting	63,108	100%	62,815	0.991	62,256
<i>Business Program Subtotal</i>	<i>1,060,381</i>	<i>98%</i>	<i>1,040,887</i>	<i>0.866</i>	<i>901,226</i>
BOC					549
Gas Conversions ^c					8,104
Business Program Total					909,880

^a Includes carryover savings.

^b Includes Virtual Commissioning savings.

^c See Section 2.3 for more details.

Table 35. Plan 5 Business Program Electric Demand Annual Savings Summary

Initiative/Channel	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard ^a	137.60	99%	136.45	0.861	117.45
Custom	22.32	84%	18.71	0.823	15.39
Retro-Commissioning ^b	1.65	59%	0.98	0.899	0.88
Streetlighting	0.05	0%	0.00	N/A	0.00
<i>Business Program Subtotal</i>	<i>161.62</i>	<i>97%</i>	<i>156.14</i>	<i>0.856</i>	<i>133.72</i>
BOC					0.07
Business Program Total					133.79

^a Includes carryover savings.

^b Includes Virtual Commissioning savings.

Table 36. Plan 5 Business Program Gas Annual Savings Summary

Initiative/Channel	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Standard ^a	10,316,877	101%	10,432,445	0.593	6,182,145
Custom	5,430,635	99%	5,368,879	0.939	5,040,953
Retro-Commissioning ^b	378,285	94%	354,423	0.907	321,325
Streetlighting	0	N/A	0	N/A	0
<i>Business Program Subtotal</i>	<i>16,125,797</i>	<i>100%</i>	<i>16,155,748</i>	<i>0.715</i>	<i>11,544,423</i>
BOC					21,036
Gas Conversions ^c					-276,583
Business Program Total					11,288,875

^a Includes carryover savings.

^b Includes Virtual Commissioning savings.

^c See Section 2.3 for more details.

2.5.2 2018 Annual Savings

The 2018 Business Program achieved 222,792 MWh, 29.73 MW, and 5,505,837 therms in verified net savings. Table 37, Table 38, and Table 39 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2018 Business Program.

Table 37. 2018 Business Program Electric Energy Annual Savings Summary

Initiative	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	Net-to-Gross Ratio (NTGR)	Verified Net MWh
Standard	230,044	100%	229,444	0.835	191,518
Custom	34,555	83%	28,816	0.825	23,775
Retro-Commissioning	5,992	107%	6,416	0.914	5,864
Streetlighting	1,638	100%	1,635	1.000	1,635
Business Program Total	272,229	98%	266,310	0.837	222,792

Table 38. 2018 Business Program Electric Demand Annual Savings Summary

Initiative	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard	34.14	95%	32.40	0.826	26.76
Custom	4.06	79%	3.19	0.825	2.63
Retro-Commissioning	0.61	61%	0.37	0.914	0.34
Streetlighting	0.00	N/A	N/A	N/A	N/A
Business Program Total	38.81	93%	35.96	0.827	29.73

Table 39. 2018 Business Program Gas Annual Savings Summary

Initiative	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Standard	5,885,866	100%	5,891,848	0.604	3,560,533
Custom	1,482,699	127%	1,880,202	0.939	1,765,510
Retro-Commissioning	190,552	103%	196,712	0.914	179,795
Streetlighting	0	N/A	N/A	N/A	N/A
Business Program Total	7,559,118	105%	7,968,762	0.691	5,505,837

2.5.3 2019 Annual Savings

The 2019 Business Program achieved 206,629 MWh, 33.25 MW, and 2,445,203 therms in verified net savings. Table 40, Table 41, and Table 42 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2019 Business Program.

Table 40. 2019 Business Program Electric Energy Annual Savings Summary

Initiative/Effort	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Standard	200,778	99%	199,497	0.866	172,771
Custom	27,130	101%	27,583	0.822	22,673
Retro-Commissioning	5,322	88%	4,680	0.890	4,165
Streetlighting	4,014	100%	4,014	1.000	4,014
<i>Business Program Subtotal</i>	<i>237,244</i>	<i>99%</i>	<i>235,774</i>	<i>0.863</i>	<i>203,623</i>
Custom (gas conversion)					2,684
BOC					322
Residential Program Total					206,629

Table 41. 2019 Business Program Electric Demand Annual Savings Summary

Initiative/Effort	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard	33.89	101%	34.11	0.869	29.64
Custom	4.32	92%	3.96	0.822	3.25
Retro-Commissioning	0.60	54%	0.33	0.890	0.29
Streetlighting	0.00	N/A	0.00	N/A	0.00
<i>Business Program Subtotal</i>	<i>38.81</i>	<i>99%</i>	<i>38.28</i>	<i>0.863</i>	<i>33.18</i>
BOC					0.06
Residential Program Total					33.25

Table 42. 2019 Business Program Gas Annual Savings Summary

Initiative/Effort	Ex Ante Gross Therms	Gross Realization Rate ^a	Verified Gross Therms	NTGR	Verified Net Therms
Standard	2,285,498	101%	2,316,720	0.600	1,390,792
Custom	1,487,000	76%	1,131,829	0.939	1,062,788
Retro-Commissioning	83,622	88%	73,197	0.890	65,145

Initiative/Effort	Ex Ante Gross Therms	Gross Realization Rate ^a	Verified Gross Therms	NTGR	Verified Net Therms
Streetlighting	0	N/A	0	N/A	0
<i>Business Program Subtotal</i>	3,856,120	91%	3,521,746	0.715	2,518,725
Custom (gas conversion)					-91,598
BOC					18,076
Residential Program Total					2,445,203

2.5.4 2020 Annual Savings

The 2020 Business Program achieved 244,956 MWh, 35.23 MW, and 1,957,408 therms in verified net savings. These savings are also reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 43, Table 44, and Table 45 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2020 Business Program.

Table 43. 2020 Business Program Electric Energy Annual Savings Summary

Initiative	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Standard	201,979	99%	200,341	0.884	177,037
Standard Carryover	6,197	100%	6,197	0.845	5,234
Custom	32,018	97%	30,951	0.822	25,442
RCx	5,529	82%	4,522	0.898	4,062
Streetlighting	31,633	100%	31,633	0.990	31,306
<i>Business Program Subtotal</i>	277,355	99%	273,643	0.888	243,081
BOC					180
Standard (gas conversion)					1,695
Business Program Total					244,956

Table 44. 2020 Business Program Electric Demand Annual Savings Summary

Initiative	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard	34.59	101%	34.89	0.886	30.91
Standard Carryover	1.46	100%	1.46	0.849	1.24
Custom	4.93	70%	3.44	0.822	2.83
RCx	0.44	64%	0.28	0.890	0.25
Streetlighting	0.00	N/A	0.00	N/A	0.00
<i>Business Program Subtotal</i>	41.42	97%	40.07	0.879	35.23
BOC					0.00
Business Program Total					35.23

Table 45. 2020 Business Program Gas Annual Savings Summary

Initiative	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Standard	938,480	106%	993,317	0.546	542,690
Standard Carryover	0	N/A	0	N/A	0
Custom	1,302,727	116%	1,507,107	0.939	1,415,174
RCx	74,471	82%	61,170	0.890	54,441
Streetlighting	0	N/A	0	N/A	0
<i>Business Program Subtotal</i>	<i>2,315,678</i>	<i>111%</i>	<i>2,561,594</i>	<i>0.786</i>	<i>2,012,306</i>
BOC					2,960
Standard (gas conversion)					-57,857
Business Program Total					1,957,408

2.5.5 2021 Annual Savings

The 2021 Business Program achieved 235,622 MWh, 35.59 MW, and 1,380,427 therms in verified net savings. These savings are reported after accounting for the FEJA-allowed “conversion” of natural gas savings to electric energy savings for the purpose of goal attainment. Table 46, Table 47, and Table 48 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative for the 2021 Business Program.

Table 46. 2021 Business Program Electric Energy Annual Savings Summary

Initiative/Channel	Ex Ante Gross MWh	Gross Realization Rate	Verified Gross MWh	NTGR	Verified Net MWh
Standard – Core	36,801	100%	36,741	0.825	30,325
Standard – SBDI	103,701	100%	103,675	0.908	94,157
Standard – OS	712	94%	670	0.974	653
Standard – II	40,497	100%	40,497	0.794	32,144
Standard – II Carryover	6,186	100%	6,186	0.916	5,667
Custom	54,352	87%	47,151	0.822	38,768
Retro-Commissioning	314	82%	258	0.940	242
Virtual Commissioning	5,166	89%	4,593	1.000	4,593
Streetlighting	25,823	99%	25,533	0.991	25,301
<i>Business Program Subtotal</i>	<i>273,552</i>	<i>97%</i>	<i>265,303</i>	<i>0.874</i>	<i>231,850</i>
BOC					47
Custom (gas conversion)					3,725
Business Program Total					235,622

Table 47. 2021 Business Program Electric Demand Annual Savings Summary

Initiative/Channel	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard – Core	6.65	100%	6.65	0.827	5.50
Standard – SBDI	15.69	100%	15.68	0.908	14.24
Standard – OS	0.14	150%	0.20	0.951	0.19

Initiative/Channel	Ex Ante Gross MW	Gross Realization Rate	Verified Gross MW	NTGR	Verified Net MW
Standard – II	9.58	100%	9.58	0.795	7.62
Standard – II Carryover	1.46	100%	1.46	0.916	1.34
Custom	9.01	90%	8.14	0.822	6.69
Retro-Commissioning	0.00	N/A	0.00	N/A	0.00
Virtual Commissioning	0.00	N/A	0.00	N/A	0.00
Streetlighting	0.05	0%	0.00	N/A	0.00
<i>Business Program Subtotal</i>	<i>42.58</i>	<i>98%</i>	<i>41.72</i>	<i>0.853</i>	<i>35.59</i>
BOC					0.00
Business Program Total					35.59

Table 48. 2021 Business Program Gas Annual Savings Summary

Initiative/Channel	Ex Ante Gross Therms	Gross Realization Rate	Verified Gross Therms	NTGR	Verified Net Therms
Standard – Core	1,170,840	102%	1,193,721	0.549	655,711
Standard – SBDI	0	N/A	0	N/A	0
Standard – OS	36,192	102%	36,839	0.880	32,419
Standard – II	0	N/A	0	N/A	0
Standard – II Carryover	0	N/A	0	N/A	0
Custom	1,158,210	73%	849,741	0.939	797,482
Retro-Commissioning	29,640	79%	23,344	0.940	21,943
Virtual Commissioning	0	N/A	0	N/A	0
Streetlighting	0	N/A	0	N/A	0
<i>Business Program Subtotal</i>	<i>2,394,882</i>	<i>88%</i>	<i>2,103,645</i>	<i>0.717</i>	<i>1,507,555</i>
BOC					0
Custom (gas conversion)					-127,128
Business Program Total					1,380,427

2.6 Voltage Optimization Program Annual Savings

This section presents the aggregated annual savings results for the Voltage Optimization Program during Plan 5, as well as the detailed results for each year of the Plan 5 cycle.⁴

2.6.1 Plan 5 Summary

The Voltage Optimization Program achieved 177,275 MWh and 28.26 MW in annual verified net savings from 2019-2021. Table 49 presents ex ante gross, verified gross, and verified net savings for the Voltage Optimization Program.

Table 49. Plan 5 Voltage Optimization Program Annual Savings Summary

	Electric Energy Savings (MWh)	Electric Peak Demand Savings (MW)	Gas Savings (Therms)
Ex Ante Gross Savings	135,807	N/A	N/A
Gross Realization Rate	131%	N/A	N/A
Verified Gross Savings	177,275	28.26	N/A
NTGR ^c	1.00	1.00	N/A
Verified Net Savings	177,275	28.26	N/A

^a Ex ante gross savings sourced from AIC. Ex ante gross savings assume 0.80 CVR factor and 3% voltage reduction across the 125 measured circuits.

^b There are no ex ante demand savings estimates for this program.

^c NTGR is assumed to be 1.000, since absent the VO Program, deliberate changes to distribution voltage would not have been made.

2.6.2 2019 Annual Savings

The 2019 Voltage Optimization Program achieved 9,175 MWh and 0.817 MW in verified net savings. Table 50 presents ex ante gross, verified gross, and verified net savings for the 2019 Voltage Optimization Program.

Table 50. 2019 Voltage Optimization Program Annual Savings Summary

	Electric Energy Savings (MWh)	Electric Peak Demand Savings (MW)	Gas Savings (Therms)
Ex Ante Gross Savings	7,849	N/A	N/A
Gross Realization Rate	117%	N/A	N/A
Verified Gross Savings	9,175	0.817	N/A
NTGR	1.00	1.00	N/A
Verified Net Savings	9,175	0.817	N/A

^a Ex ante gross savings sourced from AIC. Ex ante gross savings assume 0.80 CVR factor and 3% voltage reduction across the 125 measured circuits.

^b There are no ex ante demand savings estimates for this program.

^c NTGR is assumed to be 1.0, since absent the VO Program, deliberate changes to distribution voltage would not have been made.

⁴ AIC did not claim savings from the Voltage Optimization Program in 2018.

2.6.3 2020 Annual Savings

The 2020 Voltage Optimization Program achieved 72,669 MWh and 11.50 MW in verified net savings. Table 51 presents ex ante gross, verified gross, and verified net savings for the 2020 Voltage Optimization Program.

Table 51. 2020 Voltage Optimization Program Annual Savings Summary

	Electric Energy Savings (MWh)	Electric Peak Demand Savings (MW)	Gas Savings (Therms)
Ex Ante Gross Savings	52,861 ^a	N/A ^b	0
Gross Realization Rate	137%	N/A	N/A
Verified Gross Savings	72,669	11.50	0
NTGR ^c	N/A	N/A	N/A
Verified Net Savings	72,669	11.50	0

^a Ex ante gross savings sourced from AIC. Ex ante gross savings assume 0.80 CVR factor and 3% voltage reduction across the 125 measured circuits.

^b There are no ex ante demand savings estimates for this program.

^c NTGR is assumed to be 1.0, since absent the VO Program, deliberate changes to distribution voltage would not have been made.

2.6.4 2021 Annual Savings

The 2021 Voltage Optimization Program achieved 95,431 MWh and 15.95 MW in verified net savings. Table 52 presents ex ante gross, verified gross, and verified net savings for the 2021 Voltage Optimization Program.

Table 52. 2021 Voltage Optimization Program Annual Savings Summary

	Electric Energy Savings (MWh)	Electric Peak Demand Savings (MW)	Gas Savings (Therms)
Ex Ante Gross Savings	75,097 ^a	N/A ^b	N/A
Gross Realization Rate	127%	N/A	N/A
Verified Gross Savings	95,431	15.95	N/A
NTGR ^c	1.000	1.000	N/A
Verified Net Savings	95,431	15.95	N/A

^a Ex ante gross savings sourced from AIC. Ex ante gross savings assume 0.80 CVR factor and 3% voltage reduction across the 125 measured circuits.

^b There are no ex ante demand savings estimates for this program.

^c NTGR is assumed to be 1.000, since absent the VO Program, deliberate changes to distribution voltage would not have been made.

Appendix A. Program Evaluation Reports

The 2018, 2019, 2020, and 2021 Residential Program, Business Program, and Voltage Optimization Program Impact Evaluation Reports are available on the Illinois SAG website: <https://www.ilsag.info/evaluation-documents/final-evaluation-reports/>

Appendix B. Cumulative Persisting Annual Savings Details

This appendix presents detailed CPAS for the AIC portfolio by initiative for each year of the Plan 5 cycle. Due to many years of CPAS, tables are challenging to read; please reference the annual evaluation reports for additional detail as needed.

Figure 1. 2018 AIC Portfolio CPAS and WAML

Initiative	Initiative-Level WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh													
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Retail Products	10.3	148,825	0.713	106,060	106,060	105,893	55,309	55,309	55,309	55,309	55,309	52,660	52,660	52,660	8,657	8,657	8,657
Income Qualified	15.0	11,576	1.000	11,576	11,576	11,576	9,240	9,240	9,235	8,064	7,306	7,306	7,167	4,958	4,958	4,958	
Income Qualified (gas conversion)	19.8	12,571	1.000	12,571	12,571	12,571	12,571	12,571	12,571	12,571	7,176	7,056	7,056	5,856	5,856	5,856	
Public Housing	12.1	1,675	1.000	1,675	1,675	1,675	1,153	1,153	1,153	1,153	991	965	815	359	359	359	
Behavior Modification	5.0	6,680	1.000	6,680	4,932	3,048	1,615	721	0	0	0	0	0	0	0	0	
HVAC	18.3	6,955	0.752	5,230	5,230	5,230	5,230	5,230	5,206	3,399	3,399	3,399	3,399	3,399	3,107	3,107	3,107
Appliance Recycling	8.0	5,321	0.538	2,862	2,862	2,862	2,862	2,862	2,862	2,862	2,862	2,862	0	0	0	0	0
Multifamily	9.6	2,539	0.924	2,345	2,345	2,345	2,104	2,104	2,091	1,884	1,854	1,807	8	7	7		
Direct Distribution of Efficient Products	8.4	1,740	0.926	1,612	1,612	1,549	1,132	1,132	1,132	1,132	613	613	440	0	0	0	
Smart Savers	10.0	2,631	1.000	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631	0	0	0
Smart Savers (gas conversion)	10.0	915	1.000	915	915	915	915	915	915	915	915	915	915	915	0	0	0
DCEO New Construction Commitments	18.8	826	1.000	826	826	826	826	826	826	826	826	826	826	826	728	728	715
Standard	12.5	229,444	0.835	191,518	186,282	186,221	185,444	185,033	184,007	183,510	183,044	180,973	165,977	92,513	65,382	60,387	
Custom	12.1	28,816	0.825	23,775	23,775	23,676	23,264	23,232	22,284	21,416	20,766	20,400	19,224	18,899	15,690	12,918	
Retro-Commissioning	5.1	6,416	0.914	5,864	5,864	5,018	4,075	3,173	2,309	2,309	1,154	0	0	0	0	0	
Streetslighting	12.0	1,635	1.000	1,635	1,635	1,635	1,635	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	0
2018 Portfolio CPAS		468,565	0.806	377,775	370,791	367,672	310,007	307,402	303,800	294,062	287,496	280,866	264,184	136,354	106,013	96,965	
Expiring 2018 Portfolio CPAS				0	6,984	3,120	57,665	2,604	3,603	9,738	6,566	6,630	16,882	127,830	30,341	9,048	
Expired 2018 Portfolio CPAS				0	6,984	10,104	67,769	70,373	73,976	83,714	90,279	96,909	113,591	241,421	271,762	280,811	

Figure 2. 2018 AIC Portfolio CPAS and WAML (Cont.)

Initiative	Initiative-Level WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh												Lifetime Savings		
				2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042		2043	
Retail Products	10.3	148,825	0.713	6,926	0	0	0	0	0	0	0	0	0	0	0	0	0	730,126
Income Qualified	15.0	11,576	1.000	4,958	4,958	4,121	4,121	4,121	2,854	2,689	1,382	1,382	1,382	1,382	1,382	0	141,894	
Income Qualified (gas conversion)	19.8	12,571	1.000	5,856	5,856	4,410	4,410	4,410	4,410	4,410	3,279	3,279	3,279	3,279	3,279	0	171,615	
Public Housing	12.1	1,675	1.000	359	359	250	250	250	250	250	250	250	250	250	250	0	16,707	
Behavior Modification	5.0	6,680	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	16,997	
HVAC	18.3	6,955	0.752	3,100	3,100	3,100	3,100	3,100	1,718	1,718	0	0	0	0	0	0	73,210	
Appliance Recycling	8.0	5,321	0.538	0	0	0	0	0	0	0	0	0	0	0	0	0	22,893	
Multifamily	9.6	2,539	0.924	7	7	0	0	0	0	0	0	0	0	0	0	0	21,007	
Direct Distribution of Efficient Products	8.4	1,740	0.926	0	0	0	0	0	0	0	0	0	0	0	0	0	10,968	
Smart Savers	10.0	2,631	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	26,313	
Smart Savers (gas conversion)	10.0	915	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,152	
DCEO New Construction Commitments	18.8	826	1.000	712	701	397	397	397	355	355	355	355	355	355	355	0	15,514	
Standard	12.5	229,444	0.835	58,297	48,178	356	33	15	15	15	0	0	0	0	0	0	2,157,200	
Custom	12.1	28,816	0.825	8,097	4,956	3,883	1,944	423	53	53	21	12	4	0	0	0	288,819	
Retro-Commissioning	5.1	6,416	0.914	0	0	0	0	0	0	0	0	0	0	0	0	0	29,765	
Streetslighting	12.0	1,635	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	16,690	
2018 Portfolio CPAS		468,565	0.806	88,311	68,115	16,518	14,256	12,717	9,656	9,491	5,319	5,287	5,277	5,270	5,266	0	3,748,871	
Expiring 2018 Portfolio CPAS				8,654	20,196	51,597	2,263	1,539	3,061	165	4,171	33	9	8	4	5,266		
Expired 2018 Portfolio CPAS				289,464	309,660	361,257	363,520	365,058	368,120	368,285	372,456	372,489	372,498	372,506	372,509	377,775		
2018 Portfolio WAML	11.80																	

Figure 3. 2019 AIC Portfolio CPAS and WAML

Initiative	Initiative-Level WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh																		
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032				
Retail Products	9.1	114,126.69	0.716		81,770	81,770	49,955	49,955	46,504	23,567	23,567	18,659	18,659	18,659	6,467	24	24	24	24			
IQ - CAA	14.9	814.94	1.000		815	815	555	555	555	555	555	553	553	553	436	415	415	415	415			
IQ - SF	14.7	9,332.50	1.000		9,332	9,332	7,809	7,809	7,809	7,305	5,646	5,272	5,272	5,272	4,392	3,819	3,819	3,819	3,819			
IQ - MF	10.7	1,629.97	1.000		1,630	1,630	1,460	1,460	1,460	1,303	1,296	1,199	1,199	1,199	1,198	962	127	127	127			
IQ - Smart Savers	11.0	2,824.24	1.000		2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824	2,824			
IQ - SF (gas conversion)	18.5	13,120.73	1.000		13,121	13,121	13,121	13,121	13,121	13,121	13,121	9,477	9,477	9,439	9,439	8,912	6,997	6,997	6,997			
Public Housing	10.4	1,161.78	1.000		1,162	1,162	768	768	768	672	672	577	577	551	534	141	92	93	93			
Behavior Modification	5.0	1,060.96	1.000		1,061	783	484	257	115	0	0	0	0	0	0	0	0	0	0			
HVAC	16.5	9,129.85	0.755		6,890	6,890	6,890	6,890	6,890	6,890	4,443	4,443	4,443	4,443	4,443	3,954	3,954	3,954	3,954			
Appliance Recycling	6.5	5,146.77	0.541		2,786	2,786	2,786	2,786	2,786	2,786	1,393	0	0	0	0	0	0	0	0			
Multifamily	10.3	1,424.12	0.921		1,311	1,311	1,141	1,141	1,141	1,059	1,059	1,015	984	964	885	3	0	0	0			
DD - School Kits	8.8	2,013.79	0.931		1,874	1,874	1,340	1,340	1,340	1,340	1,340	806	806	525	0	0	0	0	0			
DD - Appliance Recycling Kits	8.9	120.17	1.000		120	120	85	85	85	85	85	48	48	33	0	0	0	0	0			
DD - Community Kits	9.1	980.22	1.000		980	980	642	641	641	641	641	357	356	356	0	0	0	0	0			
Residential NPSO	9.5	4,119.97	N/A		2,966	3,068	2,025	2,018	1,907	1,185	1,109	883	838	829	409	140	140	140	140			
Standard	13.3	199,497	0.866		172,771	172,741	171,413	168,630	165,691	162,382	160,569	159,154	156,652	154,782	151,446	122,623	85,659	80,713	80,713			
Custom	14.8	27,583	0.822		22,673	22,673	22,618	22,517	22,486	22,486	22,201	22,136	22,010	21,832	21,646	19,644	17,870	14,387	14,387			
Custom (gas conversion)	14.4	2,858	0.939		2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,586	2,416			
Retro-Commissioning	5.3	4,680	0.890		4,165	4,159	3,946	3,909	3,784	888	888	444	0	0	0	0	0	0	0			
Streetlighting	12.0	4,014	1.000		4,014	4,014	4,014	4,014	3,324	3,324	3,324	3,324	3,324	3,324	3,324	3,324	3,324	3,324	3,324			
Building Operator Certification	14.9	322	N/A		322	322	322	318	318	315	315	315	315	304	304	304	303	303	303			
Voltage Optimization	15.0	9,175	N/A		9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175	9,175			
2019 Portfolio CPAS		415,135	0.830		344,447	344,234	306,057	302,895	295,406	264,586	254,656	244,736	240,120	237,729	218,451	173,322	131,160	122,560	122,560			
Expiring 2019 Portfolio CPAS					0	213	38,178	3,162	7,489	30,820	9,930	9,920	4,616	2,391	19,278	45,128	42,162	8,600	8,600			
Expired 2019 Portfolio CPAS					0	213	38,391	41,552	49,041	79,861	89,791	99,711	104,327	106,718	125,997	171,125	213,287	221,887	221,887			

Initiative	Initiative-Level WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh																		
				2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047				
Retail Products	9.1	114,126.69	0.716	11	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0			
IQ - CAA	14.9	814.94	1.000	415	415	415	415	415	371	0	0	0	0	0	0	0	0	0	0			
IQ - SF	14.7	9,332.50	1.000	3,819	3,148	2,401	2,401	2,008	1,608	0	0	0	0	0	0	0	0	0	0			
IQ - MF	10.7	1,629.97	1.000	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
IQ - Smart Savers	11.0	2,824.24	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
IQ - SF (gas conversion)	18.5	13,120.73	1.000	6,997	6,953	6,953	6,953	6,953	7,187	34	34	34	34	34	0	0	0	0	0			
Public Housing	10.4	1,161.78	1.000	93	93	93	93	93	93	0	0	0	0	0	0	0	0	0	0			
Behavior Modification	5.0	1,060.96	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
HVAC	16.5	9,129.85	0.755	3,954	2,078	1,187	1,187	0	0	0	0	0	0	0	0	0	0	0	0			
Appliance Recycling	6.5	5,146.77	0.541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Multifamily	10.3	1,424.12	0.921	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
DD - School Kits	8.8	2,013.79	0.931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
DD - Appliance Recycling Kits	8.9	120.17	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
DD - Community Kits	9.1	980.22	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Residential NPSO	9.5	4,119.97	N/A	140	78	50	50	13	12	0	0	0	0	0	0	0	0	0	0			
Standard	13.3	199,497	0.866	69,991	802	433	385	385	385	382	382	382	0	0	0	0	0	0	0			
Custom	14.8	27,583	0.822	12,199	8,078	4,764	3,304	1,714	1,714	1,712	1,676	1,249	885	699	53	49	0	0	0			
Custom (gas conversion)	14.4	2,858	0.939	1,401	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Retro-Commissioning	5.3	4,680	0.890	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Streetlighting	12.0	4,014	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Building Operator Certification	14.9	322	N/A	281	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Voltage Optimization	15.0	9,175	N/A	9,175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2019 Portfolio CPAS		415,135	0.830	108,603	21,659	16,299	14,788	11,581	11,370	2,128	2,092	1,666	919	733	53	49	0	0	0			
Expiring 2019 Portfolio CPAS				13,957	86,944	5,359	1,511	3,207	212	9,242	36	427	746	186	681	4	49	0	0			
Expired 2019 Portfolio CPAS				295,845	322,789	328,148	329,659	332,866	333,078	342,319	342,355	342,782	343,528	343,714	344,395	344,398	344,447	344,447	344,447			
2019 Portfolio WAML	12.2																					

Figure 4. 2020 AIC Portfolio CPAS and WAML

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh																
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Retail Products	9.7	78,572	0.774			60,846	60,846	60,846	60,846	48,024	47,066	46,814	33,686	33,686	33,348	15,185	1,684	1,265		
Retail Products Carryover	9.7	16,929	0.693			11,739	11,739	11,739	11,739	7,284	7,150	7,048	5,316	5,316	5,316	0	0	0		
Income Qualified - Single Family	11.3	9,760	1.000			9,760	9,760	9,760	9,760	9,760	9,760	9,210	5,961	5,946	5,375	2,177	1,993	1,993		
Income Qualified - CAA	15.6	574	1.000			574	574	574	574	574	574	574	478	478	478	288	286	286		
Smart Savers	11.0	5,923	1.000			5,923	5,923	5,923	5,923	5,923	5,923	5,923	5,923	5,923	5,923	5,923	0	0		
Income Qualified - Multifamily	11.5	1,158	1.000			1,158	1,158	1,158	1,149	1,123	1,123	1,123	1,042	1,042	1,042	652	333	312		
Public Housing	12.6	680	1.000			680	680	680	680	652	652	652	551	551	551	368	322	277		
Multifamily	10.4	354	0.989			350	350	350	350	303	303	303	275	275	275	235	0	0		
HVAC	17.0	7,867	0.748			5,884	5,884	5,884	5,884	5,884	5,884	3,151	3,151	3,151	3,151	3,147	2,664	2,664		
Appliance Recycling	6.5	3,543	0.695			2,461	2,461	2,461	2,461	2,440	2,440	1,220	0	0	0	0	0	0		
School Kits	8.7	1,955	1.000			1,955	1,955	1,662	1,658	1,658	1,658	1,658	1,028	1,028	1,028	107	107	107		
School Kits Carryover	10.0	274	0.836			229	229	229	229	91	91	91	91	91	91	0	0	0		
AR Kits	8.9	98	1.000			98	98	98	98	98	98	98	45	45	45	0	0	0		
AR Kits Carryover	10.0	11	1.000			11	11	11	11	11	11	11	6	6	6	0	0	0		
Community Kits	9.5	5,762	1.000			5,762	5,762	5,760	5,760	5,760	5,760	5,760	2,830	2,830	2,830	0	0	0		
Smart Home Kits	8.9	169	1.000			169	169	169	169	169	169	169	61	61	61	0	0	0		
Residential NPSO	10.3	2,372	0.754			1,788	1,788	1,788	1,788	1,250	1,216	1,083	1,002	1,002	992	555	114	101		
Retail Products (gas conversion)	11.0	5,934	1.000			5,934	5,934	5,934	5,934	5,934	5,934	5,934	5,934	5,934	5,934	5,934	0	0		
Smart Savers (gas conversion)	11.0	9,572	1.000			9,572	9,572	9,572	9,572	9,572	9,572	9,572	9,572	9,572	9,572	9,572	0	0		
Standard	13.5	200,341	0.884			177,037	177,000	175,837	171,178	167,468	163,903	162,299	160,741	158,888	156,668	153,447	127,613	85,929		
Standard Carryover	13.7	6,197	0.845			5,234	5,234	5,234	5,234	4,827	4,801	4,753	4,395	4,386	4,386	4,383	4,383	4,383		
Custom	12.8	30,951	0.822			25,442	25,442	25,442	25,442	25,441	25,437	25,123	22,777	22,671	21,967	20,228	18,518	13,628		
Retro-Commissioning	6.4	4,522	0.898			4,062	4,062	4,062	3,885	3,133	2,066	2,066	1,831	1,038	0	0	0	0		
Streetlighting	12.0	31,633	0.990			31,306	31,306	31,306	31,306	29,494	29,494	29,494	29,494	29,494	29,494	29,494	29,494	0		
BOC	8.9	180	1.000			180	180	180	180	180	179	179	179	113	14	13	5	5		
Standard (gas conversion)	20.0	1,867	0.908			1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695	1,695		
Voltage Optimization	15.0	72,669	1.000			72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669	72,669		
2020 Portfolio CPAS		499,865	0.885			442,517	442,480	441,021	436,173	411,418	405,627	398,671	370,733	367,891	362,910	326,073	261,880	185,314		
Expiring 2020 Portfolio CPAS						0	37	1,458	4,849	24,755	5,791	6,956	27,939	2,841	4,982	36,837	64,192	76,566		
Expired 2020 Portfolio CPAS						0	37	1,496	6,344	31,099	36,890	43,846	71,784	74,626	79,607	116,444	180,637	257,203		

Figure 5. 2020 AIC Portfolio CPAS and WAML (Continued)

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh															
				2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
Retail Products	9.7	78,572	0.774	1,265	1,054	233	87	34	34	2	2	2	0	0	0	0	0	0	
Retail Products Carryover	9.7	16,929	0.693	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Income Qualified - Single Family	11.3	9,760	1.000	1,993	1,993	1,522	1,311	1,311	1,162	1,015	0	0	0	0	0	0	0	0	
Income Qualified - CAA	15.6	574	1.000	286	286	286	286	286	286	243	0	0	0	0	0	0	0	0	
Smart Savers	11.0	5,923	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Income Qualified - Multifamily	11.5	1,158	1.000	312	312	30	30	30	30	30	0	0	0	0	0	0	0	0	
Public Housing	12.6	680	1.000	277	277	67	67	67	67	67	0	0	0	0	0	0	0	0	
Multifamily	10.4	354	0.989	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HVAC	17.0	7,867	0.748	2,664	2,664	2,463	1,405	1,405	37	32	0	0	0	0	0	0	0	0	
Appliance Recycling	6.5	3,543	0.695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
School Kits	8.7	1,955	1.000	107	107	31	31	31	31	31	0	0	0	0	0	0	0	0	
School Kits Carryover	10.0	274	0.836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AR Kits	8.9	98	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AR Kits Carryover	10.0	11	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Community Kits	9.5	5,762	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smart Home Kits	8.9	169	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Residential NPSO	10.3	2,372	0.754	101	94	84	46	45	2	1	0	0	0	0	0	0	0	0	
Retail Products (gas conversion)	11.0	5,934	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smart Savers (gas conversion)	11.0	9,572	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Standard	13.5	200,341	0.884	79,176	69,898	624	575	526	526	526	252	252	252	0	0	0	0	0	
Standard Carryover	13.7	6,197	0.845	4,383	3,495	0	0	0	0	0	0	0	0	0	0	0	0	0	
Custom	12.8	30,951	0.822	10,059	5,335	4,085	1,690	1,161	1,161	1,161	1,098	501	379	59	59	59	59	59	
Retro-Commissioning	6.4	4,522	0.898	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Streetlighting	12.0	31,633	0.990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BOC	8.9	180	1.000	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
Standard (gas conversion)	20.0	1,867	0.908	1,695	1,695	1,695	1,695	1,695	1,695	1,695	0	0	0	0	0	0	0	0	
Voltage Optimization	15.0	72,669	1.000	72,669	72,669	0	0	0	0	0	0	0	0	0	0	0	0	0	
2020 Portfolio CPAS		499,865	0.885	174,993	159,886	11,121	7,225	6,592	5,033	4,805	1,352	755	631	59	59	59	59	59	
Expiring 2020 Portfolio CPAS				10,321	15,107	148,765	3,896	633	1,559	228	3,453	597	125	572	0	0	0	0	
Expired 2020 Portfolio CPAS				267,524	282,631	431,396	435,292	435,925	437,484	437,712	441,165	441,761	441,886	442,458	442,458	442,458	442,458	0	

Figure 6. 2020 AIC Portfolio CPAS and WAML (Continued)

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh														
				2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Retail Products	9.7	78,572	0.774	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Products Carryover	9.7	16,929	0.693	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - Single Family	11.3	9,760	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - CAA	15.6	574	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Savers	11.0	5,923	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - Multifamily	11.5	1,158	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Housing	12.6	680	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multifamily	10.4	354	0.989	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HVAC	17.0	7,867	0.748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Appliance Recycling	6.5	3,543	0.695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
School Kits	8.7	1,955	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
School Kits Carryover	10.0	274	0.836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR Kits	8.9	98	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR Kits Carryover	10.0	11	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community Kits	9.5	5,762	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Home Kits	8.9	169	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential NPSO	10.3	2,372	0.754	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Products (gas conversion)	11.0	5,934	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Savers (gas conversion)	11.0	9,572	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard	13.5	200,341	0.884	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Carryover	13.7	6,197	0.845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Custom	12.8	30,951	0.822	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Retro-Commissioning	6.4	4,522	0.898	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streetlighting	12.0	31,633	0.990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOC	8.9	180	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard (gas conversion)	20.0	1,867	0.908	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	15.0	72,669	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Portfolio CPAS		499,865	0.885	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Expiring 2020 Portfolio CPAS				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Expired 2020 Portfolio CPAS				442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458

Figure 7. 2020 AIC Portfolio CPAS and WAML (Continued)

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh														
				2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077
Retail Products	9.7	78,572	0.774	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Products Carryover	9.7	16,929	0.693	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - Single Family	11.3	9,760	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - CAA	15.6	574	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Savers	11.0	5,923	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Qualified - Multifamily	11.5	1,158	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Housing	12.6	680	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Multifamily	10.4	354	0.989	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HVAC	17.0	7,867	0.748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Appliance Recycling	6.5	3,543	0.695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
School Kits	8.7	1,955	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
School Kits Carryover	10.0	274	0.836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR Kits	8.9	98	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR Kits Carryover	10.0	11	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community Kits	9.5	5,762	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Home Kits	8.9	169	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential NPSO	10.3	2,372	0.754	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Products (gas conversion)	11.0	5,934	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smart Savers (gas conversion)	11.0	9,572	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard	13.5	200,341	0.884	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard Carryover	13.7	6,197	0.845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Custom	12.8	30,951	0.822	59	59	59	59	59	59	59	59	59	59	59	8	0	0	0
Retro-Commissioning	6.4	4,522	0.898	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streetlighting	12.0	31,633	0.990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BOC	8.9	180	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Standard (gas conversion)	20.0	1,867	0.908	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Voltage Optimization	15.0	72,669	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2020 Portfolio CPAS		499,865	0.885	59	59	59	59	59	59	59	59	59	59	59	8	0	0	0
Expiring 2020 Portfolio CPAS				0	0	0	0	0	0	0	0	0	0	0	51	59	0	0
Expired 2020 Portfolio CPAS				442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,458	442,509	442,517	442,152	442,152

Figure 8. 2021 AIC Portfolio CPAS and WAML

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	CPAS - Verified Net MWh													
				2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Retail Products	9.8	66,523	0.831	55,264	55,264	55,264	55,264	46,745	45,792	45,486	35,648	35,517	35,249	13,466	2,693	2,029	2,029
Retail Products Carryover	9.5	15,454	0.690	10,666	10,666	10,666	10,666	6,814	6,683	6,458	5,468	5,468	5,468	0	0	0	0
Income Qualified - Single Family	11.6	8,216	1.000	8,216	8,216	8,207	8,207	8,207	8,207	7,720	5,456	5,443	5,443	1,753	1,622	1,619	1,619
Income Qualified - CAA	15.9	642	1.000	642	642	642	642	642	642	642	591	591	591	375	375	375	375
Smart Savers	11.0	4,163	1.000	4,163	4,163	4,163	4,163	4,163	4,163	4,163	4,163	4,163	4,163	4,163	0	0	0
Income Qualified - Multifamily	11.5	3,777	1.000	3,777	3,777	3,777	3,777	3,680	3,680	3,649	3,366	3,348	3,348	1,981	875	866	866
Income Qualified Carryover	10.0	638	1.000	638	638	638	638	638	638	638	459	459	459	0	0	0	0
Public Housing	12.6	808	1.000	808	808	808	808	739	739	723	664	664	664	402	360	327	327
Multifamily	10.9	1,375	0.906	1,247	1,247	1,247	1,247	1,149	1,149	1,146	1,118	1,118	1,118	862	55	55	55
Home Efficiency - Market Rate	15.0	135	0.833	112	112	112	112	105	105	105	105	100	100	96	51	51	51
HVAC	15.9	3,171	0.807	2,561	2,561	2,561	2,561	2,561	2,561	2,560	2,560	2,560	2,560	2,557	2,339	2,339	2,339
Appliance Recycling	6.4	5,167	0.487	2,515	2,515	2,515	2,515	2,457	2,457	1,228	0	0	0	0	0	0	0
AR Kits	8.9	691	0.961	663	663	663	663	575	575	575	303	303	303	0	0	0	0
AR Kits Carryover	10.0	10	1.000	10	10	10	10	10	10	10	8	8	8	0	0	0	0
School Kits	8.9	2,389	1.000	2,389	2,389	2,057	2,057	2,057	2,057	2,057	1,425	1,425	1,425	196	196	196	196
School Kits Carryover	10.0	188	0.977	184	184	184	184	170	170	170	136	136	136	0	0	0	0
Community Kits	9.5	7,558	1.000	7,558	7,558	7,554	7,554	7,554	7,554	7,554	5,215	4,795	4,795	0	0	0	0
Community Kits Carryover	10.0	540	1.000	540	540	540	540	540	540	540	426	426	426	0	0	0	0
Efficient Choice	13.2	630	0.683	430	430	430	430	412	412	412	399	399	349	326	290	245	245
Residential NPSO	10.2	1,614	0.712	1,149	1,149	1,149	1,149	861	861	823	778	776	768	379	121	104	104
Retail Products (gas conversion)	11.0	7,020	0.935	6,564	6,564	6,564	6,564	6,564	6,564	6,564	6,564	6,564	6,564	6,564	0	0	0
Smart Savers (gas conversion)	11.0	10,844	1.000	10,844	10,844	10,844	10,844	10,844	10,844	10,844	10,844	10,844	10,844	10,844	0	0	0
Standard - Core	13.1	36,741	0.825	30,325	30,325	30,296	30,135	29,768	29,590	29,441	29,278	29,190	27,294	25,063	20,004	15,657	14,962
Standard - SBDI	13.4	103,675	0.908	94,157	94,157	93,624	90,230	87,473	86,062	85,104	84,404	83,664	81,411	76,586	60,379	34,668	29,927
Standard - OS	9.5	670	0.974	653	653	652	645	507	495	478	434	421	419	391	2	2	2
Standard - II	14.2	40,497	0.794	32,144	32,144	32,144	32,144	31,393	31,393	31,305	30,127	30,031	30,031	30,024	30,024	30,024	29,776
Standard - II Carryover	14.1	6,186	0.916	5,667	5,667	5,667	5,667	5,538	5,528	5,510	5,364	5,364	5,364	5,362	5,362	5,362	5,290
Custom	15.2	47,151	0.822	38,768	38,768	38,768	38,768	38,720	38,379	37,592	37,257	37,206	36,021	32,469	30,178	25,557	23,179
Retro-Commissioning	8.6	258	0.940	242	242	242	242	242	242	242	242	145	0	0	0	0	0
Virtual Commissioning	7.3	4,593	1.000	4,593	4,593	4,593	4,593	4,593	4,593	4,593	1,378	0	0	0	0	0	0
Streetlighting	20.0	25,533	0.991	25,301	25,301	25,301	24,105	24,105	24,105	24,105	24,105	24,105	24,105	24,105	24,105	24,105	24,105
BOC	15.0	47	N/A	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Custom (gas conversion)	15.5	3,969	0.939	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725	3,725
Voltage Optimization	15.0	95,431	N/A	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431	95,431
2021 Portfolio CPAS		506,305	0.893	451,995	451,995	451,086	446,329	429,028	425,994	421,643	397,489	394,439	388,631	337,169	278,234	242,787	234,652
Expiring 2021 Portfolio CPAS				0	0	908	4,758	17,300	3,035	4,351	24,153	3,050	5,808	51,463	58,935	35,447	8,135
Expired 2021 Portfolio CPAS				0	0	908	5,666	22,966	26,001	30,352	54,506	57,556	63,363	114,826	173,761	209,208	217,343

Figure 9. 2021 AIC Portfolio CPAS and WAML (Cont.)

Initiative/Channel	WAML	First-Year Verified Gross MWh	NTGR	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	Lifetime Savings
Retail Products	9.8	66,523	0.831	1,539	366	157	35	35	8	8	8	0	0	0	0	0	0	487,864
Retail Products Carryover	9.5	15,454	0.690	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79,024
Income Qualified - Single Family	11.6	8,216	1.000	1,619	1,347	1,198	1,198	1,143	1,006	0	0	0	0	0	0	0	0	87,443
Income Qualified - CAA	15.9	642	1.000	375	375	375	375	375	310	0	0	0	0	0	0	0	0	9,959
Smart Savers	11.0	4,163	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45,797
Income Qualified - Multifamily	11.5	3,777	1.000	866	104	104	104	104	104	0	0	0	0	0	0	0	0	42,157
Income Qualified Carryover	10.0	638	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,843
Public Housing	12.6	808	1.000	327	65	65	65	65	65	0	0	0	0	0	0	0	0	9,490
Multifamily	10.9	1,375	0.906	55	6	6	6	6	6	0	0	0	0	0	0	0	0	12,901
Home Efficiency - Market Rate	15.0	135	0.833	51	51	51	51	51	44	0	0	0	0	0	0	0	0	1,617
HVAC	15.9	3,171	0.807	2,339	1,502	842	842	0	0	0	0	0	0	0	0	0	0	40,704
Appliance Recycling	6.4	5,167	0.487	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,202
AR Kits	8.9	691	0.961	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,287
AR Kits Carryover	10.0	10	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98
School Kits	8.9	2,389	1.000	196	95	95	95	95	95	0	0	0	0	0	0	0	0	20,794
School Kits Carryover	10.0	188	0.977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,654
Community Kits	9.5	7,558	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67,693
Community Kits Carryover	10.0	540	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,059
Efficient Choice	13.2	630	0.683	222	52	43	1	1	1	1	1	0	0	0	0	0	0	5,531
Residential NPSO	10.2	1,614	0.712	95	57	32	29	3	2	0	0	0	0	0	0	0	0	10,388
Retail Products (gas conversion)	11.0	7,020	0.935	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72,203
Smart Savers (gas conversion)	11.0	10,844	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119,288
Standard - Core	13.1	36,741	0.825	14,742	396	362	328	328	328	108	108	108	0	0	0	0	0	388,135
Standard - SBDI	13.4	103,675	0.908	28,666	0	0	0	0	0	0	0	0	0	0	0	0	0	1,110,512
Standard - OS	9.5	670	0.974	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5,754
Standard - II	14.2	40,497	0.794	22,682	0	0	0	0	0	0	0	0	0	0	0	0	0	455,384
Standard - II Carryover	14.1	6,186	0.916	3,909	0	0	0	0	0	0	0	0	0	0	0	0	0	80,622
Custom	15.2	47,151	0.822	13,227	10,722	10,722	10,052	9,965	3,750	925	912	243	35	27	0	0	0	552,207
Retro-Commissioning	8.6	258	0.940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,084
Virtual Commissioning	7.3	4,593	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,529
Streetlighting	20.0	25,533	0.991	24,105	24,105	24,105	24,105	24,105	24,105	0	0	0	0	0	0	0	0	485,692
BOC	15.0	47	N/A	47	0	0	0	0	0	0	0	0	0	0	0	0	0	709
Custom (gas conversion)	15.5	3,969	0.939	3,725	2,029	0	0	0	0	0	0	0	0	0	0	0	0	57,902
Voltage Optimization	15.0	95,431	N/A	95,431	0	0	0	0	0	0	0	0	0	0	0	0	0	1,431,469
2021 Portfolio CPAS		506,305	0.893	214,220	41,274	38,159	37,288	36,277	29,825	1,041	1,029	351	35	27	0	0	0	5,750,997
Expiring 2021 Portfolio CPAS				20,432	172,946	3,115	871	1,011	6,452	28,783	13	678	316	9	27	0	0	
Expired 2021 Portfolio CPAS				237,775	410,721	413,836	414,707	415,718	422,170	450,953	450,966	451,644	451,959	451,968	451,995	451,995	451,995	
WAML	13.3																	

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