

Ameren Illinois Company

2024 Residential Program Impact Evaluation Report

Draft

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# Executive Summary

This report presents impact evaluation results from Ameren Illinois Company’s (AIC) 2024 Residential Program. The Residential Program is part of AIC’s overall portfolio of residential and nonresidential energy efficiency programs implemented during 2024. The overarching objective of the 2024 Residential Program impact evaluation is to determine gross and net electric energy, electric demand, and fossil fuel impacts associated with the Program.

## Program Overview

The Residential Program is formally made up of six initiatives, most of which are further broken down into channels:

* Retail Products Initiative
  + Point of Sale (POS) channel
  + Downstream Rebate channel
  + Online Marketplace channel
* Income Qualified (IQ) Initiative
  + Single Family channel, including the Accessibility Pilot
  + Community Action Agency (CAA) channel, including Food Bank Holiday Kits
  + Joint Utility channel, including Joint Utility School Kits and Bloomington-Normal (BN) Kits
  + Smart Savers channel
  + Mobile Homes and Air Sealing (MHAS) channel, including Mobile Home Kits
  + Healthier Homes channel
  + Electrification channel
  + Community Kits channel
  + Multifamily channel
  + Retail Products channel
* Public Housing Initiative
* Market Rate Multifamily Initiative
* Market Rate Single Family Initiative
  + Midstream HVAC channel
  + Home Efficiency channel
* Direct Distribution Efficient Products (Direct Distribution) Initiative
  + School Kits channel
  + High School Innovation channel

The Program’s Initiatives are designed to achieve energy savings in accordance with AIC’s plan filing and to provide energy efficiency services and assistance to customers through a wide range of channels. The Retail Products Initiative, which provides POS discounts and rebates to customers purchasing energy-efficient products, is the largest component of the Program from an electric energy and gas savings perspective. The IQ Initiative, which provides whole-home retrofit services and energy efficiency measures through a variety of channels, is the largest component of the Program from a program cost perspective.

To best serve AIC and stakeholders, we have considered the delivery strategy and unique characteristics for each AIC offering at the initiative and channel level and have organized our evaluation activities to optimize the use of evaluation resources, minimize customer touchpoints, and strengthen research insights. As a result, evaluation efforts are not always organized in a way that perfectly aligns with formal portfolio organization. Our report makes the following organizational reporting choices:

* The portion of the Retail Products Initiative delivered to IQ customers is grouped with the portion delivered to Market Rate customers, as program delivery is not differentiated.
* The IQ Initiative’s channels that focus on delivering measures directly to single family customer homes (as differentiated from retail, multifamily, or kit-based offerings) are grouped together as the IQ Initiative – Single Family channels.
* The three separate AIC efforts that deliver services to multifamily customers (the Multifamily channel of the IQ Initiative, all channels of the Market Rate Multifamily Initiative, and the Public Housing Initiative) are grouped together as program delivery is coordinated across these channels.
* All AIC efforts that deliver efficiency measures to residential customers through kits or other similar delivery channels are grouped together as evaluation efforts for these efforts are similar.

## Policy Background

This report covers the third calendar year of AIC’s sixth Electric and Gas Energy Efficiency and Demand Response Plan, covering calendar years 2022–2025 (Plan 6). AIC’s Plan 6 portfolio is governed by components of Illinois state law (220 ILCS 5/8-103B [Section 8-103B] and 220 ILCS 5/8-104 [Section 8-104]) that direct large, regulated utilities to offer electric and gas energy efficiency programs. Section 8-103B and Section 8-104 were most recently substantively revised through the passage of Illinois Public Act 102-0662 (the Climate and Equitable Jobs Act, or CEJA) in September 2021.

Section 8-103B and Section 8-104 define key policy points relevant to the evaluation of the 2024 AIC Residential Program. These are summarized below as context for this evaluation report.

* **Cumulative Persisting Annual Savings (CPAS):** Since 2018, electric energy savings goals for Illinois utilities have been primarily defined based on persisting savings as a percentage of sales. As such, annual evaluations of AIC’s electric energy efficiency programs must present both annual and persisting savings over the life of delivered measures. As a result, AIC and its program implementer have sought to deliver programs that achieve savings that persist for longer periods of time.
* **Weighted Average Measure Life (WAML):** Section 8-103B allows AIC to create a regulatory asset from all of its 8-103B expenditures, and amortize and recover the total expenditures of that regulatory asset “over a period that is equal to the weighted average of the measure lives implemented for that year that are reflected in the regulatory asset.”[[1]](#footnote-1) Therefore, annual evaluations of AIC’s electric energy efficiency programs must present a WAML in accordance with the guidelines for calculation presented in the Illinois Stakeholder Advisory Group’s (SAG) WAML Report and the Illinois Energy Efficiency Policy Manual.[[2]](#footnote-2)
* **Applicable Annual Incremental Goal (AAIG):** Section 8-103B allows AIC to earn a rate of return on their electric energy efficiency spending if they create a regulatory asset, as discussed above. The rate of return that is earned can be adjusted either up or down as a function of AIC’s performance relative to its AAIG. The AAIG is defined as the difference between the cumulative persisting electric savings goal for the year being evaluated and the cumulative persisting electric savings goal for the previous year. AIC must achieve sufficient savings through its programs to replace savings from measures at the end of their measure life before progress can be counted toward the AAIG. Therefore, annual evaluations of AIC’s electric energy efficiency programs must assess AIC’s performance against its AAIG.
* **(b-25) Savings Conversion:** Subsection (b-25) of Section 8-103B allows electric utilities to “convert” savings achieved for other fuels, including natural gas, to electric savings for the purposes of goal attainment in certain cases. The total amount of savings allowed to be converted is capped at a maximum of 10% of the utility’s applicable annual total savings requirement.[[3]](#footnote-3),[[4]](#footnote-4) Savings AIC claimed in 2024 via (b-25) conversions are presented in the *2024 AIC Integrated Impact Evaluation Report*; this report presents actual savings achieved for all fuels with the exception of electrification savings, as discussed below.
* **Electrification:** CEJA added statutory language in subsection (b-27) of Section 8-103B that enables electric utilities to use their energy efficiency programs to offer and promote measures that electrify end uses, such as space and water heating, that would otherwise be served by fossil fuels. Utilities are instructed to claim those savings as the kWh equivalent of the change in site energy consumption due to electrification.

As a result, AIC has pursued program strategies in Plan 6 that seek to begin limited electrification activities. In particular, the utility has launched targeted efforts to electrify end uses for low-income customers currently served by delivered fuels, such as propane. We report on AIC’s 2024 electrification efforts in Section 3.2.9 of this report. Statutorily required reporting around these efforts is presented in Appendix G.

## Program Savings

In the following sections, the evaluation team presents annual savings (annualized 2024 energy savings) and CPAS for AIC's Residential Program. As discussed in greater detail in the *2024 AIC Integrated Impact Evaluation Report*, AIC’s performance compared to its AAIG is determined based on both types of savings.

### Annual Savings

The 2024 Residential Program achieved 144,088 MWh, 19.93 MW, and 2,664,263 therms in verified net savings. These savings include a nonparticipant spillover (NPSO) adder to net savings.[[5]](#footnote-5),[[6]](#footnote-6) Table 1, Table 2, and Table 3 present ex ante gross, verified gross, and verified net electric energy, electric demand, and gas savings by initiative and channel for the 2024 Residential Program.

Table 1. 2024 Residential Program Electric Energy Annual Savings Summary

| Initiative/Channel | Ex Ante  Gross MWh | Gross Realization Rate | Verified  Gross MWh | Net-to-Gross Ratio (NTGR) | Verified  Net MWh |
| --- | --- | --- | --- | --- | --- |
| Retail Products – Income Qualified | 84,539 | 98% | 82,468 | 0.904 | 74,582 |
| Retail Products – Market Rate | 19,847 | 97% | 19,244 | 0.828 | 15,927 |
| Retail Products – Income Qualified Carryovera | 0 | N/A | 4,663 | 0.908 | 4,236 |
| Retail Products – Market Rate Carryovera | 0 | N/A | 5,196 | 0.713 | 3,706 |
| Income Qualified – Single Family | 5,194 | 94% | 4,857 | 1.000 | 4,857 |
| Income Qualified – CAA | 844 | 101% | 852 | 1.000 | 852 |
| Income Qualified – Joint Utility | 166 | 102% | 169 | 1.000 | 169 |
| Income Qualified – Smart Savers | 398 | 98% | 390 | 0.998 | 389 |
| Income Qualified – MHAS | 293 | 102% | 297 | 1.000 | 297 |
| Income Qualified – Healthier Homes | 37 | 110% | 41 | 1.000 | 41 |
| Income Qualified – Electrification | 358 | 102% | 365 | 1.000 | 365 |
| Income Qualified – Carryovera | 0 | N/A | 32 | 1.000 | 32 |
| Multifamily – Income Qualified | 11,776 | 95% | 11,136 | 1.000 | 11,136 |
| Multifamily – Market Rate | 2,160 | 100% | 2,159 | 0.950 | 2,052 |
| Multifamily – Public Housing | 1,614 | 85% | 1,371 | 1.000 | 1,371 |
| Market Rate Single Family – Midstream HVAC | 9,885 | 99% | 9,753 | 0.743 | 7,248 |
| Market Rate Single Family – Midstream HVAC  Market Effects | 0 | N/A | 0 | N/A | 1,597 |
| Market Rate Single Family – Home Efficiency | 146 | 98% | 143 | 0.830 | 118 |
| Kits – Full School Kits | 6,470 | 121% | 7,827 | 1.000 | 7,827 |
| Kits – Joint Utility School Kits | 713 | 144% | 1,028 | 1.000 | 1,028 |
| Kits – High School Innovation | 1,022 | 113% | 1,152 | 1.000 | 1,152 |
| Kits – Income Qualified Community Kits | 1,670 | 100% | 1,665 | 1.000 | 1,665 |
| Kits – Mobile Home Kits | 216 | 100% | 216 | 1.000 | 216 |
| Kits – BN Community Kits | 110 | 100% | 110 | 1.000 | 110 |
| Kits – Food Bank Holiday Kits | 1,792 | 100% | 1,792 | 1.000 | 1,792 |
| Kits – Carryovera | 0 | N/A | 373 | 1.000 | 373 |
| *Residential Program Subtotal* | *149,250* | *99%* | *157,298* | *0.910* | *143,138* |
| Residential NPSO Adder |  |  |  |  | 901 |
| Residential Program Total |  |  |  |  | 144,038 |

a Carryover savings are achieved through installation of measures during 2024 that were distributed or rebated in prior program years. For clarity, we break out carryover savings separately throughout this report.

b Calculations of gross realization rate at the Residential Program level exclude categories of savings with no ex ante savings.

Table 2. 2024 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 – Income Qualified | 18.14 | 57% | 10.39 | 0.908 | 9.43 |
| Retail Products – Market Rate | 4.02 | 99% | 4.00 | 0.787 | 3.15 |
| Retail Products – Income Qualified Carryovera | 0.00 | N/A | 0.60 | 0.908 | 0.55 |
| Retail Products – Market Rate Carryovera | 0.00 | N/A | 0.69 | 0.713 | 0.49 |
| Income Qualified – Single Family | 0.98 | 96% | 0.94 | 1.000 | 0.94 |
| Income Qualified – CAA | 0.20 | 101% | 0.20 | 1.000 | 0.20 |
| Income Qualified – Joint Utility | 0.08 | 103% | 0.08 | 1.000 | 0.08 |
| Income Qualified – Smart Savers | 0.15 | 100% | 0.15 | 0.997 | 0.15 |
| Income Qualified – MHAS | 0.06 | 113% | 0.07 | 1.000 | 0.07 |
| Income Qualified – Healthier Homes | 0.02 | 101% | 0.02 | 1.000 | 0.02 |
| Income Qualified – Electrification | 0.01 | 159% | 0.01 | 1.000 | 0.01 |
| Income Qualified – Carryovera | 0.00 | N/A | 0.004 | 1.000 | 0.004 |
| Multifamily – Income Qualified | 0.65 | 85% | 0.55 | 1.000 | 0.55 |
| Multifamily – Market Rate | 0.28 | 100% | 0.28 | 0.984 | 0.28 |
| Multifamily – Public Housing | -0.01 | 147% | -0.01 | 1.000 | -0.01 |
| Market Rate Single Family – Midstream HVAC | 2.04 | 100% | 2.04 | 0.743 | 1.52 |
| Market Rate Single Family – Midstream HVAC  Market Effects | 0.00 | N/A | 0.00 | N/A | 0.28 |
| Market Rate Single Family – Home Efficiency | 0.06 | 100% | 0.06 | 0.840 | 0.05 |
| Kits – Full School Kits | 0.99 | 116% | 1.15 | 1.000 | 1.15 |
| Kits – Joint Utility School Kits | 0.15 | 96% | 0.15 | 1.000 | 0.15 |
| Kits – High School Innovation | 0.15 | 105% | 0.16 | 1.000 | 0.16 |
| Kits – Income Qualified Community Kits | 0.22 | 98% | 0.21 | 1.000 | 0.21 |
| Kits – Mobile Home Kits | 0.03 | 100% | 0.03 | 1.000 | 0.03 |
| Kits – BN Community Kits | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Kits – Food Bank Holiday Kits | 0.23 | 100% | 0.23 | 1.000 | 0.23 |
| Kits – Carryovera | 0.00 | N/A | 0.04 | 1.000 | 0.04 |
| *Residential Program Subtotal* | *28.46* | *73%* | *22.06* | *0.895* | *19.75* |
| Residential NPSO Adder |  |  |  |  | 0.17 |
| Residential Program Total |  |  |  |  | 19.92 |

a Carryover savings are those savings achieved through installation of measures during 2024 that were distributed or rebated in prior program years. For clarity, we break out carryover savings separately throughout this report.

b Calculations of gross realization rate at the Residential Program level exclude categories of savings with no ex ante savings.

Table 3. 2024 Residential Program Gas Annual Savings Summary

| Initiative/Channel | Ex Ante  Gross Therms | Gross Realization Rate | Verified  Gross Therms | NTGR | Verified  Net Therms |
| --- | --- | --- | --- | --- | --- |
| Retail Products – Income Qualified | 492,594 | 101% | 495,312 | 1.000 | 495,312 |
| Retail Products – Market Rate | 1,068,064 | 100% | 1,066,142 | 0.891 | 949,852 |
| Income Qualified – Single Family | 352,182 | 100% | 353,137 | 1.000 | 353,137 |
| Income Qualified – CAA | 320 | 100% | 320 | 1.000 | 320 |
| Income Qualified – Smart Savers | 53,473 | 101% | 53,902 | 0.999 | 53,821 |
| Income Qualified – MHAS | 39,289 | 100% | 39,290 | 1.000 | 39,290 |
| Income Qualified – Healthier Homes | 8,560 | 99% | 8,487 | 1.000 | 8,487 |
| Multifamily – Income Qualified | 51,797 | 98% | 50,990 | 1.000 | 50,990 |
| Multifamily – Market Rate | 16,890 | 102% | 17,185 | 0.998 | 17,159 |
| Multifamily – Public Housing | 15,501 | 98% | 15,182 | 1.000 | 15,182 |
| Market Rate Single Family – Midstream HVAC | 359,002 | 100% | 358,933 | 0.833 | 298,879 |
| Market Rate Single Family – Midstream HVAC  Market Effects | 0 | N/A | 0 | N/A | 18,603 |
| Market Rate Single Family – Home Efficiency | 26,824 | 97% | 26,131 | 0.826 | 21,579 |
| Kits – Full School Kits | 204,325 | 97% | 197,204 | 1.000 | 197,204 |
| Kits – High School Innovation | 30,435 | 76% | 23,235 | 1.000 | 23,235 |
| Kits – Income Qualified Community Kits | 40,955 | 100% | 40,947 | 1.000 | 40,947 |
| Kits – Mobile Home Kits | 2,799 | 100% | 2,799 | 1.000 | 2,799 |
| *Residential Program Subtotal* | 2,763,010 | 100% | 2,749,195 | 0.941 | 2,586,796 |
| Residential NPSO Adder |  |  |  |  | 56,649 |
| Residential Program Total |  |  |  |  | 2,643,444 |

a Calculations of gross realization rate at the Residential Program level exclude categories of savings with no ex ante savings.

### Cumulative Persisting Annual Savings

Table 4 summarizes CPAS and WAML for the 2024 Residential Program. For additional detail related to CPAS and measure life, please see the individual subsections in Section 3 and Appendix C, which present CPAS achieved in each future year. The overall WAML for the 2024 Residential Program is 10.3 years.

Table 4. 2024 Residential Program CPAS and WAML

| Initiative/Channel | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | 2025 | | 2026 | 2027 | … | 2030 | … |
| Retail Products – Income Qualified | 8.8 | 82,468 | 0.904 | 74,582 | 74,582 | | 74,582 | 74,582 | … | 74,582 | … | 658,910 |
| Retail Products – Market Rate | 10.9 | 19,244 | 0.828 | 15,927 | 15,927 | | 15,927 | 15,927 | … | 15,904 | … | 173,188 |
| Retail Products – Income Qualified Carryover | 10.0 | 4,663 | 0.908 | 4,236 | 4,236 | | 4,236 | 4,236 | … | 4,236 | … | 39,443 |
| Retail Products – Market Rate Carryover | 9.4 | 5,196 | 0.713 | 3,706 | 3,706 | | 3,706 | 3,706 | … | 1,498 | … | 24,173 |
| Income Qualified – Single Family | 14.8 | 4,857 | 1.000 | 4,857 | 4,857 | | 4,857 | 4,857 | … | 4,209 | … | 65,068 |
| Income Qualified – CAA | 17.9 | 852 | 1.000 | 852 | 852 | | 852 | 851 | … | 771 | … | 14,056 |
| Income Qualified – Joint Utility | 17.9 | 169 | 1.000 | 169 | 169 | | 169 | 169 | … | 169 | … | 2,561 |
| Income Qualified – Healthier Homes | 15.7 | 41 | 1.000 | 41 | 41 | | 41 | 41 | … | 27 | … | 504 |
| Income Qualified – Smart Savers | 11.0 | 390 | 0.998 | 389 | 389 | | 389 | 389 | … | 389 | … | 4,283 |
| Income Qualified – MHAS | 17.3 | 297 | 1.000 | 297 | 297 | | 297 | 297 | … | 244 | … | 4,859 |
| Income Qualified – Electrification | 17.8 | 365 | 1.000 | 365 | 365 | | 365 | 365 | … | 352 | … | 5,996 |
| Income Qualified – Carryover | 10.0 | 32 | 1.000 | 32 | 32 | | 32 | 32 | … | 32 | … | 293 |
| Multifamily – Income Qualified | 12.9 | 11,136 | 1.000 | 11,136 | 11,136 | | 11,136 | 11,136 | … | 10,892 | … | 141,243 |
| Multifamily – Market Rate | 12.1 | 2,159 | 0.950 | 2,052 | 2,052 | | 2,052 | 2,052 | … | 2,025 | … | 24,176 |
| Multifamily – Public Housing | 14.7 | 1,371 | 1.000 | 1,371 | 1,371 | | 1,371 | 1,371 | … | 1,371 | … | 20,106 |
| Market Rate Single Family – Midstream HVAC | 16.0 | 9,753 | 0.743 | 7,248 | 7,248 | | 7,248 | 7,248 | … | 7,248 | … | 116,040 |
| Market Rate Single Family – Midstream HVAC Market Effects | 15.7 | 1,597 | N/A | 1,597 | 1,597 | | 1,597 | 1,597 | … | 1,597 | … | 25,145 |
| Market Rate Single Family – Home Efficiency | 25.7 | 143 | 0.830 | 118 | 118 | | 118 | 118 | … | 118 | … | 2,791 |
| Kits – Full School Kits | 9.5 | 7,827 | 1.000 | 7,827 | 7,827 | | 6,962 | 6,962 | … | 6,962 | … | 74,254 |
| Kits – Joint Utility School Kits | 10.9 | 1,152 | 1.000 | 1,152 | 1,152 | | 1,152 | 1,152 | … | 1,152 | … | 12,535 |
| Kits – High School Innovation | 9.1 | 1,665 | 1.000 | 1,665 | 1,665 | | 1,665 | 1,665 | … | 1,665 | … | 15,073 |
| Kits – Income Qualified Community Kits | 8.2 | 216 | 1.000 | 216 | 216 | | 216 | 216 | … | 216 | … | 1,769 |
| Kits – Mobile Home Kits | 9.6 | 1,028 | 1.000 | 1,028 | 1,028 | | 929 | 929 | … | 929 | … | 9,825 |
| Kits – BN Community Kits | 7.9 | 110 | 1.000 | 110 | 110 | | 110 | 110 | … | 110 | … | 843 |
| Kits – Food Bank Holiday Kits | 7.6 | 1,792 | 1.000 | 1,792 | 1,792 | | 1,792 | 1,792 | … | 1,792 | … | 13,677 |
| Kits – Carryover | 9.9 | 373 | 1.000 | 373 | 373 | | 373 | 373 | … | 373 | … | 3,408 |
| Residential NPSO Adder | 12.2 | 901 | N/A | 901 | 901 | | 901 | 901 | … | 831 | … | 10,551 |
| 2024 CPAS |  | 159,796 | 0.901 | 144,038 | 144,038 | | 143,074 | 143,073 | … | 139,693 | … | 1,464,770 |
| Expiring 2024 CPAS |  |  |  | 0 | 0 | | 964 | 1 | … | 1,149 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | 0 | | 964 | 965 | … | 4,346 | … |  |
| WAML | 10.3 |  |  |  |  |  | |  |  |  |  |  |

# Evaluation Approach

The following section of the report describes the evaluation approach taken for the 2024 Residential Program impact evaluation. As part of the evaluation process, the evaluation team applied versions of the Illinois Energy Efficiency Policy Manual and the Illinois Technical Reference Manual (IL-TRM) applicable to the 2024 program year (Version 3.0 [V3.0] and Version 12.0 [V12.0], respectively) wherever relevant.[[7]](#footnote-7) Appendix A of this report provides detailed, initiative-specific methodology where appropriate.

## Research Objectives and Evaluation Approach

The overarching research objectives for the impact evaluation of AIC’s 2024 Residential Program are as follows:

* Estimate the gross energy and demand impacts from the Program
* Estimate the net energy and demand impacts from the Program

The evaluation team met these objectives by conducting the impact evaluation activities listed in Table 5. As shown, the impact evaluation for each initiative primarily consisted of applying savings algorithms from the IL-TRM V12.0 to final initiative tracking databases to estimate verified gross savings and applying SAG-approved net-to-gross ratios (NTGRs) to these verified gross savings to derive verified net savings. In addition, we reviewed initiative materials and interviewed initiative managers.

Table 5. 2024 Residential Program Impact Evaluation Activities

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Initiative | Gross Impacts | | | | Net Impacts |
| IL-TRM Application Review | Engineering Desk Reviews | On-Site Measurement and Verification | Consumption Analysis | Application of SAG-Approved NTGRs |
| Retail Products Initiative | ü |  |  |  | ü |
| Income Qualified Initiative | ü |  |  |  | ü |
| Multifamily Initiatives | ü |  |  |  | ü |
| Market Rate Single Family Initiativea | ü |  |  |  | ü |
| Kits Initiatives | ü |  |  |  | ü |

a The Market Rate Single Family Initiative’s Midstream HVAC channel includes net savings associated with market effects resulting from channel influences on sales of non-incentivized energy-efficient equipment. In addition to IL-TRM assumptions, market effects savings rely on supplementary distributor sales data and primary research with distributors and contractors, as detailed in Appendix A.

The following sections provide further detail on the approaches to estimating verified gross and net savings.

## Verified Gross Impact Analysis Approach

### Application of IL-TRM V12.0

To determine verified gross impacts associated with the measures delivered through the Residential Program, we reviewed the content of the initiative tracking databases to identify database errors and duplicate records and ensure that the implementer correctly applied savings algorithms and assumptions stated in the IL-TRM V12.0 and the IL-TRM V12.0 errata document. In particular, we applied the algorithms and assumptions provided in the IL-TRM V12.0 while using project-specific data from the initiative tracking databases as inputs where appropriate. We also verified measure installations through analysis of initiative tracking databases and review of supporting project documentation. Appendix A provides detailed information on the IL-TRM V12.0 measures used in this evaluation.

Additionally, we resolved any discrepancies found in the databases—details related to any gross savings adjustments are provided in the initiative-specific sections of this report. Finally, in accordance with Illinois policy, the evaluation team omitted gas penalties and non-AIC fossil fuel savings from savings reported in the body of this report. Appendix B presents details on these additional impacts for cost-effectiveness purposes.

### Carryover Savings

In addition to savings achieved by AIC’s Residential Program through measures delivered during the 2024 program year, AIC also claims savings in 2024 from lighting measures distributed by the Residential Program in prior years but not installed until 2024. Carryover savings claimed in 2024 are associated with lighting measures distributed in 2022 through the Retail Products, Income Qualified, and Kits Initiatives.

Carryover savings are estimated primarily based on assumptions outlined in the IL-TRM V12.0, which recommends application of assumptions from the IL-TRM V10.0 and IL-TRM V10.0 errata measures memo.[[8]](#footnote-8) We reported previously on AIC’s 2024 carryover savings as part of an earlier memo.[[9]](#footnote-9) Carryover savings are not reported as part of individual initiative subsections in Section 3.

## Verified Net Impact Analysis Approach

To determine verified net savings for the 2024 Residential Program, we generally applied SAG-approved NTGRs to verified gross savings. Details on SAG-approved NTGRs are presented in Appendix A. For the Market Rate Single Family Initiative’s Midstream HVAC channel, we estimated net savings associated with market effects resulting from channel influences on sales of non-incentivized energy-efficient equipment, which relied on supplementary distributor sales data and primary research with distributors and contractors, as detailed in Appendix A. Two other items affected net savings in 2024, as detailed below.

### Disadvantaged Areas Net-to-Gross Policy

Section 7.4 of the Illinois Policy Manual Version 3.0 outlines the NTGR for Disadvantaged Areas policy.[[10]](#footnote-10) The policy recognizes that free ridership among certain types of customers in economically disadvantaged areas is likely very low; therefore, it directs the application of a NTGR of 1.000 for eligible customers, superseding the SAG-approved NTGRs that would otherwise be applied.

For AIC’s Residential Program, the policy applies to program activity in disadvantaged neighborhoods. The policy defines disadvantaged neighborhoods as areas identified as “income-eligible households” by Illinois Solar for All. A large portion of the Residential Program focuses on serving low-income customers and therefore already uses a NTGR of 1.000 in accordance with Policy Manual Section 7.3 (NTGR for Income Eligible Programs).[[11]](#footnote-11) Therefore, the NTGR for Disadvantaged Areas policy does not affect the majority of the channels analyzed in this report. Furthermore, we do not apply the policy to the Retail Products Initiative because the approach used to establish the portion of Retail Products measures delivered to IQ customers overlaps significantly with the policy. Therefore, this policy only affects NTGRs for the Market Rate Multifamily and Market Rate Single Family Initiatives in this report.

Further details on our approach to applying the policy and a list of disadvantaged neighborhoods are available for reference in Opinion Dynamics’ July 2024 presentation to the Illinois SAG.[[12]](#footnote-12)

### Nonparticipant Spillover

Net impact evaluation of AIC’s Residential Program includes an NPSO adder to net savings achieved by non-income qualified (non-IQ) efforts. This NPSO adder is 3.1% for non-IQ electric savings (energy and demand) and 4.4% for non-IQ gas savings.[[13]](#footnote-13) Table 6 summarizes verified, non-IQ net savings for AIC’s Residential Program by initiative and computes the NPSO adder as defined above.

Table 6. 2024 Residential Program Verified Net Savings Summary for Non-IQ Initiatives

| Initiative/Channel | Verified Net MWh | Verified Net MW | Verified Net Therms |
| --- | --- | --- | --- |
| Retail Products – Market Rate | 15,927 | 3.15 | 949,852 |
| Retail Products – Market Rate Carryover | 3,706 | 0.49 | N/A |
| Multifamily – Market Rate | 2,052 | 0.28 | 17,159 |
| Market Rate Single Family – Midstream HVAC | 7,248 | 1.52 | 298,879 |
| Market Rate Single Family – Home Efficiency | 118 | 0.05 | 21,579 |
| *Non-IQ Residential Program Subtotal* | *30,648* | *5.77* | *1,306,072* |
| Residential NPSO Adder | 901 | 0.17 | 56,649 |

## Sources and Mitigation of Error

The evaluation team took steps to mitigate potential sources of error throughout the planning and implementation of the 2024 evaluation. In particular, we considered the following types of error:

* Analysis Error
  + Prescriptive Gross Impact Calculations: To calculate prescriptive gross impacts, we applied IL-TRM V12.0 calculations to the participant data in the tracking database. To minimize data analysis error, a separate team member reviewed all calculations to verify their accuracy.
  + Net Impact Calculations: For net impact calculations, we applied SAG-approved NTGRs to estimated gross impacts to derive net impacts.[[14]](#footnote-14) To minimize analytical errors, all calculations were reviewed by a separate team member to verify their accuracy.
* Measurement Error
  + The validity and reliability of survey and interview data used to estimate market effects associated with the Market Rate Single Family Initiative’s Midstream HVAC channel were addressed through multiple strategies. First, we relied on our experience to create questions that align with the idea or construct they intended to measure (i.e., face value validity). We reviewed the questions to ensure that we did not ask double-barreled questions (i.e., questions that ask about two subjects but allow only one response) or loaded questions (i.e., questions that are slanted one way or the other). We also checked the overall logical flow of the questions to avoid confusing respondents, which would decrease reliability. All data collection instruments were reviewed by key members of the evaluation team and were provided to AIC and ICC Staff for review.
* Nonresponse and Self-Selection Bias
  + Survey and interview efforts, such as those used to estimate market effects associated with the Market Rate Single Family Initiative’s Midstream HVAC channel, have the potential for nonresponse bias due to possible differences between those who self-select to respond to surveys and those who do not. We attempted to mitigate this possible bias by sending multiple reminder emails at different times of the day and week and by making training assessment surveys required for training completion.
* Rounding Differences
  + Some values presented in this report (e.g., table totals) cannot be exactly replicated as shown due to rounding.

# Initiative-Level Results

## Retail Products Initiative

### Initiative Description

The AIC Retail Products Initiative includes several channels that offer discounts on a wide range of qualifying ENERGY STAR® products,[[15]](#footnote-15) including LED lighting, advanced power strips, advanced thermostats, and over a dozen other household appliances and miscellaneous equipment. The AIC Retail Products Initiative offers incentives in various forms on a wide range of qualifying ENERGY STAR products through three separate participation channels:

* Point of Sale (POS) channel: By partnering with retailers and manufacturers, the POS channel provides in-store discounts that reduce the purchase price of select products.
* Downstream Rebate channel: This channel allows AIC customers to apply for a post-purchase reimbursement to cover a portion of qualifying product purchases.
* Online Marketplace channel: This channel offers AIC customers select products at discounted prices on AIC’s own online store.

These channels are designed to incentivize customers to purchase energy-efficient versions of select products instead of less efficient, typically cheaper, alternatives by offsetting the price difference, helping customers reduce their energy usage, energy bills, and carbon footprints. The types of products incentivized through the Retail Products Initiative in 2024 included the following:

* LED lighting, including a variety of bulb shapes and fixtures.
* Consumer electronics, including advanced thermostats, tier 1 advanced power strips, and smart sockets.
* Appliances, including dehumidifiers, air purifiers, clothes washers, clothes dryers, refrigerators, freezers, water dispensers, room air conditioners, gas storage water heaters, gas tankless water heaters, and heat pump water heaters.
* Miscellaneous other equipment, including variable-speed pool pumps, bathroom exhaust fans, showerheads, faucet aerators, showerhead kits, pipe insulation, door sweeps, wall plate gaskets, and weatherstripping.

Leidos implements the Retail Products Initiative with support from subcontractors. Walker-Miller Energy Services provides field services, including store visits and promotional events, while AM Conservation Group operates the Online Marketplace.

##### Summary of Key Implementation Changes

In 2024, the Retail Products Initiative expanded its measure offerings to include smart sockets in the POS and Online Marketplace channels.

### Initiative Annual Savings Summary

Table 7 presents the Retail Products Initiative annual savings achieved in 2024. The 2024 Retail Products Initiative achieved 90,509 MWh, 12.58 MW, and 1,445,164 therms in verified net savings. Subsequent sections provide breakouts of savings by channel, as well as by Market Rate versus IQ participants. The Initiative also produced 115,861 therms in verified net propane savings in 2024, which are not included in this section but are detailed further in Appendix B.

Table 7. 2024 Retail Products Initiative Annual Savings

| Metric | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- |
| Ex Ante Gross Savings | 104,386 | 22.16 | 1,560,658 |
| Gross Realization Rate | 97% | 65% | 100% |
| Verified Gross Savings | 101,713 | 14.39 | 1,561,454 |
| NTGR | 0.890 | 0.875 | 0.926 |
| Verified Net Savings | 90,509 | 12.58 | 1,445,164 |

#### Participation Summary

LED Lighting remained the top-selling end use for the Retail Products Initiative in 2024, accounting for 89% of all incentivized units. Standard LEDs represented half (50%) of all incentivized product sales, followed by Specialty LEDs (19%) and LED Fixtures (13%). The Initiative also discounted over 88,000 advanced power strips, 30,000 advanced thermostats, and 21,000 air purifiers, which collectively make up another 7% of all sales and more than two-thirds (70%) of non-lighting sales. The remaining measures each accounted for less than 1% of sales and collectively amounted to 3% of total sales volume. Table 8 summarizes participation in the Initiative during 2024 by measure.

Table 8. 2024 Retail Products Initiative Participation Summary

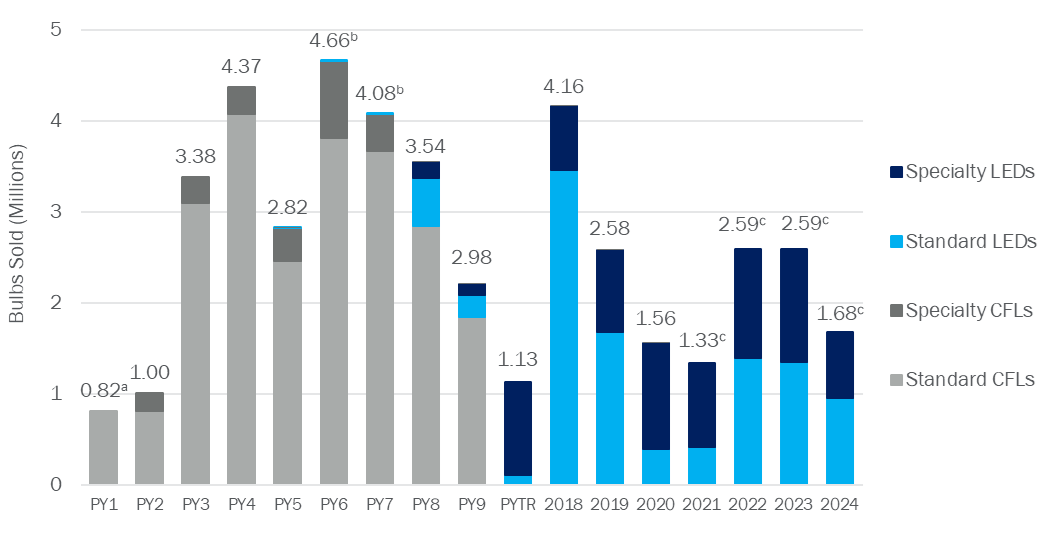
| Measure Category | Subcategory | Sales Quantity | Share of Sales |
| --- | --- | --- | --- |
| Standard LED | A-Line; EISA Non-Exempt | 944,102 | 50% |
| A-Line; EISA Exempt | 4,309 | <1% |
| Specialty LED | BR/R; EISA Non-Exempt | 98,954 | 5% |
| BR/R; EISA Exempt | 484 | <1% |
| Decorative; EISA Non-Exempt | 70,041 | 4% |
| Decorative; EISA Exempt | 66,974 | 4% |
| Globe; EISA Non-Exempt | 49,356 | 3% |
| Globe; EISA Exempt | 3,298 | <1% |
| 3-Way; EISA Non-Exempt | 34,677 | 2% |
| PAR/MR; EISA Non-Exempt | 26,095 | 1% |
| PAR/MR; EISA Exempt | 36 | <1% |
| LED Fixture | EISA Non-Exempt | 44,622 | 2% |
| EISA Exempt | 199,129 | 11% |
| LED Nightlight | N/A | 137,593 | 7% |
| Connected LED | N/A | 1,443 | <1% |
| Advanced Power Strip | N/A | 88,144 | 5% |
| Advanced Thermostat | N/A | 30,088 | 2% |
| Air Purifier | N/A | 21,784 | 1% |
| Door Sweep | N/A | 16,908 | 1% |
| Smart Socket | N/A | 13,295 | 1% |
| Dehumidifier | N/A | 6,688 | <1% |
| Bathroom Exhaust Fan | N/A | 5,309 | <1% |
| Pipe Insulationa | N/A | 5,141 | <1% |
| Refrigerator | N/A | 4,386 | <1% |
| Clothes Washer | N/A | 3,195 | <1% |
| Electric Dryer | N/A | 2,693 | <1% |
| Showerhead Kit | N/A | 1,491 | <1% |
| Water Dispenser | N/A | 771 | <1% |
| Freezer | N/A | 472 | <1% |
| Heat Pump Water Heater | N/A | 238 | <1% |
| Faucet Aerator | N/A | 128 | <1% |
| Room Air Conditioner | N/A | 95 | <1% |
| Showerhead | N/A | 89 | <1% |
| Gas Tankless Water Heater | N/A | 86 | <1% |
| Pool Pump | N/A | 82 | <1% |
| Weatherstripping | N/A | 42 | <1% |
| Wall Plate Gasket | N/A | 11 | <1% |
| Gas Water Heater | N/A | 6 | <1% |
| Total | N/A | 1,882,255 | 100% |

a Pipe insulation quantity reflects the total number of packages, each containing 12 linear feet.

##### Historic Product Sales

Since 2009, AIC has discounted 44.5 million energy-efficient lighting products through the Retail Products Initiative and its predecessors, beginning with compact fluorescent lamp (CFL) products and shifting toward LEDs as the lighting market transformed. The Retail Products Initiative discounted almost 1.7 million LED bulbs and fixtures during 2024, reflecting a 35% decrease from 2023 lighting sales. Figure 1 shows efficient lighting sales from PY1 through 2024.

Figure 1. Retail Products Initiative Historical Lighting Sales (PY1–2024)



The Retail Products Initiative featured 23 non-lighting measure categories in 2024. The Initiative sold higher volumes of most measures than in the previous year. Most notably, pipe insulation and air purifiers increased by 275% and 124%, respectively. The Initiative also sold over 13,295 smart sockets in the first full year they were offered. Overall, the channel sold 17% more non-lighting units in 2024 than in 2023. These historical trends in non-lighting measure mix are outlined in Table 9.

Table 9. Retail Products Initiative Historical Non-Lighting Sales

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Measure Category | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Advanced Power Strip | 25,803 | 55,275 | 66,438 | 54,881 | 52,026 | 75,966 | 88,144 |
| Advanced Thermostat | 14,403 | 16,044 | 33,073 | 28,289 | 36,402 | 29,180 | 30,088 |
| Air Purifier | 0 | 0 | 1,237 | 3,316 | 3,733 | 9,705 | 21,784 |
| Door Sweep | 0 | 0 | 0 | 0 | 0 | 23,652 | 16,908 |
| Smart Socket | 0 | 0 | 0 | 0 | 0 | 3 | 13,295 |
| Dehumidifier | 0 | 0 | 5,768 | 7,735 | 7,747 | 8,352 | 6,688 |
| Bathroom Exhaust Fan | 0 | 0 | 1,675 | 1,315 | 4,364 | 4,857 | 5,309 |
| Pipe Insulationa | 0 | 0 | 0 | 0 | 0 | 1,372 | 5,141 |
| Refrigerator | 0 | 82 | 1,388 | 2,915 | 2,206 | 2,841 | 3,195 |
| Clothes Washer | 0 | 177 | 2,587 | 3,299 | 2,562 | 2,535 | 2,693 |
| Electric Dryer | 0 | 79 | 1,357 | 1,714 | 1,399 | 1,452 | 1,491 |
| Showerhead Kit | 0 | 0 | 0 | 0 | 915 | 10,756 | 4,386 |
| Water Dispenser | 0 | 0 | 611 | 1,110 | 548 | 364 | 771 |
| Freezer | 0 | 6 | 83 | 230 | 189 | 277 | 472 |
| Heat Pump Water Heater | 0 | 0 | 0 | 55 | 96 | 125 | 238 |
| Faucet Aerator | 0 | 0 | 0 | 0 | 0 | 101 | 128 |
| Room Air Conditioner | 0 | 0 | 0 | 422 | 290 | 176 | 95 |
| Showerhead | 0 | 0 | 0 | 0 | 0 | 56 | 89 |
| Gas Tankless Water Heater | 0 | 0 | 0 | 0 | 0 | 69 | 86 |
| Pool Pump | 206 | 8 | 59 | 124 | 89 | 109 | 82 |
| Weatherstripping | 0 | 0 | 0 | 0 | 0 | 7 | 42 |
| Wall Plate Gasket | 0 | 0 | 0 | 0 | 0 | 8 | 11 |
| Gas Water Heater | 0 | 0 | 0 | 0 | 24 | 15 | 6 |
| Lighted Ceiling Fan | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Total | 40,412 | 71,671 | 114,276 | 105,405 | 112,593 | 171,978 | 201,142 |

a Pipe insulation quantity reflects the total number of packages, each containing 12 linear feet.

##### Sales by Delivery Channel

The POS channel provided the lion’s share of sales, including all LED sales and nearly all advanced power strip sales. Online Marketplace channel sales were largely comprised of advanced thermostats and smart sockets, along with a few hundred units of other products. Larger appliances, including refrigerators, clothes washers, and electric dryers, sold exclusively through the Downstream Rebate channel. Table 10 provides a breakdown of 2024 sales of each measure by delivery channel.

Table 10. 2024 Retail Products Initiative Sales by Delivery Channel and Measure

| Measure Category | POS | Downstream Rebate | Online Marketplace |
| --- | --- | --- | --- |
| LED Lighting | 1,681,113 | 0 | 0 |
| Advanced Power Strip | 87,926 | 0 | 218 |
| Advanced Thermostat | 0 | 1,998 | 28,090 |
| Air Purifier | 21,102 | 608 | 74 |
| Door Sweep | 16,870 | 0 | 38 |
| Smart Socket | 4,728 | 0 | 8,567 |
| Dehumidifier | 5,260 | 1,423 | 5 |
| Bathroom Exhaust Fan | 5,125 | 184 | 0 |
| Pipe Insulationa | 5,141 | 0 | 0 |
| Refrigerator | 4,386 | 0 | 0 |
| Clothes Washer | 0 | 3,195 | 0 |
| Electric Dryer | 0 | 2,693 | 0 |
| Showerhead Kit | 0 | 1,491 | 0 |
| Water Dispenser | 720 | 51 | 0 |
| Freezer | 0 | 472 | 0 |
| Heat Pump Water Heater | 0 | 238 | 0 |
| Faucet Aerator | 0 | 0 | 128 |
| Room Air Conditioner | 0 | 95 | 0 |
| Showerhead | 0 | 0 | 89 |
| Gas Tankless Water Heater | 0 | 86 | 0 |
| Pool Pump | 0 | 82 | 0 |
| Weatherstripping | 0 | 0 | 42 |
| Wall Plate Gasket | 0 | 0 | 11 |
| Gas Water Heater | 0 | 6 | 0 |
| Total | 1,832,371 | 12,622 | 37,262 |

a Pipe insulation quantity reflects the total number of packages, each containing 12 linear feet.

##### Sales to Income Qualified Customers

The Retail Products Initiative implementation team makes concerted efforts to maximize outreach to low- and moderate-income customers by engaging thrift stores, dollar stores, and retailers in ZIP codes with higher incidences of IQ customers. Table 11 summarizes the share of sales for each measure category assumed to reach IQ versus market rate customers, along with the associated distribution of IQ and market rate verified kWh savings. Overall, 91% of Retail Products Initiative sales and 81% of verified energy savings are considered IQ, driven primarily by LED lighting participation.

Table 11. 2024 Retail Products Initiative Income Qualified Allocations by Measure

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Measure Category | IQ Allocation | Total Sales Quantity | IQ Sales Quantity | Market Rate Sales Quantity | IQ Verified MWh | Market Rate Verified MWh |
| Standard LED | 100% | 944,102 | 944,102 | 0 | 39,906 | 0 |
| Standard LED (EISA Exempt) | 100% | 4,309 | 4,309 | 0 | 1,179 | 0 |
| Specialty LED | 100% | 279,123 | 279,123 | 0 | 14,829 | 0 |
| Specialty LED (EISA Exempt) | 85% | 70,792 | 60,279 | 10,513 | 1,684 | 287 |
| LED Fixtures | 100% | 44,622 | 44,622 | 0 | 3,086 | 0 |
| LED Fixtures (EISA Exempt) | 77% | 199,129 | 152,880 | 46,249 | 4,746 | 961 |
| LED Nightlights | 80% | 137,593 | 110,446 | 27,147 | 2,822 | 694 |
| Connected LED | 100% | 1,443 | 1,443 | 0 | 56 | 0 |
| Advanced Thermostat | 28% | 30,088 | 8,423 | 21,665 | 4,513 | 11,175 |
| Air Purifier | 67% | 21,784 | 14,569 | 7,215 | 3,438 | 1,484 |
| Advanced Power Strip | 72% | 88,144 | 63,349 | 24,795 | 3,825 | 1,582 |
| Smart Socket | 43% | 13,295 | 5,664 | 7,631 | 560 | 493 |
| Dehumidifier | 31% | 6,688 | 2,101 | 4,587 | 351 | 762 |
| Pipe Insulation | 72% | 5,141 | 3,712 | 1,429 | 524 | 202 |
| Door Sweep | 40% | 16,908 | 6,827 | 10,081 | 214 | 316 |
| Showerhead Kit | 64% | 4,386 | 2,820 | 1,566 | 280 | 155 |
| Heat Pump Water Heater | 28% | 238 | 66 | 172 | 136 | 344 |
| Clothes Washer | 27% | 2,693 | 724 | 1,969 | 103 | 261 |
| Electric Dryer | 27% | 1,491 | 403 | 1,088 | 68 | 182 |
| Refrigerator | 28% | 3,195 | 883 | 2,312 | 62 | 160 |
| Bathroom Exhaust Fan | 33% | 5,309 | 1,727 | 3,582 | 46 | 95 |
| Water Dispenser | 32% | 771 | 250 | 521 | 17 | 37 |
| Freezer | 27% | 472 | 129 | 343 | 9 | 22 |
| Pool Pump | 24% | 82 | 20 | 62 | 6 | 19 |
| Room Air Conditioner | 35% | 95 | 33 | 62 | 3 | 6 |
| Showerhead | 30% | 89 | 27 | 62 | 2 | 4 |
| Faucet Aerator | 34% | 128 | 43 | 85 | 1 | 2 |
| Weatherstripping | 29% | 42 | 12 | 30 | <1 | 1 |
| Wall Plate Gasket | 25% | 11 | 3 | 8 | <1 | <1 |
| Gas Tankless Water Heater | 24% | 86 | 20 | 66 | 0 | 0 |
| Gas Water Heater | 23% | 6 | 1 | 5 | 0 | 0 |
| Total | 91% | 1,882,255 | 1,709,011 | 173,244 | 82,468 | 19,244 |

#### Savings Detail

##### Income Qualified

Table 12 presents the ex ante, verified gross, and verified net electric energy savings achieved through the income qualified portion of the Initiative in 2024.

Table 12. 2024 Retail Products Initiative (Income Qualified) Electric Energy Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| Standard LED | 39,906 | 100% | 39,906 | 0.859 | 34,282 |
| Standard LED (EISA Exempt) | 1,179 | 100% | 1,179 | 1.000 | 1,179 |
| Specialty LED | 14,815 | 100% | 14,829 | 0.880 | 13,054 |
| Specialty LED (EISA Exempt) | 1,770 | 95% | 1,684 | 0.791 | 1,332 |
| LED Fixtures | 3,070 | 101% | 3,086 | 0.969 | 2,992 |
| LED Fixtures (EISA Exempt) | 5,037 | 94% | 4,746 | 0.997 | 4,734 |
| LED Nightlights | 2,822 | 100% | 2,822 | 0.996 | 2,811 |
| Connected LED | 55 | 101% | 56 | 0.693 | 39 |
| Advanced Thermostat | 4,532 | 100% | 4,513 | 1.000 | 4,513 |
| Air Purifier | 5,071 | 68% | 3,438 | 1.000 | 3,438 |
| Advanced Power Strip | 3,825 | 100% | 3,825 | 1.000 | 3,825 |
| Smart Socket | 635 | 88% | 560 | 1.000 | 560 |
| Dehumidifier | 352 | 100% | 351 | 1.000 | 351 |
| Pipe Insulation | 430 | 122% | 524 | 1.000 | 524 |
| Door Sweep | 235 | 91% | 214 | 1.000 | 214 |
| Showerhead Kit | 351 | 80% | 280 | 1.000 | 280 |
| Heat Pump Water Heater | 136 | 100% | 136 | 1.000 | 136 |
| Clothes Washer | 108 | 95% | 103 | 1.000 | 103 |
| Electric Dryer | 66 | 104% | 68 | 1.000 | 68 |
| Refrigerator | 59 | 105% | 62 | 1.000 | 62 |
| Bathroom Exhaust Fan | 46 | 100% | 46 | 1.000 | 46 |
| Water Dispenser | 17 | 102% | 17 | 1.000 | 17 |
| Freezer | 9 | 100% | 9 | 1.000 | 9 |
| Pool Pump | 6 | 100% | 6 | 1.000 | 6 |
| Room Air Conditioner | 3 | 101% | 3 | 1.000 | 3 |
| Showerhead | 2 | 111% | 2 | 1.000 | 2 |
| Faucet Aerator | 1 | 102% | 1 | 1.000 | 1 |
| Weatherstripping | <1 | 135% | <1 | 1.000 | <1 |
| Wall Plate Gasket | <1 | 86% | <1 | 1.000 | <1 |
| Total | 84,539 | 98% | 82,468 | 0.904 | 74,582 |

Table 13 presents the ex ante, verified gross, and verified net electric demand savings achieved through the income qualified portion of the Initiative in 2024.

Table 13. 2024 Retail Products Initiative (Income Qualified) Electric Demand Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| Standard LED | 4.82 | 100% | 4.82 | 0.859 | 4.14 |
| Standard LED (EISA Exempt) | 0.14 | 100% | 0.14 | 1.000 | 0.14 |
| Specialty LED | 1.76 | 100% | 1.76 | 0.880 | 1.55 |
| Specialty LED (EISA Exempt) | 0.21 | 95% | 0.20 | 0.791 | 0.16 |
| LED Fixtures | 7.94 | 5% | 0.42 | 0.968 | 0.40 |
| LED Fixtures (EISA Exempt) | 0.73 | 97% | 0.71 | 0.997 | 0.71 |
| Connected LED | 0.01 | 101% | 0.01 | 0.692 | 0.00 |
| Advanced Thermostat | 1.19 | 99% | 1.18 | 1.000 | 1.18 |
| Air Purifier | 0.58 | 68% | 0.39 | 1.000 | 0.39 |
| Advanced Power Strip | 0.43 | 100% | 0.43 | 1.000 | 0.43 |
| Smart Socket | 0.09 | 88% | 0.08 | 1.000 | 0.08 |
| Dehumidifier | 0.06 | 136% | 0.08 | 1.000 | 0.08 |
| Pipe Insulation | 0.05 | 122% | 0.06 | 1.000 | 0.06 |
| Door Sweep | 0.02 | 7% | 0.002 | 1.000 | 0.002 |
| Showerhead Kit | 0.06 | 82% | 0.05 | 1.000 | 0.05 |
| Heat Pump Water Heater | 0.01 | 101% | 0.01 | 1.000 | 0.01 |
| Clothes Washer | 0.01 | 98% | 0.01 | 1.000 | 0.01 |
| Electric Dryer | 0.01 | 104% | 0.01 | 1.000 | 0.01 |
| Refrigerator | 0.01 | 108% | 0.01 | 1.000 | 0.01 |
| Bathroom Exhaust Fan | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Water Dispenser | 0.002 | 102% | 0.002 | 1.000 | 0.002 |
| Freezer | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Pool Pump | 0.004 | 100% | 0.004 | 1.000 | 0.004 |
| Room Air Conditioner | 0.003 | 100% | 0.003 | 1.000 | 0.003 |
| Showerhead | 0.0001 | 129% | 0.0002 | 1.000 | 0.0002 |
| Faucet Aerator | 0.0003 | 128% | 0.0004 | 1.000 | 0.0004 |
| Weatherstripping | 0.00001 | 175% | 0.00002 | 1.000 | 0.00002 |
| Wall Plate Gasket | 0.00005 | 137% | 0.00006 | 1.000 | 0.00006 |
| Total | 18.14 | 57% | 10.39 | 0.908 | 9.43 |

Table 14 presents the ex ante, verified gross, and verified net gas savings achieved through the income qualified portion of the Initiative in 2024. The channel also achieved propane savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 14. 2024 Retail Products Initiative (Income Qualified) Gas Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| Advanced Thermostat | 377,850 | 100% | 377,030 | 1.000 | 377,030 |
| Pipe Insulation | 47,663 | 121% | 57,778 | 1.000 | 57,778 |
| Door Sweep | 29,490 | 100% | 29,518 | 1.000 | 29,518 |
| Showerhead Kit | 34,238 | 81% | 27,643 | 1.000 | 27,643 |
| Clothes Washer | 1,443 | 94% | 1,353 | 1.000 | 1,353 |
| Showerhead | 146 | 128% | 187 | 1.000 | 187 |
| Faucet Aerator | 90 | 128% | 116 | 1.000 | 116 |
| Weatherstripping | 57 | 121% | 70 | 1.000 | 70 |
| Wall Plate Gasket | 11 | 131% | 15 | 1.000 | 15 |
| Gas Tankless Water Heater | 1,503 | 100% | 1,503 | 1.000 | 1,503 |
| Gas Water Heater | 101 | 98% | 99 | 1.000 | 99 |
| Total | 492,594 | 101% | 495,312 | 1.000 | 495,312 |

##### Market Rate

Table 15 presents the ex ante, verified gross, and verified net electric energy savings achieved through the market rate portion of the Initiative in 2024.

Table 15. 2024 Retail Products Initiative (Market Rate) Electric Energy Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| Specialty LED (EISA Exempt) | 370 | 78% | 287 | 0.690 | 198 |
| Fixture LED (EISA Exempt) | 1,051 | 91% | 961 | 0.690 | 663 |
| Nightlight LED | 694 | 100% | 694 | 0.690 | 479 |
| Advanced Thermostat | 11,232 | 99% | 11,175 | 0.879 | 9,819 |
| Air Purifier | 1,755 | 85% | 1,484 | 0.790 | 1,173 |
| Advanced Power Strip | 1,582 | 100% | 1,582 | 0.860 | 1,361 |
| Smart Socket | 559 | 88% | 493 | 0.800 | 394 |
| Dehumidifier | 763 | 100% | 762 | 0.670 | 510 |
| Pipe Insulation | 166 | 122% | 202 | 0.800 | 161 |
| Door Sweep | 346 | 91% | 316 | 0.800 | 253 |
| Showerhead Kit | 195 | 80% | 155 | 0.800 | 124 |
| Heat Pump Water Heater | 344 | 100% | 344 | 0.800 | 275 |
| Clothes Washer | 274 | 95% | 261 | 0.630 | 165 |
| Electric Dryer | 177 | 103% | 182 | 0.670 | 122 |
| Refrigerator | 153 | 105% | 160 | 0.650 | 104 |
| Bathroom Exhaust Fan | 95 | 100% | 95 | 0.660 | 63 |
| Water Dispenser | 35 | 103% | 37 | 0.670 | 25 |
| Freezer | 22 | 100% | 22 | 0.630 | 14 |
| Pool Pump | 19 | 100% | 19 | 0.760 | 15 |
| Room Air Conditioner | 6 | 102% | 6 | 0.720 | 4 |
| Showerhead | 4 | 107% | 4 | 0.800 | 3 |
| Faucet Aerator | 2 | 105% | 2 | 0.800 | 2 |
| Weatherstripping | 1 | 101% | 1 | 0.800 | 1 |
| Wall Plate Gasket | <1 | 102% | <1 | 0.800 | <1 |
| Total | 19,847 | 97% | 19,244 | 0.828 | 15,927 |

Table 16 presents the ex ante, verified gross, and verified net electric demand savings achieved through the market rate portion of the Initiative in 2024.

Table 16. 2024 Retail Products Initiative (Market Rate) Electric Demand Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| Specialty LED (EISA Exempt) | 0.05 | 77% | 0.04 | 0.690 | 0.03 |
| Fixture LED (EISA Exempt) | 0.15 | 117% | 0.18 | 0.690 | 0.12 |
| Advanced Thermostat | 3.03 | 99% | 3.00 | 0.800 | 2.40 |
| Air Purifier | 0.20 | 85% | 0.17 | 0.790 | 0.13 |
| Advanced Power Strip | 0.18 | 100% | 0.18 | 0.860 | 0.15 |
| Smart Socket | 0.08 | 88% | 0.07 | 0.800 | 0.05 |
| Dehumidifier | 0.12 | 147% | 0.17 | 0.670 | 0.12 |
| Pipe Insulation | 0.02 | 122% | 0.02 | 0.800 | 0.02 |
| Door Sweep | 0.03 | 7% | 0.002 | 0.800 | 0.002 |
| Showerhead Kit | 0.04 | 82% | 0.03 | 0.800 | 0.02 |
| Heat Pump Water Heater | 0.02 | 101% | 0.02 | 0.800 | 0.01 |
| Clothes Washer | 0.03 | 98% | 0.03 | 0.630 | 0.02 |
| Electric Dryer | 0.02 | 103% | 0.02 | 0.670 | 0.02 |
| Refrigerator | 0.02 | 107% | 0.02 | 0.650 | 0.02 |
| Bathroom Exhaust Fan | 0.01 | 100% | 0.01 | 0.660 | 0.01 |
| Water Dispenser | 0.004 | 103% | 0.004 | 0.670 | 0.003 |
| Freezer | 0.004 | 100% | 0.004 | 0.630 | 0.002 |
| Pool Pump | 0.01 | 100% | 0.01 | 0.760 | 0.01 |
| Room Air Conditioner | 0.005 | 100% | 0.005 | 0.720 | 0.004 |
| Showerhead | 0.0003 | 124% | 0.0004 | 0.800 | 0.0003 |
| Faucet Aerator | 0.001 | 132% | 0.001 | 0.800 | 0.001 |
| Weatherstripping | 0.00004 | 150% | 0.00006 | 0.800 | 0.00005 |
| Wall Plate Gasket | 0.0001 | 136% | 0.0002 | 0.800 | 0.0002 |
| Total | 4.02 | 99% | 4.00 | 0.787 | 3.15 |

Table 17 presents the ex ante, verified gross, and verified net gas savings achieved through the market rate portion of the Initiative in 2024. The channel also achieved propane savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 17. 2024 Retail Products Initiative (Market Rate) Gas Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| Advanced Thermostat | 977,547 | 100% | 975,349 | 0.900 | 877,817 |
| Pipe Insulation | 18,348 | 121% | 22,241 | 0.800 | 17,793 |
| Door Sweep | 43,531 | 100% | 43,600 | 0.800 | 34,880 |
| Showerhead Kit | 19,008 | 81% | 15,346 | 0.800 | 12,277 |
| Clothes Washer | 3,730 | 94% | 3,523 | 0.630 | 2,219 |
| Showerhead | 332 | 129% | 429 | 0.800 | 343 |
| Faucet Aerator | 171 | 134% | 228 | 0.800 | 183 |
| Weatherstripping | 139 | 126% | 175 | 0.800 | 140 |
| Wall Plate Gasket | 33 | 125% | 42 | 0.800 | 33 |
| Gas Tankless Water Heater | 4,888 | 100% | 4,888 | 0.800 | 3,910 |
| Gas Water Heater | 338 | 95% | 321 | 0.800 | 256 |
| Total | 1,068,064 | 100% | 1,066,142 | 0.891 | 949,852 |

##### Summary of Discrepancies

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on Initiative savings or measures with particularly high or low realization rates.

* LED Fixtures (9% of ex ante energy savings and 40% of demand savings): The gross realization rate for LED Fixtures is 96% for kWh and 15% for kW.
  + For <1% of measures (n=46), the evaluation team assigned demand savings based on parameters recommended by the IL-TRM V12.0, whereas the implementation team assigned demand savings equivalent to claimed energy savings, resulting in lower verified demand savings. Despite affecting such a small number of measures, the misrepresented ex ante values were several thousand times larger than verified demand savings for these 46 measures, leading to a very large discrepancy in total demand savings. While this error had a very large influence on the overall RR, it appears to be a very isolated data entry error that should not pose future concern.
* Air Purifiers (7% of ex ante energy savings and 4% of demand savings): The gross realization rate for Air Purifiers is 72% for kWh and kW.
  + For 100% of measures (n=21,784), the evaluation team applied IL-TRM V12.0-recommended baseline and energy-efficient usage assumptions based on product-specific Clear Air Delivery Rates (CADRs), whereas the implementation team applied less granular baseline and energy-efficient usage assumptions, resulting in lower verified energy and demand savings.
* Smart Sockets (1% of ex ante energy and demand savings): The gross realization rate for Smart Sockets is 88% for kWh and kW.
  + For 100% of measures (n=13,295), the evaluation team applied a blended average ISR of 82% based on the virtual install ISRs recommended by the IL-TRM V12.0, whereas the implementation team applied the community distributed kit ISR of 93%, resulting in lower verified energy and demand savings.
* Dehumidifiers (1% of ex ante energy and demand savings): The gross realization rate for Dehumidifiers is 100% for kWh and 143% for kW.
  + For 100% of measures (n=6,688), the evaluation team applied the hours of use (HOU) and coincidence factor (CF) parameters recommended by the IL-TRM V12.0, whereas the implementation team seemingly applied values different than those specified in tracking data and supplemental calculations, resulting in higher verified demand savings.
* Door Sweeps (1% of ex ante energy savings, <1% of demand savings, and 5% of gas savings): The gross realization rate for Door Sweeps is 91% for kWh, 7% for kW, and 100% for therms.
  + For 100% of measures (n=13,295), the evaluation team estimated demand savings using a kWh cooling value of 0.2718 calculated from assumptions recommended by the IL-TRM V12.0, whereas the implementation team relied on a deemed kWh cooling value of 4.028, resulting in lower verified demand savings.
* Showerhead Kits (1% of ex ante energy savings, <1% of demand savings, and 3% of gas savings): The gross realization rate for Showerhead Kits is 80% for kWh, 82% for kW, and 81% for therms.
  + For 100% of measures (n=4,386), the evaluation team applied efficiency kit ISRs of 65% for showerheads and 60% for aerators recommended by the IL-TRM V12.0, whereas the implementation team applied standalone showerhead ISRs of 80% for showerheads and 77% for aerators, resulting in lower verified energy, demand, and gas savings.
* Showerheads (<1% of ex ante electric energy savings, <1% of demand savings, and <1% of gas savings): The gross realization rate for Showerheads is 109% for kWh, 126% for kW, and 129% for therms.
  + For 9% of measures (n=8), the evaluation team included both direct and secondary kWh savings, whereas the implementation team only applied savings associated with Secondary kWh Savings for Water Supply and Wastewater Treatment, resulting in higher verified energy, demand, and gas savings.
* Faucet Aerators (<1% of ex ante electric energy savings, <1% of demand savings, and <1% of gas savings): The gross realization rate for Faucet Aerators is 104% for kWh, 130% for kW, and 133% for therms.
  + For 95% of measures (n=122), the evaluation team applied a blended faucet aerator HOU value based on IL-TRM V12.0-recommended values, whereas the implementation team applied a higher faucet aerator HOU assumption, resulting in higher verified demand savings.
  + For 25% of measures (n=31), the evaluation team assigned non-zero gas savings, whereas the implementation team claimed zero ex ante gas savings, resulting in higher verified gas savings.

### Cumulative Persisting Annual Savings

Table 18 summarizes CPAS and WAML for the 2024 Retail Products Initiative by channel. The WAML for the Initiative is 9.2 years. CPAS and WAML for each channel at the measure level are presented in Table 19 and Table 20.

Table 18. 2024 Retail Products Initiative CPAS and WAML

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Channel | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | Lifetime Savings (MWh) |
| 2024 | 2025 | 2026 | 2027 | … | 2030 | … |
| Income Qualified | 8.8 | 82,468 | 0.904 | 74,582 | 74,582 | 74,582 | 74,582 | … | 74,582 | … | 658,910 |
| Market Rate | 10.9 | 19,244 | 0.828 | 15,927 | 15,927 | 15,927 | 15,927 | … | 15,904 | … | 173,188 |
| 2024 CPAS | | 101,713 | 0.890 | 90,509 | 90,509 | 90,509 | 90,509 | … | 90,486 | … | 832,098 |
| Expiring 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 0 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 23 | … |  |
| WAML | 9.2 |  |  |  |  |  |  |  |  |  |  |

Table 19. 2024 Retail Products Initiative – Income Qualified CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Standard LED | 8.0 | 39,906 | 0.859 | 34,282 | | 34,282 | 34,282 | | 34,282 | | … | 34,282 | … | 274,260 |
| Standard LED (EISA Exempt) | 10.0 | 1,179 | 1.000 | 1,179 | | 1,179 | 1,179 | | 1,179 | | … | 1,179 | … | 11,789 |
| Specialty LED | 8.0 | 14,829 | 0.880 | 13,054 | | 13,054 | 13,054 | | 13,054 | | … | 13,054 | … | 104,430 |
| Specialty LED (EISA Exempt) | 10.0 | 1,684 | 0.791 | 1,332 | | 1,332 | 1,332 | | 1,332 | | … | 1,332 | … | 13,318 |
| Fixture LED | 8.0 | 3,075 | 0.970 | 2,984 | | 2,984 | 2,984 | | 2,984 | | … | 2,984 | … | 23,872 |
| Outdoor Fixture LED | 8.0 | 12 | 0.690 | 8 | | 8 | 8 | | 8 | | … | 8 | … | 64 |
| Fixture LED (EISA Exempt) | 15.0 | 4,746 | 0.997 | 4,734 | | 4,734 | 4,734 | | 4,734 | | … | 4,734 | … | 71,005 |
| Nightlight LED | 8.0 | 2,822 | 0.996 | 2,811 | | 2,811 | 2,811 | | 2,811 | | … | 2,811 | … | 22,486 |
| Connected LED | 10.0 | 56 | 0.693 | 39 | | 39 | 39 | | 39 | | … | 39 | … | 388 |
| Advanced Thermostat | 11.0 | 4,513 | 1.000 | 4,513 | | 4,513 | 4,513 | | 4,513 | | … | 4,513 | … | 49,645 |
| Advanced Power Strip | 7.0 | 3,825 | 1.000 | 3,825 | | 3,825 | 3,825 | | 3,825 | | … | 3,825 | … | 26,775 |
| Air Purifier | 9.0 | 3,438 | 1.000 | 3,438 | | 3,438 | 3,438 | | 3,438 | | … | 3,438 | … | 30,940 |
| Pipe Insulation | 15.0 | 524 | 1.000 | 524 | | 524 | 524 | | 524 | | … | 524 | … | 7,862 |
| Dehumidifier | 12.0 | 351 | 1.000 | 351 | | 351 | 351 | | 351 | | … | 351 | … | 4,217 |
| Showerhead Kit | 10.0 | 280 | 1.000 | 280 | | 280 | 280 | | 280 | | … | 280 | … | 2,796 |
| Smart Socket | 7.0 | 560 | 1.000 | 560 | | 560 | 560 | | 560 | | … | 560 | … | 3,921 |
| Door Sweep | 20.0 | 214 | 1.000 | 214 | | 214 | 214 | | 214 | | … | 214 | … | 4,284 |
| Heat Pump Water Heater | 15.0 | 136 | 1.000 | 136 | | 136 | 136 | | 136 | | … | 136 | … | 2,045 |
| Clothes Washer | 14.0 | 103 | 1.000 | 103 | | 103 | 103 | | 103 | | … | 103 | … | 1,441 |
| Electric Dryer | 16.0 | 68 | 1.000 | 68 | | 68 | 68 | | 68 | | … | 68 | … | 1,088 |
| Refrigerator | 15.0 | 62 | 1.000 | 62 | | 62 | 62 | | 62 | | … | 62 | … | 932 |
| Bathroom Exhaust Fan | 19.0 | 46 | 1.000 | 46 | | 46 | 46 | | 46 | | … | 46 | … | 866 |
| Water Dispenser | 10.0 | 17 | 1.000 | 17 | | 17 | 17 | | 17 | | … | 17 | … | 175 |
| Freezer | 21.0 | 9 | 1.000 | 9 | | 9 | 9 | | 9 | | … | 9 | … | 187 |
| Pool Pump | 7.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 6 | … | 43 |
| Room Air Conditioner | 12.0 | 3 | 1.000 | 3 | | 3 | 3 | | 3 | | … | 3 | … | 40 |
| Showerhead | 10.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 19 |
| Faucet Aerator | 10.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 12 |
| Weatherstripping | 20.0 | 0.5 | 1.000 | 0.5 | | 0.5 | 0.5 | | 0.5 | | … | 0.5 | … | 9 |
| Wall Plate Gasket | 20.0 | 0.1 | 1.000 | 0.1 | | 0.1 | 0.1 | | 0.1 | | … | 0.1 | … | 2 |
| 2024 CPAS |  | 82,468 | 0.904 | 74,582 | | 74,582 | 74,582 | | 74,582 | | … | 74,582 | … | 658,910 |
| Expiring 2024 CPAS |  |  | 0 | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  | 0 | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 8.8 |  |  |  |  | | |  | |  |  |  |  |  |

Table 20. 2024 Retail Products Initiative – Market Rate CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Specialty LED (EISA Exempt) - Residential | 10.0 | 254 | 0.690 | 175 | | 175 | 175 | | 175 | | … | 175 | … | 1,753 |
| Specialty LED (EISA Exempt) - Commercial | 4.7 | 33 | 0.690 | 23 | | 23 | 23 | | 23 | | … | 0 | … | 107 |
| Fixture LED (EISA Exempt) - Residential | 15.0 | 835 | 0.690 | 576 | | 576 | 576 | | 576 | | … | 576 | … | 8,639 |
| Fixture LED (EISA Exempt) - Commercial | 14.8 | 126 | 0.690 | 87 | | 87 | 87 | | 87 | | … | 87 | … | 1,287 |
| Nightlight LED - Residential | 8.0 | 694 | 0.690 | 479 | | 479 | 479 | | 479 | |  | 479 |  | 3,829 |
| Advanced Thermostat | 11.0 | 11,175 | 0.879 | 9,819 | | 9,819 | 9,819 | | 9,819 | |  | 9,819 |  | 108,004 |
| Advanced Power Strip | 7.0 | 1,582 | 0.860 | 1,361 | | 1,361 | 1,361 | | 1,361 | |  | 1,361 |  | 9,526 |
| Air Purifier | 9.0 | 1,484 | 0.790 | 1,173 | | 1,173 | 1,173 | | 1,173 | |  | 1,173 |  | 10,553 |
| Dehumidifier | 12.0 | 762 | 0.670 | 510 | | 510 | 510 | | 510 | |  | 510 |  | 6,122 |
| Smart Socket | 7.0 | 493 | 0.800 | 394 | | 394 | 394 | | 394 | |  | 394 |  | 2,760 |
| Heat Pump Water Heater | 15.0 | 344 | 0.800 | 275 | | 275 | 275 | | 275 | |  | 275 |  | 4,128 |
| Door Sweep | 20.0 | 316 | 0.800 | 253 | | 253 | 253 | | 253 | |  | 253 |  | 5,058 |
| Clothes Washer | 14.0 | 261 | 0.630 | 165 | | 165 | 165 | | 165 | |  | 165 |  | 2,305 |
| Pipe Insulation | 15.0 | 202 | 0.800 | 161 | | 161 | 161 | | 161 | |  | 161 |  | 2,421 |
| Electric Dryer | 16.0 | 182 | 0.670 | 122 | | 122 | 122 | | 122 | |  | 122 |  | 1,949 |
| Refrigerator | 15.0 | 160 | 0.650 | 104 | | 104 | 104 | | 104 | | … | 104 | … | 1,559 |
| Showerhead Kit | 10.0 | 155 | 0.800 | 124 | | 124 | 124 | | 124 | | … | 124 | … | 1,242 |
| Bathroom Exhaust Fan | 19.0 | 95 | 0.660 | 63 | | 63 | 63 | | 63 | | … | 63 | … | 1,192 |
| Water Dispenser | 10.0 | 37 | 0.670 | 25 | | 25 | 25 | | 25 | | … | 25 | … | 246 |
| Freezer | 21.0 | 22 | 0.630 | 14 | | 14 | 14 | | 14 | | … | 14 | … | 280 |
| Pool Pump | 7.0 | 19 | 0.760 | 15 | | 15 | 15 | | 15 | | … | 15 | … | 102 |
| Room Air Conditioner | 12.0 | 6 | 0.720 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 51 |
| Showerhead | 10.0 | 4 | 0.800 | 3 | | 3 | 3 | | 3 | | … | 3 | … | 34 |
| Faucet Aerator | 10.0 | 2 | 0.800 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 19 |
| Weatherstripping | 20.0 | 1 | 0.800 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 16 |
| Wall Plate Gasket | 20.0 | 0.4 | 0.800 | 0.3 | | 0.3 | 0.3 | | 0.3 | | … | 0.3 | … | 7 |
| 2024 CPAS |  | 19,244 | 0.828 | 15,927 | | 15,927 | 15,927 | | 15,927 | | … | 15,904 | … | 173,188 |
| Expiring 2024 CPAS |  |  | 0 | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  | 0 | 0 | | 0 | 0 | | 0 | | … | 23 | … |  |
| WAML | 10.9 |  |  |  |  | | |  | |  |  |  |  |  |

## Income Qualified Initiative – Single Family Offerings

### Initiative Description

The IQ Initiative encompasses nearly all of AIC’s low and moderate income targeted energy efficiency offerings, including efforts targeted at both single and multifamily customers. This section of the report provides results for seven single family-focused offerings included in the IQ Initiative:

* Single Family channel, including Accessibility Pilot
* CAA channel
* Joint Utility channel
* Smart Savers channel
* MHAS channel
* Healthier Homes channel
* Electrification channel

This section of the report does not include the IQ Initiative’s Multifamily channel, for which evaluation findings are reported in Section 3.3, or IQ-focused kit and measure distribution offerings (specifically the IQ Community Kits channel, kits provided through the MHAS, CAA, and Joint Utility channels, and several ad hoc measure distributions), for which evaluation findings are reported in Section 3.5.

### Initiative Annual Savings Summary

Table 21 presents the IQ Initiative Single Family Offerings annual savings achieved in 2024. The IQ Initiative Single Family Offerings achieved 6,967 MWh, 1.47 MW, and 543,931 therms in verified net savings. The Initiative also produced 874 therms in verified net propane savings and 987 therms in verified net non-AIC gas savings, which are not included in this section but are further detailed in Appendix B.[[16]](#footnote-16)

Table 21. 2024 Income Qualified Initiative Single Family Offerings Annual Savings

| Metric | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- |
| Ex Ante Gross Savings | 7,290 | 1.50 | 542,629 |
| Gross Realization Rate | 96% | 99% | 100% |
| Verified Gross Savings | 6,972 | 1.47 | 544,393 |
| NTGRa | 0.999 | 1.000 | 0.999 |
| Verified Net Savings | 6,967 | 1.47 | 543,931 |

a The evaluation team applied SAG-approved NTGRs of 1.000 for all IQ Initiatives except a small subset of Smart Savers advanced thermostats provided to ZIP codes that could not be verified as IQ.

### Single Family Channel

#### Channel Description

The Single Family channel is AIC’s fully utility-funded, whole home weatherization program for low- and moderate-income customers. Leidos oversees its implementation in coordination with Walker-Miller Energy Services and AIC Program Allies.

The channel provides no-cost Building Performance Institute (BPI) energy audits that identify building envelope and HVAC retrofit opportunities for low-income customers. During the audit, implementation staff install direct install (DI) measures such as LEDs, showerheads, faucet aerators, advanced power strips, pipe insulation, and advanced thermostats at no cost. Following the audit, customers may receive additional HVAC and building envelope retrofits, such as air sealing and insulation improvements, central air conditioner replacements (for customers approved as high needs), or air source heat pump replacements. Low-income customers receive all retrofits at no cost (Tier 1 – incentive at 100%), while moderate-income customers may have a copayment (Tier 2 - incentive at 90%). In partnership with AIC, the Energy Assistance Foundation offers a program called Warm Neighbors Cool Friends™, which provides grant funding to help offset the out-of-pocket costs for Tier 2 customers within AIC territory. The grant funding is offered on a first-come, first-serve basis and can be applied to energy efficiency measures, as well as costs related to building envelope and HVAC upgrades (excluding air conditioners).

The channel also provides health and safety assistance to enable measure installations and improve the living conditions of AIC customers. Common health and safety measures implemented include venting exhaust fans outside, repairing or replacing vapor barriers, and installing or replacing carbon monoxide alarms.

##### Summary of Key Implementation Changes

We summarize key changes to the Single Family channel’s design and implementation in 2024 below:

* In collaboration with local Community Partner advocacy groups, Program Allies, and municipal and regional government authorities, the Single Family channel incorporated the Accessibility Pilot, which aims to assist disabled residential customers and customers with mobility challenges by providing smart home devices at no cost. Smart home devices offered by the Accessibility Pilot include
  + Advanced thermostats;
  + Smart speakers;
  + Smart lighting, including motion-sensing night lights;
  + Advanced power strips; and,
  + Thermostatic valves that regulate faucet water temperature.
* The Single Family channel also distributed air purifiers as a new measure toward the end of 2024. A total of 2,884 air purifiers were distributed via drop shipment to 1,442 customers (i.e., two air purifiers per customer).
* Funding to address knob and tube wiring was increased to $12,000 in 2024. Prior to 2024, Health and Safety remediations, including knob and tube wiring, were capped at $5,000 per household. However, Initiative staff reported that most of the health and safety remediation work participating households needed was related to knob and tube wiring. As such, funding was increased in 2024 for knob and tube wiring specifically while other health and safety remediation work remained capped at $5,000.
* The Single Family channel also made some process improvements to streamline channel implementation in 2024, including the following:
  + Implementation staff developed a portal or dashboard enabling Program Allies to view or track their assigned projects in real time and upload project information, including work scopes, beginning in 2025.
  + Home Energy Specialists began using geo-mapping and/or Google Maps to schedule appointments for Energy Advisors visiting participating households with the goal of improving scheduling efficiency for both Home Energy Specialists and Energy Advisors and scheduling subsequent appointments in close proximity to one another where possible. This often allowed Energy Advisors to visit two or three homes in a day rather than just one.
  + Implementation staff began using the Savings to Investment Ratio tool (SIR), an Excel-based calculator that helps Initiative staff assess the cost-effectiveness of each project, including any health and safety remediation work that needs to be completed before installing any energy-saving upgrades or equipment.
* The implementation team also reviewed cases where customers were previously denied air source heat pumps due to insulation issues to identify potential candidates for insulation, furnace, or air source heat pump measures.

#### Participation Summary

The Single Family channel provided energy efficiency services to 2,946 homes in 2024. Approximately two-thirds (66%) of participants only received DI measures, and the remaining one-third (34%) received larger retrofits. Of the 1,956 participants who only received DI measures, 1,442 only received air purifiers. Table 22 summarizes the number of homes served by project type, and additional detail regarding participation levels by measure category is provided in Appendix E.[[17]](#footnote-17)

Table 22. 2024 Single Family Channel Participation Summary

| Project Type | Total |
| --- | --- |
| DI Measures Only | 1,956 |
| Full Participation: DI + Building Envelope or HVAC Retrofits | 641 |
| Building Envelope or HVAC Retrofits Only | 349 |
| Number of Single Family Homes Served | 2,946 |

*Source*: We identified unique homes by account number and excluded 56 homes that only received "Other" measures such as Administrative Cost, Program Support, Health and Safety, Authorized Measure, and Program Support, which did not include ex ante savings.

The Accessibility Pilot served a total of 72 participants. More than two-thirds (71%) of participants received only DI measures, while the remaining participants received larger retrofits. Table 23 summarizes the number of homes served by the Single Family Accessibility Pilot in 2024.

Table 23. 2024 Single Family Accessibility Pilot Participation Summary

| Project Type | Total |
| --- | --- |
| DI Measures Only | 51 |
| Full Participation: DI + Building Envelope or HVAC Retrofits | 20 |
| Building Envelope or HVAC Retrofits Only | 1 |
| Number of Homes Served | 72 |

*Source:* We identified unique homes by account number and excluded one home that only received "Other" measures such as Administrative Cost, Program Support, Health and Safety, Authorized Measure, and Program Support, which did not include ex ante savings.

#### Savings Detail

Table 24 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Single Family channel in 2024.

Table 24. 2024 Single Family Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Air Purifier | 1,120 | 66% | 741 | 1.000 | 741 |
| Air Source Heat Pump (Early Replacement ER]) | 892 | 101% | 897 | 1.000 | 897 |
| Standard LED | 373 | 99% | 369 | 1.000 | 369 |
| Air Sealing | 322 | 101% | 326 | 1.000 | 326 |
| Central AC (ER) | 314 | 100% | 315 | 1.000 | 315 |
| BPM Motor | 273 | 100% | 272 | 1.000 | 272 |
| Attic Insulation | 271 | 102% | 277 | 1.000 | 277 |
| Advanced Power Strip | 266 | 100% | 266 | 1.000 | 266 |
| Crawl Space Insulation | 229 | 86% | 197 | 1.000 | 197 |
| Heat Pump Water Heater | 216 | 99% | 213 | 1.000 | 213 |
| Advanced Thermostat | 201 | 98% | 198 | 1.000 | 198 |
| Bathroom Exhaust Fan | 159 | 100% | 159 | 1.000 | 159 |
| Ductless Heat Pump (Time-of-Sale [TOS]) | 153 | 128% | 195 | 1.000 | 195 |
| Specialty LED | 134 | 99% | 132 | 1.000 | 132 |
| Pipe Insulation | 84 | 100% | 84 | 1.000 | 84 |
| Wall Insulation | 45 | 102% | 46 | 1.000 | 46 |
| Faucet Aerator | 43 | 100% | 43 | 1.000 | 43 |
| Rim Joist Insulation | 29 | 100% | 29 | 1.000 | 29 |
| Low Flow Showerhead | 26 | 100% | 26 | 1.000 | 26 |
| Duct Sealing | 18 | 83% | 15 | 1.000 | 15 |
| Air Source Heat Pump (TOS) | 9 | 450% | 42 | 1.000 | 42 |
| Room Air Conditioner (ER) | 6 | 100% | 6 | 1.000 | 6 |
| Knee Wall Insulation | 6 | 102% | 6 | 1.000 | 6 |
| Door Sweep | 2 | 48% | 1 | 1.000 | 1 |
| Central AC (TOS)b | 2 | 100% | 2 | 1.000 | 2 |
| Smart Socket | 1 | 100% | 1 | 1.000 | 1 |
| Induction Range | <1 | 65% | <1 | 1.000 | <1 |
| Tree Planting | 0 | N/A | <1 | 1.000 | <1 |
| Total | 5,194 | 94% | 4,857 | 1.000 | 4,857 |

Table 25 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Single Family channel in 2024.

Table 25. 2024 Single Family Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Air Purifier | 0.13 | 66% | 0.08 | 1.000 | 0.08 |
| Air Source Heat Pump (ER) | 0.001 | 560% | 0.01 | 1.000 | 0.01 |
| Standard LED | 0.05 | 99% | 0.05 | 1.000 | 0.05 |
| Air Sealing | 0.16 | 100% | 0.16 | 1.000 | 0.16 |
| Central AC (ER) | 0.21 | 103% | 0.22 | 1.000 | 0.22 |
| BPM Motor | 0.07 | 101% | 0.08 | 1.000 | 0.08 |
| Attic Insulation | 0.10 | 102% | 0.10 | 1.000 | 0.10 |
| Advanced Power Strip | 0.03 | 100% | 0.03 | 1.000 | 0.03 |
| Crawl Space Insulation | 0.04 | 100% | 0.04 | 1.000 | 0.04 |
| Heat Pump Water Heater | 0.01 | 99% | 0.01 | 1.000 | 0.01 |
| Advanced Thermostat | 0.09 | 98% | 0.09 | 1.000 | 0.09 |
| Bathroom Exhaust Fan | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Ductless Heat Pump (TOS) | -0.02 | 149% | -0.03 | 1.000 | -0.03 |
| Specialty LED | 0.02 | 99% | 0.02 | 1.000 | 0.02 |
| Pipe Insulation | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Wall Insulation | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Faucet Aerator | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Rim Joist Insulation | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Low Flow Showerhead | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Duct Sealing | 0.004 | 92% | 0.003 | 1.000 | 0.003 |
| Air Source Heat Pump (TOS) | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Room Air Conditioner (ER) | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Knee Wall Insulation | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Door Sweep | 0.0003 | 102% | 0.0003 | 1.000 | 0.0003 |
| Central AC (TOS) | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Smart Socket | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Induction Range | 0.00002 | 65% | 0.00002 | 1.000 | 0.00002 |
| Tree Planting | 0 | N/A | 0.0001 | 1.000 | 0.0001 |
| Total | 0.98 | 96% | 0.94 | 1.000 | 0.94 |

Table 26 presents the ex ante, verified gross, and verified net gas savings achieved through the Single Family channel in 2024. The channel also achieved non-AIC natural gas savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 26. 2024 Single Family Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 35,402 | 100% | 35,399 | 1.000 | 35,399 |
| Attic Insulation | 47,239 | 102% | 48,394 | 1.000 | 48,394 |
| Crawl Space Insulation | 28,416 | 101% | 28,640 | 1.000 | 28,640 |
| Advanced Thermostat | 39,232 | 99% | 38,902 | 1.000 | 38,902 |
| Pipe Insulation | 16,067 | 100% | 16,054 | 1.000 | 16,054 |
| Wall Insulation | 14,867 | 100% | 14,867 | 1.000 | 14,867 |
| Faucet Aerator | 5,371 | 100% | 5,371 | 1.000 | 5,371 |
| Rim Joist Insulation | 5,004 | 100% | 5,005 | 1.000 | 5,005 |
| Low Flow Showerhead | 3,778 | 99% | 3,731 | 1.000 | 3,731 |
| Duct Sealing | 3,121 | 100% | 3,121 | 1.000 | 3,121 |
| Knee Wall Insulation | 1,620 | 100% | 1,620 | 1.000 | 1,620 |
| Door Sweep | 393 | 91% | 357 | 1.000 | 357 |
| High Efficiency Gas Furnace (ER) | 122,939 | 100% | 122,941 | 1.000 | 122,941 |
| High Efficiency Gas Furnace (TOS) | 17,868 | 100% | 17,868 | 1.000 | 17,868 |
| Gas High Efficiency Boiler (ER) | 7,363 | 100% | 7,363 | 1.000 | 7,363 |
| Gas Water Heater | 3,307 | 100% | 3,307 | 1.000 | 3,307 |
| Gas High Efficiency Boiler (TOS) | 195 | 100% | 195 | 1.000 | 195 |
| Total | 352,182 | 100% | 353,137 | 1.000 | 353,137 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Air Purifier (22% of ex ante energy and 13% of demand savings): The gross realization rate for Air Purifier was 66% for kWh and 66% for kW.
  + For 100% of measures (n=2,884), the evaluation team applied the IQ baseline adjustment factor as recommended by the IL-TRM V12.0, whereas the implementation team applied the IQ baseline adjustment factor to deemed values that already accounted for it, resulting in lower verified energy and demand savings.
* Air Source Heat Pump (ER) (17% of ex ante energy and <1% of demand savings): The gross realization rate for Air Source Heat Pumps (ER) was 101% for kWh and 560% for kW.
  + For 7% of measures (n=6), the evaluation team applied the existing cooling system efficiency (7.4 EER2) from the IL-TRM V12.0 since the actual existing system cooling efficiency was unknown, whereas the implementation team converted SEER2 to EER2 using the SEER to EER conversion formula, which results in a different EER2 value (8.6 EER2) than what is presented in the IL-TRM V12.0, resulting in higher verified demand savings.[[18]](#footnote-18)
  + For 1% of measures (n=1), the evaluation team assumed the existing cooling system was unknown when the primary cooling type field was not populated, whereas the implementation team assumed that there was no existing cooling system, resulting in higher verified energy and demand savings.
* Crawl Space Insulation (4% of ex ante energy savings, 4% of demand savings, and 8% of gas savings): The gross realization rate for Crawl Space Insulation was 86% for kWh, 100% for kW, and 101% for therms.
  + For 93% of measures (n=349), the evaluation team applied the average heating degree day (HDD) for semi-conditioned and unconditioned basements from the IL-TRM V12.0, whereas the implementation team inconsistently applied HDD values associated with semi-conditioned and unconditioned basements when calculating heating and furnace fan runtime savings, resulting in lower verified energy savings and higher verified gas savings.
* Ductless Heat Pump (3% of ex ante energy savings and negative demand savings): The gross realization rate for Ductless Heat Pumps was 128% for kWh and 149% for kW.
  + For 38% of measures (n=8), the evaluation team applied IL-TRM V12.0-recommended assumptions for existing electric resistance heating and no central AC in cases where measures were installed in parts of the home not served by the primary HVAC system, whereas the implementation team applied assumptions associated with the existing primary heating and cooling system, resulting in higher verified energy savings and lower (i.e., more negative) verified demand savings.
* Air Source Heat Pump (TOS) (<1% of ex ante energy and <1% of demand savings): The gross realization rate for Air Source Heat Pumps (TOS) was 450% for kWh and 100% for kW.
  + For 50% of measures (n=4), the evaluation team applied IL-TRM V12.0-recommended assumptions for existing electric resistance heating based on information included in tracking data, whereas the implementation team applied assumptions for an existing air source heat pump, resulting in higher verified energy savings.
* Door Sweep (<1% of ex ante energy, demand, and gas savings): The gross realization rate for Door Sweeps was 48% for kWh, 102% for kW, and 91% for therms.
  + For 100% of measures (n=121), the evaluation team applied IL-TRM V12.0-recommended assumptions for prescriptive air sealing measures directly installed in single-family homes, whereas the implementation team applied deemed savings that relied on select assumptions (e.g., climate weights) associated with the Kits Initiative, resulting in lower verified energy savings, higher verified demand savings, and lower verified gas savings.
* Induction Range (<1% of ex ante energy and <1% of demand savings): The gross realization rate for Induction Ranges was 65% for kWh and 65% for kW.
  + For the one measure included, the evaluation team applied IL-TRM V12.0-recommended assumptions for the induction cooktop only, whereas the implementation team included savings associated with both the induction cooktop and electric resistance oven, resulting in lower verified electric energy and demand savings.

### Community Action Agency Channel

#### Channel Description

The CAA channel provides comprehensive energy efficiency and health and safety improvements to low-income customers in AIC service territory who are eligible for the Illinois Home Weatherization Assistance Program (IHWAP). The CAA channel’s key distinction from the Single Family channel is that CAA channel projects are not entirely funded by AIC. Rather, CAA channel projects use a combination of AIC and IHWAP funding, and AIC claims all savings from measures they co-fund. The AIC components of the CAA channel are implemented primarily by Walker-Miller Energy Services. Walker-Miller engages with CAAs to ensure those agencies have sufficient funds, resources, support, and training to complete AIC projects. CAAs are responsible for recruiting AIC IQ customers and executing projects. CAAs first provide a BPI energy assessment that identifies energy savings opportunities and produces a retrofit scope of work. During the assessment, these agencies also install energy-efficient DI measures such as LEDs, showerheads, faucet aerators, advanced power strips, pipe insulation, and advanced thermostats at no cost to qualifying customers. Following the assessment, customers typically receive additional building envelope and HVAC retrofits based on the scope of work. Additionally, AIC pays 50% of the costs of any health and safety services provided through the channel.

##### Summary of Key Implementation Changes

We summarize key changes to the CAA channel’s design and implementation in 2024 below:

* The CAA channel expanded its offerings to multifamily customers by installing energy-saving measures in individual residential units. Measures installed included DI measures and duct sealing.
* Initiative staff created a web-based work portal/dashboard to enable CAAs to more easily view measure offerings, streamline braiding AIC and government funds, and for data security purposes.
* Initiative staff transitioned the activities of the CAA Staffing Pilot to the Illinois Association of Community Action Agencies (IACAA). The Pilot included management and placement of the Traveling Specialists with CAAs that needed supplemental staff. IACAA implemented a pay-per-service model, which covered the salaries and associated costs of the Traveling Specialists. IACAA also began recruiting and training supplemental staff who could provide CAAs with office or administrative support.
* Initiative staff also noted that CAAs transitioned to a new program tracking platform called the Illinois Weatherization (IWx) tool in July 2024. The new platform replaced WeatherWorks due to concerns about data security from the US Department of Energy (DOE). AIC allowed CAAs to submit paper applications for projects to allow the completion of projects put on hold due to the transition to IWx.

#### Participation Summary

In 2024, the CAA channel completed projects in 216 homes (including one multifamily unit), as shown in Table 27.[[19]](#footnote-19) The majority (88%) of participants received both DI measures and larger retrofits, while the rest typically received only retrofits. Additional detail regarding the percentage of customers who received each type of measure is available in Appendix E.

Table 27. 2024 CAA Channel Participation Summary

| Project Type | Total |
| --- | --- |
| Full Participation: DI + Building Envelope or HVAC Retrofits | 190 |
| Building Envelope or HVAC Retrofits Only | 26 |
| DI Measures Only | 1 |
| Number of Homes Served | 216 |

*Source:* We identified unique homes by account number and excluded one home that only received "Other" measures such as Administrative Cost, Program Support, Health and Safety, Authorized Measure, and Program Support, which did not include ex ante savings.

#### Savings Detail

Table 28 presents the ex ante, verified gross, and verified net electric energy savings achieved through the CAA channel in 2024.

Table 28. 2024 CAA Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 188 | 101% | 190 | 1.000 | 190 |
| Attic Insulation | 121 | 101% | 122 | 1.000 | 122 |
| Standard LED | 107 | 100% | 107 | 1.000 | 107 |
| Air Source Heat Pump (ER) | 106 | 103% | 110 | 1.000 | 110 |
| BPM Motor | 63 | 101% | 63 | 1.000 | 63 |
| Crawl Space Insulation | 51 | 87% | 44 | 1.000 | 44 |
| Bathroom Exhaust Fan | 40 | 100% | 40 | 1.000 | 40 |
| Packaged Terminal Heat Pump | 33 | 100% | 33 | 1.000 | 33 |
| Pipe Insulation | 31 | 100% | 31 | 1.000 | 31 |
| Heat Pump Water Heaters | 28 | 100% | 28 | 1.000 | 28 |
| Floor Insulation | 18 | 100% | 18 | 1.000 | 18 |
| Low Flow Showerhead | 16 | 101% | 16 | 1.000 | 16 |
| Wall Insulation | 9 | 104% | 9 | 1.000 | 9 |
| Faucet Aerator | 9 | 100% | 9 | 1.000 | 9 |
| Rim Joist Insulation | 6 | 101% | 6 | 1.000 | 6 |
| Specialty LED | 5 | 100% | 5 | 1.000 | 5 |
| Advanced Thermostat | 5 | 95% | 5 | 1.000 | 5 |
| Room Air Conditioner (ER) | 3 | 100% | 3 | 1.000 | 3 |
| Door Sweep | 2 | 100% | 2 | 1.000 | 2 |
| Knee Wall Insulation | 2 | 101% | 2 | 1.000 | 2 |
| Caulking | 1 | 100% | 1 | 1.000 | 1 |
| Ductless Heat Pump | 1 | 706% | 9 | 1.000 | 9 |
| Air Source Heat Pump (TOS) | 1 | 100% | 1 | 1.000 | 1 |
| Total | 844 | 101% | 852 | 1.000 | 852 |

Table 29 presents the ex ante, verified gross, and verified net electric demand savings achieved through the CAA channel in 2024.

Table 29. 2024 CAA Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 0.08 | 100% | 0.08 | 1.000 | 0.08 |
| Attic Insulation | 0.04 | 100% | 0.04 | 1.000 | 0.04 |
| Standard LED | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Air Source Heat Pump (ER) | 0.0003 | 1,397% | 0.004 | 1.000 | 0.004 |
| BPM Motor | 0.02 | 102% | 0.02 | 1.000 | 0.02 |
| Crawl Space Insulation | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Bathroom Exhaust Fan | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Packaged Terminal Heat Pump | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Pipe Insulation | 0.003 | 100% | 0.003 | 1.000 | 0.003 |
| Heat Pump Water Heaters | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Floor Insulation | 0.003 | 100% | 0.003 | 1.000 | 0.003 |
| Low Flow Showerhead | 0.002 | 101% | 0.002 | 1.000 | 0.002 |
| Wall Insulation | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Faucet Aerator | 0.004 | 100% | 0.004 | 1.000 | 0.004 |
| Rim Joist Insulation | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Specialty LED | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Advanced Thermostat | 0.003 | 95% | 0.003 | 1.000 | 0.003 |
| Room Air Conditioner (ER) | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Knee Wall Insulation | 0.001 | 101% | 0.001 | 1.000 | 0.001 |
| Ductless Heat Pump | 0.0003 | N/A | -0.001 | 1.000 | -0.001 |
| Air Source Heat Pump (TOS) | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Total | 0.20 | 101% | 0.20 | 1.000 | 0.20 |

Table 30 presents the ex ante, verified gross, and verified net gas savings achieved through the CAA channel in 2024. The channel also achieved non-AIC natural gas savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 30. 2024 CAA Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 18,458 | 100% | 18,458 | 1.000 | 18,458 |
| Attic Insulation | 17,538 | 100% | 17,539 | 1.000 | 17,539 |
| Crawl Space Insulation | 8,567 | 100% | 8,610 | 1.000 | 8,610 |
| Pipe Insulation | 2,053 | 100% | 2,053 | 1.000 | 2,053 |
| Floor Insulation | 2,599 | 100% | 2,599 | 1.000 | 2,599 |
| Low Flow Showerhead | 298 | 100% | 298 | 1.000 | 298 |
| Wall Insulation | 3,484 | 100% | 3,495 | 1.000 | 3,495 |
| Faucet Aerator | 234 | 100% | 234 | 1.000 | 234 |
| Rim Joist Insulation | 1,242 | 100% | 1,239 | 1.000 | 1,239 |
| Advanced Thermostat | 1,085 | 95% | 1,029 | 1.000 | 1,029 |
| Knee Wall Insulation | 453 | 101% | 456 | 1.000 | 456 |
| High Efficiency Gas Furnace (ER) | 29,340 | 100% | 29,340 | 1.000 | 29,340 |
| Gas High Efficiency Boiler (ER) | 3,033 | 100% | 3,033 | 1.000 | 3,033 |
| Gas Water Heater | 449 | 100% | 449 | 1.000 | 449 |
| High Efficiency Gas Furnace (TOS) | 292 | 100% | 292 | 1.000 | 292 |
| Total | 89,124 | 100% | 89,123 | 1.000 | 89,123 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Air Source Heat Pump (ER) (13% of ex ante energy and <1% of demand savings): The gross realization rate for Air Source Heat Pump (ER) was 103% for kWh and 1,397% for kW.
  + For 8% of measures (n=1), the evaluation team applied the existing cooling system efficiency (7.4 EER2) from the IL-TRM V12.0 since the actual existing system cooling efficiency was unknown, whereas the implementation team converted SEER2 to EER2 using the SEER to EER conversion formula, which results in a different EER2 value (8.6 EER2) than what is presented in the IL-TRM V12.0, resulting in higher verified demand savings.
  + For 8% of measures (n=1), the evaluation team assumed the existing cooling system was unknown when the primary cooling type field was not populated, whereas the implementation team assumed that there was no existing cooling system, resulting in higher verified energy and demand savings.
* Advanced Thermostat (1% of ex ante energy, 1% of demand savings, and 1% of natural gas savings): The gross realization rate for Advanced Thermostat was 95% for kWh, kW, and therms.
  + In 6% of measures (n=1), the evaluation team did not include savings for instances where tracking data identified the existing thermostat as an advanced thermostat, whereas the implementation team included savings for these measures, resulting in lower verified energy, demand, and gas savings.
* Ductless Heat Pump (<1% of ex ante energy savings and negative demand savings): The gross realization rate for Ductless Heat Pump was 706% for kWh and is not applicable for kW.
  + For the one measure provided, the evaluation team applied IL-TRM V12.0-recommended assumptions for existing electric resistance heating and no central AC in cases where measures were installed in parts of the home not served by the primary HVAC system, whereas the implementation team applied assumptions associated with the existing primary heating and cooling system, resulting in higher verified energy savings and lower verified demand savings.

### Joint Utility Channel

#### Channel Description

Similar to the Single Family channel, the Joint Utility channel provides DI, HVAC, and building envelope retrofits to participating single family customer homes through select Program Allies. However, this channel is implemented via a partnership between AIC and Nicor Gas to serve IQ customers in their shared utility territory, largely in the Bloomington-Normal area but also in parts of Rantoul and Champaign counties. Measures are similar to the Single Family channel; however, AIC typically pays for and claims savings from only electric efficiency measures provided through the channel. AIC and Nicor Gas partner with Resource Innovations to implement this channel.

##### Summary of Key Implementation Changes

We summarize key changes to the Joint Utility channel’s design and implementation in 2024 below:

* The cost allocation between AIC and Nicor Gas changed. In 2023, the cost of joint measures was consistently split 65%/35% between AIC and Nicor Gas. In 2024, AIC and Nicor Gas split costs based on measure-level savings achieved, taking into consideration each utility’s avoided costs. The change more accurately aligned AIC spend with electric measure expenditure, allowing for more accurate budgeting and goal setting.
* The Joint Utility channel expanded to multifamily customers in 2024, allowing individual in-unit energy-saving upgrades and improvements. Properties with at least three tenant units, townhomes, and condominiums with both AIC electric and Nicor Gas accounts were eligible to participate through the Joint Utility channel.
* Initiative staff also made the following adjustments to energy-saving measures offered in 2024:
  + Added new DI measures such as exterior LED lighting and smart plugs
  + Increased the number of advanced power strips offered per household.
  + Expanded to include duct sealing and establish a minimum CFM requirement for all building envelope offerings.

#### Participation Summary

In 2023, the Joint Utility channel served 99 homes, almost half of which were part of the expansion to multifamily units. Nearly all participants received HVAC or building shell retrofits, with a few receiving DI measures only. This summary does not fully capture customers’ participation experience, as customers may have also received gas-only measures funded by Nicor Gas. While not depicted below, five customers received health and safety services. Table 31 shows the number of participants served and describes the types of projects AIC funded for the Joint Utility channel, and additional detail regarding participation levels by measure category is provided in Appendix E.

Table 31. 2024 Joint Utility Channel Participation Summary (AIC-Funded Measures)

| Project Type | Single-Family Home | Multifamily Unit | Total |
| --- | --- | --- | --- |
| Full Participation (DI + Building Envelope or HVAC Retrofits) | 46 | 34 | 80 |
| Building Envelope or HVAC Retrofits Only | 10 | 3 | 13 |
| DI Only | 2 | 4 | 6 |
| Number of Homes Served | 58 | 41 | 99 |

*Source*: We identified unique homes by account number and excluded three homes that only received "Other" measures, such as Administrative Cost, Program Support, Health and Safety, Authorized Measure, and Program Support, which did not include ex ante savings.

#### Savings Detail

Table 32 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Joint Utility channel in 2024.

Table 32. 2024 Joint Utility Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Duct Sealing | 81 | 106% | 86 | 1.000 | 86 |
| Air Sealing | 36 | 100% | 36 | 1.000 | 36 |
| Advanced Power Strip | 11 | 100% | 11 | 1.000 | 11 |
| Standard LED | 9 | 99% | 9 | 1.000 | 9 |
| Advanced Thermostat | 7 | 86% | 6 | 1.000 | 6 |
| Smart Socket | 5 | 100% | 5 | 1.000 | 5 |
| Attic Insulation | 4 | 100% | 4 | 1.000 | 4 |
| Floor Insulation | 4 | 100% | 4 | 1.000 | 4 |
| LED Fixtures | 3 | 78% | 2 | 1.000 | 2 |
| Pipe Insulation | 1 | 100% | 1 | 1.000 | 1 |
| Specialty LED | 1 | 99% | 1 | 1.000 | 1 |
| Faucet Aerator | 1 | 96% | 1 | 1.000 | 1 |
| Low Flow Showerhead | <1 | 107% | <1 | 1.000 | <1 |
| Wall Insulation | <1 | 111% | <1 | 1.000 | <1 |
| Rim Joist Insulation | <1 | 100% | <1 | 1.000 | <1 |
| Total | 166 | 102% | 169 | 1.000 | 169 |

Table 33 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Joint Utility channel in 2024. The channel also achieved non-AIC natural gas savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 33. 2024 Joint Utility Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Duct Sealing | 0.04 | 102% | 0.05 | 1.000 | 0.05 |
| Air Sealing | 0.02 | 103% | 0.03 | 1.000 | 0.03 |
| Advanced Power Strip | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Standard LED | 0.001 | 99% | 0.001 | 1.000 | 0.001 |
| Advanced Thermostat | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Smart Socket | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Attic Insulation | 0.002 | 141% | 0.003 | 1.000 | 0.003 |
| Floor Insulation | 0.002 | 102% | 0.002 | 1.000 | 0.002 |
| LED Fixtures | 0.0004 | 98% | 0.0004 | 1.000 | 0.0004 |
| Pipe Insulation | 0.0002 | 100% | 0.0002 | 1.000 | 0.0002 |
| Specialty LED | 0.0002 | 99% | 0.0002 | 1.000 | 0.0002 |
| Faucet Aerator | 0.0002 | 100% | 0.0002 | 1.000 | 0.0002 |
| Wall Insulation | 0.0002 | 112% | 0.0002 | 1.000 | 0.0002 |
| Rim Joist Insulation | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Total | 0.08 | 103% | 0.08 | 1.000 | 0.08 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Duct Sealing (49% of ex ante energy and 55% of demand savings): The gross realization rate for Duct Sealing was 106% for kWh and 102% for kW.
  + For 13% of measures (n=12), the evaluation team included furnace fan savings, whereas the implementation team did not, resulting in higher verified electric energy savings.
  + For 1% of measures (n=1), the evaluation team included cooling savings, whereas the implementation team did not, resulting in higher verified electric energy and demand savings.
* Advanced Thermostat (5% of ex ante energy and 6% of demand savings): The gross realization rate for Advanced Thermostat was 86% for kWh and 100% for kW.
  + For 86% of measures (n=31), the evaluation team applied IL-TRM V12.0 assumptions for thermostats installed in multifamily homes based on participant information included in tracking data, whereas the implementation team applied single-family assumptions, resulting in lower verified electric energy savings.[[20]](#footnote-20)
* Attic Insulation (3% of ex ante energy and 2% of demand savings): The gross realization rate for Attic Insulation was 100% for kWh and 141% for kW.
  + For 100% of measures (n=16), the evaluation team applied cooling full load hour (FLH) assumptions by cooling zone as recommended by the IL-TRM V12.0, whereas the implementation team applied cooling FLH values for a different cooling zone than reflected in tracking data, resulting in higher verified demand savings.
* LED Fixtures (2% of ex ante energy and 1% of demand savings): The gross realization rate for LED Fixtures was 78% for kWh and 98% for kW.
  + For 100% of measures (n=79), the evaluation team applied IL-TRM V12.0-recommended task lighting HOU assumptions for measures identified as desk lamps, whereas the implementation team applied indoor fixture HOU assumptions, resulting in lower verified electric energy savings.

### Smart Savers Channel

#### Channel Description

The Smart Savers channel is a third-party offering that provides advanced thermostat technology and installation at no cost to AIC customers in lower-income areas. The channel utilizes a group of qualified installers enrolled to support thermostat installation, known as Program Allies. The channel's overarching goals are to achieve energy savings through advanced thermostat installation, reach customers who have not previously benefited from AIC’s Residential Program, and serve as an entry point to other AIC energy efficiency offerings for both customers and contractors.

The channel targets single-family and multifamily customers in ZIP codes where at least 30% of residents are at or below 200% of the Federal Poverty Level (FPL) by census data definitions. Customers in these ZIP codes can learn about the channel in various ways, including AIC bill inserts, emails, direct mail campaigns, and Program Ally-led marketing efforts. Eligible customers may apply online or by phone and can select the Program Ally they prefer. A Program Ally then schedules and conducts the thermostat installation at the customer's home, educating them in the process on how to use their new device’s energy-saving features.

The channel’s implementers, Leidos and i3 Energy (formerly Staples Energy), play distinct roles in the channel’s execution. Leidos is responsible for hosting the online portal, distributing project leads, and ensuring leads are contacted and served in a timely manner. I3 Energy acts as a liaison between the channel and Program Allies, identifying and recruiting new Program Allies, onboarding them into the channel, serving as their go-to resource for channel support, and providing ongoing training on various topics, including online portal navigation, marketing practices, and customer education.

##### Summary of Key Implementation Changes

We summarize key changes made in 2024 to the Smart Savers channel design and implementation below:

* As of early 2024, the channel no longer supports customer self-installation of thermostats. Customers who decline installation services on their Smart Savers application are redirected to AIC’s Online Marketplace offering.
* This year, implementation staff placed greater emphasis on ensuring that Program Allies assist customers in connecting their new advanced thermostats to their smartphones during installation and educate them on the energy-saving features of their devices. Program Allies are now required to complete a customer acknowledgment form during each installation and submit it to Leidos alongside the project invoice to confirm they provided device setup assistance and education. Additionally, i3 Energy started dedicating time during Program Ally training sessions to the importance of customer education and best practices for educating customers.
* Over the past year, AIC scaled back email outreach for energy efficiency programs to help avoid customers unsubscribing due to high email volume. As a result, implementation staff began exploring new avenues for customer engagement, including in-person engagement at large events and outreach via bill inserts. Additionally, implementation staff placed emphasis on encouraging Program Allies to generate leads via their own marketing. To support this effort, i3 Energy began dedicating portions of onboarding and training to showing Program Allies how to use the online marketing portal, how to order pre-approved marketing materials listed there, and best practices for use of marketing resources.
* As of 2024, the Smart Savers channel no longer includes the Smart Self Reliance Pilot (SSRP), which in 2023 added 12 ZIP codes to the channel to enable a partner organization to refer their IQ clientele to the channel directly.

#### Participation Summary

The Smart Savers channel did not meet its adjusted participation target of 3,000 thermostats for 2024. Program Allies installed about 900 thermostats, marking a decrease of 90% from 2023 participation levels. This shift is primarily attributable to the removal of a self-install option, which historically accounted for the majority of participation, as well as the scaling back of marketing efforts and the continually increasing market saturation of advanced thermostat technology in AIC’s service territory. Nearly all thermostats went to single-family homes (97%), while the remainder went to seven multifamily properties. Table 34 summarizes participation by home type.

Table 34. 2024 Smart Savers Channel Participation Summary

| Home Type | Measure Quantity | Participant Count (Households) |
| --- | --- | --- |
| Single-family | 876 | 876 |
| Multifamily | 28 | 7 |
| Total | 904 | 883 |

The Smart Savers channel served customers across 90 unique ZIP codes in AIC service territory, reflecting a considerable drop-off from 2023 when the offering served customers in 262 unique ZIP codes. This is likely the result of the drop in overall participation and the shift to a Program Ally-only installation model, which has historically been a less common pathway for this channel and depends on Program Ally availability in different geographic areas. Table 35 summarizes the number of unique ZIP codes served by housing type.

Table 35. 2024 Smart Saver Channel Number of ZIP Codes Served

| Home Type | Number of ZIP Codes |
| --- | --- |
| Single-family | 90 |
| Multifamily | 2 |
| Total | 90 |

#### Savings Detail

In our review of tracking data, the evaluation team identified 10 participant ZIP codes not included on the approved list of ZIP codes targeted by the offering. As such, we treated these cases as market rate participants and assigned the associated NTGR to estimate net verified savings. This issue affected 12 thermostats, or 1% of the total distributed, resulting in an NTGR of slightly less than 1.0.

Table 36 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Smart Savers channel in 2024.

Table 36. 2024 Smart Savers Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 398 | 98% | 390 | 0.998 | 389 |
| Total | 398 | 98% | 390 | 0.998 | 389 |

Table 37 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Smart Savers channel in 2024.

Table 37. 2024 Smart Savers Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 0.15 | 100% | 0.15 | 0.997 | 0.15 |
| Total | 0.15 | 100% | 0.15 | 0.997 | 0.15 |

Table 38 presents the ex ante, verified gross, and verified net gas savings achieved through the Smart Savers channel in 2024. The channel also achieved non-AIC natural gas and propane savings, which cannot be claimed against AIC’s natural gas savings goals but are presented in Appendix B.

Table 38. 2024 Smart Savers Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 53,473 | 101% | 53,902 | 0.999 | 53,821 |
| Total | 53,473 | 101% | 53,902 | 0.999 | 53,821 |

While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Advanced Thermostat (100% of ex ante energy savings, 100% of demand savings, and 100% of gas savings): The gross realization rate for Advanced Thermostat was 98% for kWh, 100% for kW, and 101% for therms.
  + For 1% of measures (n=7), the evaluation team applied natural gas furnace heating assumptions from the IL-TRM V12.0, whereas the implementation team assumed electric resistance heating, resulting in lower verified energy savings and higher verified gas savings.

### Mobile Homes and Air Sealing Channel

#### Channel Description

The IQ Initiative’s MHAS channel is a third-party offering implemented by Future Energy Enterprises (FUTEE) that delivers energy efficiency and other improvements to IQ customers living in mobile homes. The channel provides kits with energy-saving products, advanced thermostats, and larger building envelope and HVAC retrofits, including some mobile home-specific measures like “belly board” (i.e., subfloor) insulation. Customers also receive energy literacy education and certain health and safety measures, such as carbon monoxide and smoke detectors, as well as fire extinguishers. AIC and its partners are actively recruiting and training Program Allies to work on mobile home projects, and developing partnerships with community-based organizations (CBOs) for channel delivery and community engagement.[[21]](#footnote-21) As done in 2023, channel staff continued offering mobile home-specific training opportunities for new and existing Program Allies through the Building Performance Center. Additionally, as of 2024, the channel includes an electrification effort to encourage propane customers to convert to electric appliances.

##### Summary of Key Implementation Changes

Key changes to channel design and implementation in 2024 are described below:

* The channel simplified its income qualification process to improve customer experience. Under the simplified eligibility requirements, any mobile home resident with AIC electric or gas service is automatically qualified to participate.
* Channel staff launched the new electrification effort targeting mobile home residents with propane service in AIC service territory. The pilot aimed to encourage propane customers to adopt electric appliances and make associated electrical upgrades, such as panel modifications.
  + In the first year of the electrification effort, channel staff did not complete any MHAS channel electrification projects due primarily to challenges with equipment sizing, lack of customer interest or readiness to move off of propane (e.g., having a full propane tank), and difficulty locating customers who met eligibility requirements.[[22]](#footnote-22) Channel staff plan to focus on addressing these initial obstacles and begin enrolling electrification effort participants in 2025.

#### Participation Summary

Table 39 summarizes MHAS channel participation in 2024. The MHAS channel provided energy efficiency services to a total of 344 customers in 2024. Nearly all of these customers (95%) received a mobile home kit that included energy-saving products such as LEDs and faucet aerators, while just under one-third (29%) received building envelope and/or HVAC retrofits. Some customers who only received a mobile home kit may have been in the middle of the participation process at the end of 2024 and could receive additional retrofits in 2025. Most of the 17 customers with no savings were walkaways, while some completed the initial assessment and may still receive additional services in 2025.

Table 39. 2024 MHAS Channel Participation Summary

|  |  |  |
| --- | --- | --- |
| Participation | Count | Percent |
| Received Kit | 327 | 95% |
| Received Building Envelope or HVAC Retrofit | 100 | 29% |
| No Savings | 17 | 5% |
| Total Customers Served | 344 | 100% |

Note: We identified unique homes by account number. Participation counts are not mutually exclusive and thus sum to more than the total number of customers served.

As shown in Table 40, the MHAS channel served customers across 26 counties within AIC service territory. Nearly two-fifths (39%) of participants were located in Champaign County, where AIC has historically focused channel efforts. Macon and St. Clair counties were the next most common regions served by the channel, both of which were established as areas of interest for channel expansion beginning in 2023. In 2024, the channel expanded participation to 19 new counties, in addition to 7 of the counties served in 2023. This demonstrates significant territorial growth for the channel and indicates potential for continued participation growth in 2025.

Table 40. 2024 MHAS Channel Participation by County

|  |  |  |
| --- | --- | --- |
| County | Count of Customers | Percent of Customers |
| Champaign | 135 | 39% |
| Macon | 74 | 22% |
| St. Clair | 29 | 8% |
| Madison | 18 | 5% |
| Mariona | 11 | 3% |
| Christian | 10 | 3% |
| Crawforda | 9 | 3% |
| Douglasa | 9 | 3% |
| Coles | 8 | 2% |
| Cumberlanda | 7 | 2% |
| Effinghama | 5 | 1% |
| Shelbya | 5 | 1% |
| Otherb | 24 | 7% |
| Total | 344 | 100% |

a Indicates county was a new addition to the channel for 2024.

b ‘Other’ includes 14 counties with four or fewer participants.

#### Savings Detail

This chapter summarizes savings from HVAC and building envelope retrofits only. Mobile Home Kits savings are presented in the Kits Initiatives chapter (Section 3.5).

Table 41 presents the ex ante, verified gross, and verified net electric energy savings achieved through the MHAS channel in 2024.

Table 41. 2024 MHAS Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER) | 118 | 102% | 121 | 1.000 | 121 |
| Floor Insulation | 49 | 101% | 49 | 1.000 | 49 |
| Air Sealing | 40 | 103% | 41 | 1.000 | 41 |
| BPM Motor | 39 | 101% | 39 | 1.000 | 39 |
| Advanced Thermostat | 22 | 100% | 22 | 1.000 | 22 |
| Ductless Heat Pump | 13 | 100% | 13 | 1.000 | 13 |
| Bathroom Exhaust Fan | 8 | 100% | 8 | 1.000 | 8 |
| Heat Pump Water Heater | 3 | 100% | 3 | 1.000 | 3 |
| Crawl Space Insulation | 2 | 91% | 1 | 1.000 | 1 |
| Total | 293 | 102% | 297 | 1.000 | 297 |

Table 42 presents the ex ante, verified gross, and verified net electric demand savings achieved through the MHAS channel in 2024.

Table 42. 2024 MHAS Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER) | 0.01 | 171% | 0.01 | 1.000 | 0.01 |
| Floor Insulation | 0.01 | 104% | 0.01 | 1.000 | 0.01 |
| Air Sealing | 0.02 | 106% | 0.02 | 1.000 | 0.02 |
| BPM Motor | 0.01 | 107% | 0.01 | 1.000 | 0.01 |
| Advanced Thermostat | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Ductless Heat Pump | -0.002 | 100% | -0.002 | 1.000 | -0.002 |
| Bathroom Exhaust Fan | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Heat Pump Water Heater | 0.0001 | 101% | 0.0001 | 1.000 | 0.0001 |
| Crawl Space Insulation | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Total | 0.06 | 113% | 0.07 | 1.000 | 0.07 |

Table 43 presents the ex ante, verified gross, and verified net gas savings achieved through the MHAS channel in 2024.

Table 43. 2024 MHAS Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Floor Insulation | 8,112 | 100% | 8,113 | 1.000 | 8,113 |
| Air Sealing | 5,960 | 100% | 5,960 | 1.000 | 5,960 |
| Advanced Thermostat | 4,156 | 100% | 4,156 | 1.000 | 4,156 |
| Crawl Space Insulation | 711 | 100% | 711 | 1.000 | 711 |
| High Efficiency Gas Furnace (ER) | 20,115 | 100% | 20,116 | 1.000 | 20,116 |
| High Efficiency Gas Furnace (TOS) | 235 | 100% | 235 | 1.000 | 235 |
| Total | 39,289 | 100% | 39,290 | 1.000 | 39,290 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Air Source Heat Pump (ER) (40% of ex ante energy and 12% of demand savings): The gross realization rate for early replacement air source heat pumps is 102% for kWh and 171% for kW.
  + For 9% of measures (n=1), the evaluation team applied IL-TRM V12.0-recommended assumptions for an unknown existing cooling system when the primary cooling type field was not populated, whereas the implementation team applied assumptions associated with a lack of any existing cooling system, resulting in higher verified energy and demand savings.[[23]](#footnote-23)
  + For 36% of measures (n=4), the evaluation team applied default EER2 values from the IL-TRM V12.0, whereas the implementation team applied a SEER to EER conversion formula to the IL-TRM V12.0 default SEER2 value to calculate EER2, resulting in higher verified demand savings.

### Healthier Homes Channel

#### Channel Description

The Healthier Homes channel partners with healthcare providers and local community organizations to identify low-income or underserved households with a history of asthma or other respiratory ailments. AIC provides energy efficiency and health and safety services to deliver energy bill savings and preventative care to these households. Projects include an in-home health and energy assessment; various energy-saving products like LEDs; larger weatherization and HVAC upgrades like air sealing and advanced thermostats; and indoor air quality (IAQ) improvement measures such as moisture control, hypoallergenic bedding, mold remediation, IAQ monitors, and carbon monoxide detectors. Some measures, such as dehumidifiers and air purifiers, are “hybrid measures” to save energy and improve IAQ.

##### Summary of Key Implementation Changes

We summarize key changes to the Healthier Homes channel’s design and implementation in 2024 below:

* The channel expanded the scope of non-energy-saving measures to include stairs and carpets. Replacing carpets is meant to improve air quality and prevent health issues, particularly among children who are often in close contact with carpets and elderly individuals who are more susceptible to respiratory problems.[[24]](#footnote-24)
* The channel established partnerships with two healthcare organizations for client referrals: Solvera Health in Peoria and Crossing Healthcare in Decatur. These organizations helped identify the majority of participants.
* Implementation staff worked to increase the workforce of home auditors through a partnership with Richland College, pairing BPI certification graduates with Program Allies. As part of this effort, at least 12 students participated in in-home visits through Richland’s workforce development program. This collaboration allowed students to engage with a Program Ally, enabling them to ask industry-related questions and gain practical experience in building performance principles.

#### Participation Summary

In 2024, the Healthier Homes channel served 16 unique homes, most of which received building envelope or HVAC retrofits. Table 44 summarizes the number of homes served by project type, and additional detail regarding participation levels by measure category is provided in Appendix E.

Table 44. 2024 Healthier Homes Channel Participation Summary

|  |  |
| --- | --- |
| Project Type | Total |
| Full Participation: DI + Building Envelope or HVAC Retrofits | 10 |
| Building Envelope or HVAC Retrofits Only | 4 |
| DI Measures Only | 2 |
| Number of Homes Served | 16 |

*Source:* We identified unique homes by account number and excluded one home that only received "Other" measures, such as Administrative Cost, Program Support, Health and Safety, Authorized Measure, and Program Support, which did not include ex ante savings.

#### Savings Detail

Table 45 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Healthier Homes channel in 2024.

Table 45. 2024 Healthier Homes Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Central AC (ER) | 10 | 100% | 10 | 1.000 | 10 |
| BPM Motor | 6 | 100% | 6 | 1.000 | 6 |
| Standard LED | 5 | 100% | 5 | 1.000 | 5 |
| Air Sealing | 4 | 105% | 4 | 1.000 | 4 |
| Attic Insulation | 2 | 104% | 3 | 1.000 | 3 |
| Bathroom Exhaust Fan | 2 | 100% | 2 | 1.000 | 2 |
| Advanced Thermostat | 2 | 84% | 1 | 1.000 | 1 |
| Specialty LED | 1 | 100% | 1 | 1.000 | 1 |
| Crawl Space Insulation | 1 | 90% | 1 | 1.000 | 1 |
| Wall Insulation | 1 | 100% | 1 | 1.000 | 1 |
| Advanced Power Strip | 1 | 100% | 1 | 1.000 | 1 |
| Ductless Heat Pump (TOS) | 1 | 773% | 4 | 1.000 | 4 |
| Central AC (TOS) | <1 | 100% | <1 | 1.000 | <1 |
| Duct Sealing | <1 | 100% | <1 | 1.000 | <1 |
| Connected LED | <1 | 100% | <1 | 1.000 | <1 |
| Rim Joist Insulation | <1 | 105% | <1 | 1.000 | <1 |
| Knee Wall Insulation | <1 | 100% | <1 | 1.000 | <1 |
| Faucet Aerator | <1 | 100% | <1 | 1.000 | <1 |
| Low Flow Showerhead | <1 | 100% | <1 | 1.000 | <1 |
| Total | 37 | 110% | 41 | 1.000 | 41 |

Table 46 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Healthier Homes channel in 2024.

Table 46. 2024 Healthier Homes Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Central AC ER | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| BPM Motor | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Standard LED | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Air Sealing | 0.002 | 107% | 0.003 | 1.000 | 0.003 |
| Attic Insulation | 0.001 | 107% | 0.001 | 1.000 | 0.001 |
| Bathroom Exhaust Fan | 0.0003 | 100% | 0.0003 | 1.000 | 0.0003 |
| Advanced Thermostat | 0.001 | 79% | 0.001 | 1.000 | 0.001 |
| Specialty LED | 0.0002 | 100% | 0.0002 | 1.000 | 0.0002 |
| Crawl Space Insulation | 0.0004 | 100% | 0.0004 | 1.000 | 0.0004 |
| Wall Insulation | 0.0004 | 100% | 0.0004 | 1.000 | 0.0004 |
| Advanced Power Strip | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Ductless Heat Pump (TOS) | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Central AC (TOS) | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Duct Sealing | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Connected LED | 0.00004 | 100% | 0.00004 | 1.000 | 0.00004 |
| Rim Joist Insulation | 0.0001 | 109% | 0.0001 | 1.000 | 0.0001 |
| Knee Wall Insulation | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Total | 0.02 | 101% | 0.02 | 1.000 | 0.02 |

Table 47 presents the ex ante, verified gross, and verified net gas savings achieved through the Healthier Homes channel in 2024.

Table 47. 2024 Healthier Homes Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 1,457 | 100% | 1,457 | 1.000 | 1,457 |
| Attic Insulation | 1,121 | 100% | 1,121 | 1.000 | 1,121 |
| Advanced Thermostat | 942 | 92% | 869 | 1.000 | 869 |
| Crawl Space Insulation | 478 | 100% | 478 | 1.000 | 478 |
| Wall Insulation | 479 | 100% | 479 | 1.000 | 479 |
| Duct Sealing | 214 | 100% | 214 | 1.000 | 214 |
| Rim Joist Insulation | 109 | 100% | 109 | 1.000 | 109 |
| Knee Wall Insulation | 113 | 100% | 113 | 1.000 | 113 |
| Faucet Aerator | 31 | 100% | 31 | 1.000 | 31 |
| Low Flow Showerhead | 38 | 100% | 38 | 1.000 | 38 |
| Gas Furnace ER | 2,949 | 100% | 2,949 | 1.000 | 2,949 |
| Gas Boiler ER | 540 | 100% | 540 | 1.000 | 540 |
| Water Heater | 89 | 100% | 89 | 1.000 | 89 |
| Total | 8,560 | 99% | 8,487 | 1.000 | 8,487 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Air Sealing (11% of ex ante energy, 15% of demand savings, and 17% of gas savings): The gross realization rate for Air Sealing was 105% for kWh, 107% for kW, and 100% for therms.
  + For 6% of measures (n=1), the evaluation team assumed the existing cooling system was unknown when the primary cooling type field was not populated, whereas the implementation team assumed that there was no existing cooling system, resulting in higher verified energy and demand savings.[[25]](#footnote-25)
* Advanced Thermostat (4% of ex ante energy, 6% of demand savings, and 11% of gas savings): The gross realization rate for Advanced Thermostat was 84% for kWh, 79% for kW, and 92% for therms.
  + For 9% of measures (n=1), the evaluation team did not include savings for those where tracking data identified the existing thermostat as an advanced thermostat, whereas the implementation team included savings for these measures, resulting in lower verified energy, demand, and gas savings.
* Crawl Space Insulation (3% of ex ante energy, 2% of demand savings, and 6% of gas savings): The gross realization rate for Crawl Space Insulation was 90% for kWh, 100% for kW, and 100% for therms.
  + For 100% of measures (n=7), the evaluation team applied the average HDD for semi-conditioned and unconditioned basements from the IL-TRM V12.0, whereas the implementation team inconsistently applied HDD values associated with semi-conditioned and unconditioned basements when calculating furnace fan runtime savings, resulting in lower verified energy savings.
* Ductless Heat Pump (TOS) (2% of ex ante energy and <1% of demand savings): The gross realization rate for Ductless Heat Pump (TOS) was 986% for kWh and 100% for kW.
  + For 100% of measures (n=1), the evaluation team applied IL-TRM V12.0-recommended assumptions for existing electric resistance heating in cases where measures were installed in parts of the home not served by the primary HVAC system, whereas the implementation team applied assumptions associated with the existing heating system, resulting in higher verified energy savings.

### Electrification Channel

#### Channel Description

AIC conducted limited electrification efforts for its low-income customers for the first time in 2024, supported by activities in three IQ Initiative channels: the IQ Electrification channel, the IQ Single Family channel, and the IQ Healthier Homes channel. We group these efforts together in this section for simplicity.

The Electrification channel operates as part of the IQ Initiative, with the goal of encouraging AIC residential customers to replace propane-fueled appliances with energy-efficient electric appliances. In concert with appliances delivered through the Electrification channel, customers may also receive weatherization services through the Single Family channel. In 2024, the Single Family and Healthier Homes channels also conducted a limited number of installations of heat pump water heaters replacing natural gas-fired water heaters.

#### Participation Summary

The Electrification channel completed a limited number of projects in its first year of operation. Twenty customers received some combination of electrification and energy efficiency services. Table 48 provides a summary of AIC customers receiving electrification services in 2024.

Table 48. 2024 Income Qualified Electrification Participation Summary

| Channel | Measures Delivered | Customers |
| --- | --- | --- |
| Single Family and Electrification | Comprehensive Improvements | 9 |
| Electrification Only | Air Source Heat Pumps and Advanced Thermostats | 2 |
| Single Family Only | Heat Pump Water Heater Only | 7 |
| Healthier Homes Only | Heat Pump Water Heater Only | 2 |
| Total | | 20 |

*Source:* We determined unique customers served based on electric account numbers.

These customers fell into two separate categories:

* Eleven customers received electrification of space heat through the installation of a ducted air source heat pump to replace an existing fossil fuel-fired heating system.
  + Nine of these customers also received weatherization improvements, including air sealing (n=9) and/or insulation (n=8).
  + Five of these customers also received electrification of water heating (n=4), cooking (n=4), and/or clothes drying (n=1).
  + Where necessary, customers received advanced thermostats (n=5) and supplementary ductless heat pumps (n=1).
  + Two customers received ducted air source heat pumps without envelope improvements, one of whom also received an advanced thermostat.
* Nine customers received electrification of water heating only, replacing natural gas-fired systems.
  + These projects were completed through the Single Family and Healthier Homes channels

Table 49 below summarizes the measures and associated quantities delivered through the above projects in 2024.

Table 49. Summary of Measures Delivered through 2024 Electrification Projects

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Air Sealing | Air Sealing | 9,107 | CFM reduced |
| Attic Insulation | Ceiling/Attic Insulation | 12,063 | sq. ft. |
| Basement Sidewall Insulation | Basement Sidewall Insulation | 159 | sq. ft. |
| Crawl Space Insulation | 559 | sq. ft. |
| Kneewall Insulation | Wall Insulation | 609 | sq. ft. |
| Rim Joist Insulation | Rim/Band Joist Insulation | 1,103 | linear ft. |
| Air Source Heat Pump (ER, Electrification) | Air Source Heat Pumps (Centrally Ducted and Ductless) | 12 | # of systems |
| Ductless Heat Pump (Electrification) | 1 | # of systems |
| Heat Pump Water Heater (ER, Electrification) | Heat Pump Water Heaters | 14 | # of systems |
| Advanced Thermostats (Electrification) | Advanced Thermostats | 5 | # of thermostats |
| Heat Pump Dryer (Electrification) | ENERGY STAR Clothes Dryer | 1 | # of dryers |
| Induction Cooktop (Electrification) | Residential Induction Cooking Appliances | 4 | # of cooktops |

#### Savings Detail

Reporting savings for electrification measures is complex. Illinois state law, the Illinois Energy Efficiency Policy Manual, and the Illinois TRM prescribe several rules around how to calculate savings to be claimed against AIC’s goals for these measures, and this section presents savings calculated in that manner. There are two specific differences around how savings presented in this section are calculated as compared to other sections of this report:

1. Savings from the electrification of fossil fuel-fired end uses (e.g., replacement of a propane furnace with an air source heat pump) presented in this chapter are reported in kWh equivalents representing the net fuel-agnostic change in site energy usage.[[26]](#footnote-26)
2. Savings from weatherization activities conducted at a site receiving electrification of space heat presented in this chapter are calculated as fossil fuel savings consistent with the weatherized site's pre-existing condition but converted to kWh equivalents for the purpose of goal attainment.[[27]](#footnote-27)

For a full accounting of at-the-meter impacts from these measures that will be used in cost-effectiveness testing, please see Appendix B.

Table 50 presents the ex ante, verified gross, and verified net energy savings in MWh equivalents achieved through the Electrification channel in 2024 that can be claimed against AIC’s electric energy savings goals.

Table 50. 2024 Income Qualified Electrification Channel Energy Savings by Measure (MWh Equivalents)

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER, Electrification) | 213 | 103% | 220 | 1.000 | 220 |
| Heat Pump Water Heater  (ER, Electrification) | 60 | 100% | 60 | 1.000 | 60 |
| Attic Insulation | 23 | 100% | 23 | 1.000 | 23 |
| Air Sealing | 19 | 100% | 19 | 1.000 | 19 |
| Crawl Space Insulation | 16 | 100% | 16 | 1.000 | 16 |
| Ductless Heat Pump (Electrification) | 9 | 104% | 9 | 1.000 | 9 |
| Advanced Thermostats (Electrification) | 6 | 100% | 6 | 1.000 | 6 |
| Basement Sidewall Insulation | 5 | 100% | 5 | 1.000 | 5 |
| Rim Joist Insulation | 3 | 100% | 3 | 1.000 | 3 |
| Kneewall Insulation | 2 | 100% | 2 | 1.000 | 2 |
| Induction Cooktop (Electrification) | 1 | 112% | 2 | 1.000 | 2 |
| Heat Pump Dryer (Electrification) | 1 | 23% | 0 | 1.000 | 0 |
| Total | 358 | 102% | 365 | 1.000 | 365 |

Table 50 presents the ex ante, verified gross, and verified net demand savings resulting from the Electrification channel in 2024.

Table 51. 2024 Income Qualified Electrification Channel Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER, Electrification) | 0.0051 | 161% | 0.0083 | 1.000 | 0.0083 |
| Heat Pump Water Heater  (ER, Electrification) | 0.0002 | 388% | 0.0008 | 1.000 | 0.0008 |
| Attic Insulation | -0.0005 | 100% | -0.0005 | 1.000 | -0.0005 |
| Air Sealing | 0.0015 | 100% | 0.0015 | 1.000 | 0.0015 |
| Crawl Space Insulation | 0.0022 | 100% | 0.0022 | 1.000 | 0.0022 |
| Ductless Heat Pump (Electrification) | 0.0004 | 100% | 0.0004 | 1.000 | 0.0004 |
| Advanced Thermostats (Electrification) | 0.0010 | 100% | 0.0010 | 1.000 | 0.0010 |
| Basement Sidewall Insulation | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Rim Joist Insulation | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Kneewall Insulation | 0.0001 | 100% | 0.0001 | 1.000 | 0.0001 |
| Induction Cooktop (Electrification) | -0.0013 | -29% | 0.0004 | 1.000 | 0.0004 |
| Heat Pump Dryer (Electrification) | 0.0000 | N/A | -0.0001 | 1.000 | -0.0001 |
| Total | 0.01 | 159% | 0.01 | 1.000 | 0.01 |

We identified several specific discrepancies for specific measure categories when conducting our verified analysis and discuss them below.

* Air Source Heat Pumps – Early Replacement, Electrification (59% of ex ante energy savings): The gross realization rates for Air Source Heat Pumps were 103% for kWh and 161% for kW.
  + For 100% of measures (n=11), the implementation team made a conversion error in calculations that understated furnace fan energy savings by a factor of 10. Correction of this issue in verified calculations increased energy savings.
  + For 9% of measures (n=1), the implementation team appears to have zeroed out added energy consumption due to cooling from an air source heat pump installed at a site that previously did not have cooling. Correction of this issue in verified calculations decreased energy savings.
* Ductless Heat Pump – Electrification (5% of ex ante energy savings): The gross realization rates for Ductless Heat Pumps were 104% for kWh and 388% for kW.
  + For 100% of measures (n=1), the implementation team made a conversion error in calculations that understated furnace fan energy savings by a factor of 10. Correction of this issue in verified calculations increased energy savings.
* Heat Pump Water Heaters – Early Replacement, Electrification (17% of ex ante energy savings): The gross realization rates for Heat Pump Water Heaters were 100% for kWh and 100% for kW.
  + For all measures, measure calculations appear to have been implemented correctly. The evaluation team observed minor rounding errors in calculations that led to slight variances in verified values on a measure-by-measure basis (no greater than 1% for any given measure and approximately 0.5% in aggregate) but accepted the implementation team’s calculations for simplicity.
* Induction Cooktops – Electrification (<1% of ex ante energy savings): The gross realization rate for Induction Cooktops - Electrification was 112% for kWh and 100% for kW.
  + For 100% of measures (n=4), we could not determine the source of ex ante energy savings. Component values presented in the tracking database for this measure appear correct and can be replicated, but final claimed savings are incorrectly specified.
* Heat Pump Clothes Dryers - Electrification (<1% of ex ante energy savings): The gross realization rate for Heat Pump Clothes Dryers - Electrification was 23% for kWh and N/A for kW.
  + For 100% of measures (n=1), the implementation team appears to have reversed a +/- sign on impact values for electric energy; ex ante values indicated positive electric energy savings from the implementation of these measures where, in reality, additional electric energy is consumed by the installation of these measures.
  + For 100% of measures (n=1), the implementation team improperly omitted the %Gas factor when calculating energy usage associated with the baseline propane dryer. This overstated propane energy savings.
  + For 100% of measures (n=1), the implementation team did not include peak demand impacts in ex ante calculations.

### Cumulative Persisting Annual Savings

Table 52 summarizes CPAS and WAML for the 2024 Single Family Initiative by channel. The WAML for the Initiative is 15.3 years. CPAS and WAML for each channel at a measure level are presented in Table 53 through Table 59.

Table 52. 2024 Income Qualified Initiative – Single Family Offerings CPAS and WAML

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Channel | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | Lifetime Savings (MWh) |
| 2024 | 2025 | 2026 | 2027 | … | 2030 | … |
| Single Family | 14.8 | 4,857 | 1.000 | 4,857 | 4,857 | 4,857 | 4,857 | … | 4,209 | … | 65,068 |
| CAA | 17.9 | 852 | 1.000 | 852 | 852 | 852 | 851 | … | 771 | … | 14,056 |
| Joint Utility | 17.9 | 169 | 1.000 | 169 | 169 | 169 | 169 | … | 169 | … | 2,561 |
| Smart Savers | 11.0 | 390 | 0.998 | 389 | 389 | 389 | 389 | … | 389 | … | 4,283 |
| MHAS | 17.3 | 297 | 1.000 | 297 | 297 | 297 | 297 | … | 244 | … | 4,859 |
| Healthier Homes | 15.7 | 41 | 1.000 | 41 | 41 | 41 | 41 | … | 27 | … | 504 |
| Electrification | 17.8 | 365 | 1.000 | 365 | 365 | 365 | 365 | … | 352 | … | 5,996 |
| 2024 CPAS | | 6,972 | 1.000 | 6,971 | 6,971 | 6,971 | 6,970 | … | 6,161 | … | 97,327 |
| Expiring 2024 CPAS | | | | 0 | 0 | 0 | 1 | … | 809 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | 0 | 1 | … | 810 | … |  |
| WAML | 15.3 |  |  |  |  |  |  |  |  |  |  |

Table 53. 2024 Income Qualified Initiative – Single Family Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Purifier | 9.0 | 741 | 1.000 | 741 | | 741 | 741 | | 741 | | … | 741 | … | 6,666 |
| Air Source Heat Pump (ER) | 16.0 | 897 | 1.000 | 897 | | 897 | 897 | | 897 | | … | 797 | … | 13,346 |
| Standard LED | 8.0 | 369 | 1.000 | 369 | | 369 | 369 | | 369 | | … | 369 | … | 2,950 |
| Air Sealing | 20.0 | 326 | 1.000 | 326 | | 326 | 326 | | 326 | | … | 326 | … | 5,744 |
| Central AC (ER) | 18.0 | 315 | 1.000 | 315 | | 315 | 315 | | 315 | | … | 40 | … | 2,367 |
| BPM Motor | 6.0 | 272 | 1.000 | 272 | | 272 | 272 | | 272 | | … | 0 | … | 1,635 |
| Attic Insulation | 30.0 | 277 | 1.000 | 277 | | 277 | 277 | | 277 | | … | 277 | … | 6,607 |
| Advanced Power Strip | 7.0 | 266 | 1.000 | 266 | | 266 | 266 | | 266 | | … | 266 | … | 1,859 |
| Crawl Space Insulation | 30.0 | 197 | 1.000 | 197 | | 197 | 197 | | 197 | | … | 197 | … | 5,485 |
| Heat Pump Water Heater | 15.0 | 213 | 1.000 | 213 | | 213 | 213 | | 213 | | … | 213 | … | 3,193 |
| Advanced Thermostat | 11.0 | 198 | 1.000 | 198 | | 198 | 198 | | 198 | | … | 198 | … | 2,178 |
| Bathroom Exhaust Fan | 19.0 | 159 | 1.000 | 159 | | 159 | 159 | | 159 | | … | 159 | … | 3,021 |
| Ductless Heat Pump | 16.0 | 195 | 1.000 | 195 | | 195 | 195 | | 195 | | … | 195 | … | 3,120 |
| Specialty LED | 8.0 | 132 | 1.000 | 132 | | 132 | 132 | | 132 | | … | 132 | … | 1,056 |
| Pipe Insulation | 15.0 | 84 | 1.000 | 84 | | 84 | 84 | | 84 | | … | 84 | … | 1,257 |
| Wall Insulation | 30.0 | 46 | 1.000 | 46 | | 46 | 46 | | 46 | | … | 46 | … | 1,173 |
| Faucet Aerator | 10.0 | 43 | 1.000 | 43 | | 43 | 43 | | 43 | | … | 43 | … | 427 |
| Rim Joist Insulation | 30.0 | 29 | 1.000 | 29 | | 29 | 29 | | 29 | | … | 29 | … | 808 |
| Low Flow Showerhead | 10.0 | 26 | 1.000 | 26 | | 26 | 26 | | 26 | | … | 26 | … | 258 |
| Duct Sealing | 20.0 | 15 | 1.000 | 15 | | 15 | 15 | | 15 | | … | 15 | … | 276 |
| Air Source Heat Pump (TOS) | 16.0 | 42 | 1.000 | 42 | | 42 | 42 | | 42 | | … | 42 | … | 672 |
| Room Air Conditioner (ER) | 12.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 6 | … | 75 |
| Knee Wall Insulation | 30.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 6 | … | 160 |
| Door Sweep | 20.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 22 |
| Central AC (TOS) | 18.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 30 |
| Smart Socket | 7.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 5 |
| Induction Range | 16.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | <1 |
| Tree Planting | 25.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 1 |
| 2024 CPAS |  | 4,857 | 1.000 | 4,857 | | 4,857 | 4,857 | | 4,857 | | … | 4,209 | … | 65,068 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 648 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 648 | … |  |
| WAML | 14.8 |  |  |  |  | | |  | |  |  |  |  |  |

Table 54. 2024 Income Qualified Initiative – CAA Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Sealing | 20.0 | 190 | 1.000 | 190 | | 190 | 190 | | 190 | | … | 190 | … | 3,362 |
| Attic Insulation | 30.0 | 122 | 1.000 | 122 | | 122 | 122 | | 122 | | … | 122 | … | 3,256 |
| Standard LED | 8.0 | 107 | 1.000 | 107 | | 107 | 107 | | 107 | | … | 107 | … | 859 |
| Air Source Heat Pump (ER) | 16.0 | 110 | 1.000 | 110 | | 110 | 110 | | 110 | | … | 93 | … | 1,590 |
| BPM Motor | 6.0 | 63 | 1.000 | 63 | | 63 | 63 | | 63 | | … | 0 | … | 380 |
| Crawl Space Insulation | 30.0 | 44 | 1.000 | 44 | | 44 | 44 | | 44 | | … | 44 | … | 1,187 |
| Bathroom Exhaust Fan | 19.0 | 40 | 1.000 | 40 | | 40 | 40 | | 40 | | … | 40 | … | 753 |
| Packaged Terminal Heat Pump | 8.0 | 33 | 1.000 | 33 | | 33 | 33 | | 32 | | … | 32 | … | 261 |
| Pipe Insulation | 15.0 | 31 | 1.000 | 31 | | 31 | 31 | | 31 | | … | 31 | … | 459 |
| Heat Pump Water Heater | 15.0 | 28 | 1.000 | 28 | | 28 | 28 | | 28 | | … | 28 | … | 416 |
| Floor Insulation | 30.0 | 18 | 1.000 | 18 | | 18 | 18 | | 18 | | … | 18 | … | 510 |
| Low Flow Showerhead | 10.0 | 16 | 1.000 | 16 | | 16 | 16 | | 16 | | … | 16 | … | 158 |
| Wall Insulation | 30.0 | 9 | 1.000 | 9 | | 9 | 9 | | 9 | | … | 9 | … | 233 |
| Faucet Aerator | 10.0 | 9 | 1.000 | 9 | | 9 | 9 | | 9 | | … | 9 | … | 86 |
| Rim Joist Insulation | 30.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 6 | … | 153 |
| Specialty LED | 8.0 | 5 | 1.000 | 5 | | 5 | 5 | | 5 | | … | 5 | … | 40 |
| Advanced Thermostat | 11.0 | 5 | 1.000 | 5 | | 5 | 5 | | 5 | | … | 5 | … | 52 |
| Room Air Conditioner (ER) | 12.0 | 3 | 1.000 | 3 | | 3 | 3 | | 3 | | … | 3 | … | 37 |
| Door Sweep | 20.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 41 |
| Knee Wall Insulation | 30.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 45 |
| Caulking | 20.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 27 |
| Ductless Heat Pump | 16.0 | 9 | 1.000 | 9 | | 9 | 9 | | 9 | | … | 9 | … | 138 |
| Air Source Heat Pump (TOS) | 16.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 13 |
| 2024 CPAS |  | 852 | 1.000 | 852 | | 852 | 852 | | 851 | | … | 771 | … | 14,056 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 1 | | … | 80 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 1 | | … | 81 | … |  |
| WAML | 17.9 |  |  |  |  | | |  | |  |  |  |  |  |

Table 55. 2024 Income Qualified Initiative – Joint Utility Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Duct Sealing | 20.0 | 86 | 1.000 | 86 | | 86 | 86 | | 86 | | … | 86 | … | 1,382 |
| Air Sealing | 20.0 | 36 | 1.000 | 36 | | 36 | 36 | | 36 | | … | 36 | … | 627 |
| Advanced Power Strip | 7.0 | 11 | 1.000 | 11 | | 11 | 11 | | 11 | | … | 11 | … | 77 |
| Standard LED | 8.0 | 9 | 1.000 | 9 | | 9 | 9 | | 9 | | … | 9 | … | 72 |
| Advanced Thermostat | 11.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 6 | … | 71 |
| Smart Socket | 7.0 | 5 | 1.000 | 5 | | 5 | 5 | | 5 | | … | 5 | … | 37 |
| Attic Insulation | 30.0 | 4 | 1.000 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 111 |
| Floor Insulation | 30.0 | 4 | 1.000 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 107 |
| LED Fixtures | 8.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 20 |
| Pipe Insulation | 15.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 22 |
| Specialty LED | 8.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 9 |
| Faucet Aerator | 10.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 10 |
| Low Flow Showerhead | 10.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 5 |
| Wall Insulation | 30.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 8 |
| Rim Joist Insulation | 30.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 2 |
| 2024 CPAS |  | 169 | 1.000 | 169 | | 169 | 169 | | 169 | | … | 169 | … | 2,561 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 17.9 |  |  |  |  | | |  | |  |  |  |  |  |

Table 56. 2024 Income Qualified Initiative – Smart Savers Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2023 | | 2024 | 2025 | | 2026 | | … | 2030 | … |
| Advanced Thermostat | 11.0 | 390 | 0.998 | 389 | | 389 | 389 | | 389 | | … | 389 | … | 4,283 |
| 2023 CPAS |  | 390 | 0.998 | 389 | | 389 | 389 | | 389 | | … | 389 | … | 4,283 |
| Expiring 2023 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2023 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 11.0 |  |  |  |  | | |  | |  |  |  |  |  |

Table 57. 2024 Income Qualified Initiative – MHAS Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Source Heat Pump (ER) | 16.0 | 120 | 1.000 | 120 | | 120 | 120 | | 120 | | … | 106 | … | 1,783 |
| Floor Insulation | 30.0 | 49 | 1.000 | 49 | | 49 | 49 | | 49 | | … | 49 | … | 1,395 |
| Air Sealing | 20.0 | 41 | 1.000 | 41 | | 41 | 41 | | 41 | | … | 41 | … | 763 |
| BPM Motor | 6.0 | 39 | 1.000 | 39 | | 39 | 39 | | 39 | | … | 0 | … | 233 |
| Advanced Thermostat | 11.0 | 22 | 1.000 | 22 | | 22 | 22 | | 22 | | … | 22 | … | 244 |
| Ductless Heat Pump | 16.0 | 13 | 1.000 | 13 | | 13 | 13 | | 13 | | … | 13 | … | 210 |
| Bathroom Exhaust Fan | 19.0 | 8 | 1.000 | 8 | | 8 | 8 | | 8 | | … | 8 | … | 156 |
| Heat Pump Water Heater | 15.0 | 3 | 1.000 | 3 | | 3 | 3 | | 3 | | … | 3 | … | 38 |
| Crawl Space Insulation | 30.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 38 |
| 2024 CPAS |  | 297 | 1.000 | 297 | | 297 | 297 | | 297 | | … | 244 | … | 4,859 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 53 | … |  |
| WAML | 17.3 |  |  |  |  | | |  | |  |  |  |  |  |

Table 58. 2024 Income Qualified Initiative – Healthier Homes Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Central AC ER | 18.0 | 10 | 1.000 | 10 | | 10 | 10 | | 10 | | … | 1 | … | 78 |
| BPM Motor | 6.0 | 6 | 1.000 | 6 | | 6 | 6 | | 6 | | … | 0 | … | 34 |
| Standard LED | 8.0 | 5 | 1.000 | 5 | | 5 | 5 | | 5 | | … | 5 | … | 39 |
| Air Sealing | 20.0 | 4 | 1.000 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 74 |
| Attic Insulation | 30.0 | 3 | 1.000 | 3 | | 3 | 3 | | 3 | | … | 3 | … | 63 |
| Bathroom Exhaust Fan | 19.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 43 |
| Advanced Thermostat | 11.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 15 |
| Specialty LED | 8.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 12 |
| Crawl Space Insulation | 30.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 22 |
| Wall Insulation | 30.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 21 |
| Advanced Power Strip | 7.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 6 |
| Ductless Heat Pump TOS | 16.0 | 4 | 1.000 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 69 |
| Central AC TOS | 18.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 9 |
| Duct Sealing | 20.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 7 |
| Connected LED | 10.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 3 |
| Rim Joist Insulation | 30.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 5 |
| Knee Wall Insulation | 30.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 4 |
| Faucet Aerator | 10.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | <1 |
| Low Flow Showerhead | 10.0 | <1 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | <1 |
| 2024 CPAS |  | 41 | 1.000 | 41 | | 41 | 41 | | 41 | | … | 27 | … | 504 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 15 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 15 | … |  |
| WAML | 15.7 |  |  |  |  | | |  | |  |  |  |  |  |

Table 59. 2024 Income Qualified Electrification CPAS and WAML

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| 2024 | 2025 | | 2026 | | 2027 | | … | 2030 | … |
| Air Source Heat Pump (ER, Electrification) | 16.0 | 220 | 1.000 | 220 | 220 | | 220 | | 220 | | … | 207 | … | 3,002 |
| Heat Pump Water Heater (ER, Electrification) | 15.0 | 60 | 1.000 | 60 | 60 | | 60 | | 60 | | … | 60 | … | 906 |
| Attic Insulation | 30.0 | 23 | 1.000 | 23 | 23 | | 23 | | 23 | | … | 23 | … | 690 |
| Air Sealing | 20.0 | 19 | 1.000 | 19 | 19 | | 19 | | 19 | | … | 19 | … | 385 |
| Crawl Space Insulation | 30.0 | 16 | 1.000 | 16 | 16 | | 16 | | 16 | | … | 16 | … | 487 |
| Ductless Heat Pump (Electrification) | 16.0 | 9 | 1.000 | 9 | 9 | | 9 | | 9 | | … | 9 | … | 145 |
| Advanced Thermostats (Electrification) | 11.0 | 6 | 1.000 | 6 | 6 | | 6 | | 6 | | … | 6 | … | 62 |
| Basement Sidewall Insulation | 30.0 | 5 | 1.000 | 5 | 5 | | 5 | | 5 | | … | 5 | … | 153 |
| Rim Joist Insulation | 30.0 | 3 | 1.000 | 3 | 3 | | 3 | | 3 | | … | 3 | … | 90 |
| Kneewall Insulation | 30.0 | 2 | 1.000 | 2 | 2 | | 2 | | 2 | | … | 2 | … | 47 |
| Induction Cooktop (Electrification) | 16.0 | 2 | 1.000 | 2 | 2 | | 2 | | 2 | | … | 2 | … | 25 |
| Heat Pump Dryer (Electrification) | 16.0 | <1 | 1.000 | <1 | <1 | | <1 | | <1 | | … | <1 | … | 5 |
| 2024 CPAS | | 365 | 1.000 | 365 | 365 | | 365 | | 365 | | … | 352 | … | 5,996 |
| Expiring 2024 CPAS | | | | 0 | 0 | | 0 | | 0 | | … | 13 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | | 0 | | 0 | | … | 13 | … |  |
| WAML | 17.8 |  |  |  | |  | |  | |  |  |  |  |  |

### Conclusions and Recommendations

Based on the results of this evaluation, the evaluation team offers the following key findings and recommendations for the Income Qualified Initiative moving forward.

#### Cross-Cutting

* **Key Finding 1:** For some projects, the Initiatives tracking data did not include the primary cooling system type, and the implementation team excluded savings from cooling when the primary cooling type is unspecified in the tracking database
  + Recommendation: The implementation team should collect and track primary cooling system information whenever possible. To increase the accuracy of the tracking database, the primary cooling system field should explicitly state whether there is no existing cooling system or if the existing cooling or heating system is unknown. When the primary cooling system is unknown, assumptions specified in the current IL-TRM for unknown cooling should be used to calculate savings.
* **Key Finding 2:** For all Crawl Space Insulation projects, the implementation team inconsistently applied HDD values associated with semi-conditioned and unconditioned basements when calculating heating and furnace fan runtime savings.
  + Recommendation: To the degree possible, the implementation team should track basement condition information (e.g., semi-conditioned or unconditioned space) in tracking data and apply the appropriate HDD value from the current IL-TRM rather than averaging HDDs associated with various basement conditions.
* **Key Finding 3:** The implementation team applied primary heating and cooling system information from the tracking database to calculate savings for ductless heat pump measures; however, ductless heat pumps installed through the Single Family and CAA channels are often installed to heat and cool areas of the home that are not served by the primary system. The existing heating and cooling system that served the area where the ductless heat pump was installed is included in project applications but does not appear in tracking data.
  + Recommendation: If AIC plans to continue installing ductless heat pumps in income-qualified homes, the implementation team should track whether the heat pump serves the whole home or part of it. For ductless heat pumps serving part of the home, tracking data should indicate the existing secondary heating and cooling system that serves the area where the ductless heat pump was installed and use the existing secondary system as the baseline for ductless heat pump savings.
* **Key Finding 4:** The implementation team included savings from advanced thermostats in cases where the previously installed (i.e., existing) thermostat was an advanced thermostat. In these cases, the baseline condition is an advanced thermostat, and savings generally should not be claimed.
  + Recommendation: Advanced thermostats should only be installed in place of existing advanced thermostats in select cases (e.g., for the purpose of customer satisfaction), and no savings should be claimed given the existing baseline unit is a high-efficiency unit.

#### Single Family Channel

* **Key Finding 1:** Almost 3,000 air purifiers were drop-shipped to customers in the Single Family channel without explicitly soliciting customer interest or gathering detailed household information.
  + Recommendation: If AIC intends to offer this measure via this channel in the future, IL-TRM updates should be made to reflect more appropriate baseline and installation assumptions. IL-TRM V12.0 recommendations presume that customers are replacing existing air purifiers or intend to purchase air purifiers in the near future and effectively assume an ISR of 100%. These assumptions are likely not entirely applicable to customers who receive a free and unsolicited measure and may therefore use the measure less than someone who actively decided to purchase one. This likelihood is exacerbated by the delivery of two such units to each individual household.
* **Key Finding 2:** The evaluation team assigned savings per IL-TRM V12.0 recommendations for prescriptive air sealing measures, whereas the implementation team applied deemed savings that relied on select assumptions (e.g., climate weights) associated with the Kits Initiative.
  + Recommendation: The implementation team should apply savings assumptions recommended by the IL-TRM for prescriptive air sealing measures rather than deriving deemed values with inputs from alternate sources.

#### CAA Channel

* **Key Finding 1:** One CAA project involved the installation of packaged terminal heat pumps in a residential multifamily building.
  + Recommendation: If AIC plans to continue installing packaged terminal heat pumps in multifamily buildings, consider working with the IL-TRM Technical Advisory Committee (TAC) to develop a residential packaged terminal heat pump measure for inclusion in the IL-TRM.

#### Joint Utility Channel

* **Key Finding 1:** The Joint Utility channel expanded to multifamily customers in 2024, yet the implementation team applied single-family assumptions from the IL-TRM V12.0 for all advanced thermostat and LED lighting measures, regardless of home type indicated in tracking data.
  + Recommendation: Ensure appropriate home type-dependent parameters recommended by the current version of the IL-TRM are applied based on information available in tracking data.
* **Key Finding 2:** For some duct sealing measures delivered through the Joint Utility channel, the post-installation distribution efficiency was not included in tracking data. To calculate CPAS, a mid-life adjustment was applied to account for the likely replacement of heating and cooling equipment during the lifetime of the duct sealing measure. Additionally, per IL-TRM V12.0, the post-installation distribution efficiency is a required input for calculating annual savings after the expiration of existing gas systems.
  + Recommendation: To enable development of accurate CPAS estimates per IL-TRM recommendations, the implementation team should track the distribution efficiency following installation of duct sealing.
* **Key Finding 3:** For all attic insulation measures distributed through the Joint Utility channel, the implementation team applied cooling FLH values recommended by the IL-TRM V12.0 for cooling zones outside the Bloomington-Normal area.
  + Recommendation: The implementation team should update savings assumptions for measures installed and/or distributed in the Bloomington-Normal area to rely on default assumptions recommended by the current IL-TRM for Springfield, Illinois.

#### Smart Savers channel

* **Key Finding 1:** Several participants’ service address ZIP codes were not included on the approved list of areas targeted by the channel and therefore could not be verified as IQ participants.
  + Recommendation: Review the screening processes in place to ensure that only customers from eligible ZIP codes are included in the Smart Savers channel, and consider whether any changes to communication or coordination between the implementation team and Program Allies could improve alignment on qualification criteria and procedures.

#### Electrification Channel

* **Key Finding 1:** Electrification tracking data appears well-populated and the implementation team’s approach to calculating energy savings for electrification efforts appears reasonable. We observed minor variances for select measures, including an issue where a load increase was inadvertently treated as a load decrease.
  + Recommendation: As AIC continues to scale electrification efforts, ensure that electrification savings are carefully reviewed in line with Illinois SAG policy and current IL-TRM guidance. The complexity of electrification savings calculations increases the risk of error.
* **Key Finding 2:** In our impact evaluation, we found that in certain cases, the implementation team applied the Policy Manual-outlined rounded therm to kWh conversion factor of 29.3 when converting fossil savings to kWh equivalents,[[28]](#footnote-28) while in other cases, they used the IL-TRM V12.0-prescribed stepwise conversion of therms to Btus (100,000 Btus per therm) and then Btus to kWh (3,412 Btus per kWh). The IL-TRM V12.0 approach results in an effective conversion factor of 100,000/3,412 or ≈ 29.31 kWh per therm, which differs from the rounded conversion factor by a small amount. Both approaches are detailed in SAG- and ICC-approved Illinois guiding documents and the implementation team’s approach is of course therefore acceptable. To align with this approach, we applied conversion factors in our 2024 verified analysis that aligned with the implementation team’s approach wherever possible. However, the inconsistency in the use of these factors is likely to produce small and potentially confusing variations in future impact calculations.
  + Recommendation: While the actual impact of these variations in conversion factors is very small, we recommend that the implementation team consistently apply the full precision 100,000/3,412 conversion factor rather than the rounded 29.3 conversion factor to avoid potential confusion or misalignment in future program years. We plan to make a similar change in our 2025 impact evaluations.

## Multifamily Initiatives

### Initiative Description

Multifamily Initiatives include the Multifamily channel of the IQ Initiative (IQ Multifamily channel), the Market Rate Multifamily Initiative, and the Public Housing Initiative. Together, these Initiatives serve property managers and owners of subsidized or low-income housing; non-subsidized (market rate) multifamily and mixed-use buildings; and publicly owned housing. While there are some differences in qualifying measures, the Multifamily Initiatives all provide comprehensive property assessments, health and safety evaluations (and remediation where necessary), tenant unit and common area DI measures (e.g., LEDs, water-savings measures, advanced thermostats), and more comprehensive building envelope and HVAC retrofits. The Initiatives are implemented by CMC Energy Services as a subcontractor to Leidos.

While this chapter focuses specifically on the measures provided through the Multifamily Initiatives, it is important to note that the Initiatives are implemented with a “one-stop shop” (OSS) delivery model. The goal of the OSS is to seamlessly connect customers to offerings available to them across the Residential and Business Programs using an Energy Advisor who serves as a single point of contact. In cases where participants choose to pursue additional upgrades beyond the Multifamily Initiatives, the Energy Advisor continues to help the participant navigate the process (e.g., assisting with applications, deciding on project scopes, selecting Program Allies). This delivery model ensures that properties have access to the full range of offerings available to them and creates an opportunity to develop a trusted, longer-term relationship with the property, allowing AIC to serve their energy efficiency needs continuously.

##### Summary of Key Implementation Changes

We summarize key changes to the Multifamily Initiatives’ design and implementation in 2024 below:

* The Multifamily Initiatives began offering window inserts to IQ Multifamily channel and Public Housing Initiative participants.
* The implementation team made some adjustments to program tracking data to allow for more reliable and precise tracking of customer participation through the OSS. For instance, the implementation team created a unique identifier called “OSS Name,” which can be used to track each participant’s journey through the OSS and Multifamily Initiatives. The unique identifier also enabled the evaluation team to report on new IQ metrics agreed upon by Illinois Program Administrators and stakeholders in 2024. The new IQ metrics are described in the Illinois Energy Efficiency Policy Manual Version 3.[[29]](#footnote-29)

### Initiative Annual Savings Summary

The 2024 Multifamily Initiatives achieved 14,558 MWh, 0.82 MW, and 83,331 therms in verified net savings. The IQ Multifamily channel was the largest contributor to overall electric savings (76%), followed by the Market Rate Multifamily Initiative (14%) and the Public Housing Initiative (10%). Table 60 summarizes Multifamily Initiatives annual savings achieved in 2024.

Table 60. 2024 Multifamily Initiatives Annual Savings

| Metric | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- |
| Ex Ante Gross Savings | 15,550 | 0.92 | 84,189 |
| Gross Realization Rate | 94% | 89% | 99% |
| Verified Gross Savings | 14,665 | 0.82 | 83,357 |
| NTGR | 0.993 | 0.995 | 1.000 |
| Verified Net Savings | 14,558 | 0.82 | 83,331 |

### IQ Multifamily Channel

#### Channel Description

Multifamily properties participating in government-sponsored programs or that house 50% or more tenants who are at or below 300% of the FPL, or are 80% below area median income levels, are eligible to participate in the IQ Multifamily channel offerings. The channel works to minimize costs for participating properties; all DI measures are provided at no cost to the property, incentives of $7,500 per system are offered for HVAC upgrades, and building envelope measures (such as attic insulation and air sealing upgrades) are provided at no cost if the costs fall within a $5,000 per property cap. Lastly, any eligible health and safety needs for properties are addressed alongside retrofits.

#### Participation Summary

In 2024, the IQ Multifamily channel served 198 unique properties consisting of 1,571 buildings and 8,210 individual tenant units, as shown in Table 61. As reported by the implementation team, the IQ Multifamily channel maintained a consistently robust pipeline of projects throughout the year.

Table 61. 2024 IQ Multifamily Channel Participation Summary

| Number of Properties | Number of Buildings | Number of Tenant Units |
| --- | --- | --- |
| 198 | 1,571 | 8,210 |

The most common measures provided to IQ Multifamily channel participants were DI measures such as advanced power strips, standard LEDs, showerheads, and kitchen faucet aerators, each of which were delivered to at least three-quarters of participating properties as shown in Table 62.

Table 62. 2024 IQ Multifamily Channel Measure Mix

|  |  |  |
| --- | --- | --- |
| Measure Category | Properties Served | Percent of Properties |
| Advanced Power Strip - Tier 1 | 161 | 81% |
| Standard LED | 156 | 79% |
| Showerhead | 149 | 75% |
| Kitchen Faucet Aerator | 149 | 75% |
| Wall Plate Gasket | 146 | 74% |
| Restrictor Shower Valve | 143 | 72% |
| Bathroom Faucet Aerator | 137 | 69% |
| Pipe Insulation | 111 | 56% |
| Advanced Thermostat | 59 | 30% |
| Specialty LED | 53 | 27% |
| Door Sweep | 47 | 24% |
| Ductless Heat Pump | 22 | 11% |
| Air Purifiers | 18 | 9% |
| Standard LED (Common Area) | 9 | 5% |
| Attic Insulation | 7 | 4% |
| Air Sealing | 6 | 3% |
| Air Source Heat Pump | 5 | 3% |
| Specialty LED (Common Area) | 2 | 1% |
| Low Energy Storm Window | 1 | 1% |

Additional participation summaries containing the IQ Multifamily metrics agreed upon by the Illinois Program Administrators and non-financially interested stakeholders are reported in Appendix D.

#### Savings Detail

Table 63 presents the ex ante, verified gross, and verified net electric energy savings achieved through the IQ Multifamily channel in 2024.

Table 63. 2024 IQ Multifamily Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Ductless Heat Pump | 2,750 | 107% | 2,933 | 1.000 | 2,933 |
| Air Source Heat Pump | 2,226 | 100% | 2,226 | 1.000 | 2,226 |
| Air Purifier | 1,807 | 66% | 1,195 | 1.000 | 1,195 |
| Advanced Thermostat | 1,263 | 100% | 1,263 | 1.000 | 1,263 |
| Showerhead | 922 | 100% | 922 | 1.000 | 922 |
| Standard LED (Common Area) | 614 | 63% | 390 | 1.000 | 390 |
| Kitchen Faucet Aerator | 588 | 100% | 588 | 1.000 | 588 |
| Standard LED | 500 | 102% | 509 | 1.000 | 509 |
| Pipe Insulation | 296 | 100% | 296 | 1.000 | 296 |
| Advanced Power Strip - Tier 1 | 198 | 100% | 198 | 1.000 | 198 |
| Restrictor Shower Valve | 170 | 100% | 170 | 1.000 | 170 |
| Door Sweep | 136 | 101% | 137 | 1.000 | 137 |
| Bathroom Faucet Aerator | 98 | 100% | 98 | 1.000 | 98 |
| Wall Plate Gasket | 70 | 101% | 70 | 1.000 | 70 |
| Specialty LED | 57 | 111% | 63 | 1.000 | 63 |
| Specialty LED (Common Area) | 56 | 98% | 54 | 1.000 | 54 |
| Attic Insulation | 16 | 100% | 16 | 1.000 | 16 |
| Air Sealing | 7 | 100% | 7 | 1.000 | 7 |
| Low Energy Storm Window | 2 | 7% | <1 | 1.000 | <1 |
| Total | 11,776 | 95% | 11,136 | 1.000 | 11,136 |

Table 64 presents the ex ante, verified gross, and verified net electric demand savings achieved through the IQ Multifamily channel in 2024.

Table 64. 2024 IQ Multifamily Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Ductless Heat Pump | -0.45 | 91% | -0.41 | 1.000 | -0.41 |
| Air Source Heat Pump | 0.07 | 100% | 0.07 | 1.000 | 0.07 |
| Air Purifier | 0.21 | 66% | 0.14 | 1.000 | 0.14 |
| Advanced Thermostat | 0.23 | 100% | 0.23 | 1.000 | 0.23 |
| Showerhead | 0.11 | 100% | 0.11 | 1.000 | 0.11 |
| Standard LED (Common Area) | 0.07 | 4% | <0.01 | 1.000 | <0.01 |
| Kitchen Faucet Aerator | 0.13 | 100% | 0.13 | 1.000 | 0.13 |
| Standard LED | 0.10 | 101% | 0.10 | 1.000 | 0.10 |
| Pipe Insulation | 0.03 | 101% | 0.03 | 1.000 | 0.03 |
| Advanced Power Strip - Tier 1 | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Restrictor Shower Valve | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Door Sweep | 0.003 | 103% | 0.004 | 1.000 | 0.004 |
| Bathroom Faucet Aerator | 0.08 | 100% | 0.08 | 1.000 | 0.08 |
| Wall Plate Gasket | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Specialty LED | 0.01 | 102% | 0.01 | 1.000 | 0.01 |
| Specialty LED (Common Area) | 0.01 | 98% | 0.01 | 1.000 | 0.01 |
| Attic Insulation | 0.002 | 102% | 0.002 | 1.000 | 0.002 |
| Air Sealing | 0.001 | 100% | <0.01 | 1.000 | 0.001 |
| Low Energy Storm Window | 0.001 | 8% | 0.0001 | 1.000 | 0.0001 |
| Total | 0.65 | 85% | 0.55 | 1.000 | 0.55 |

Table 65 presents the ex ante, verified gross, and verified net gas savings achieved through the IQ Multifamily channel in 2024.

Table 65. 2024 IQ Multifamily Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 24,994 | 100% | 25,050 | 1.000 | 25,050 |
| Showerhead | 11,468 | 100% | 11,468 | 1.000 | 11,468 |
| Kitchen Faucet Aerator | 8,100 | 100% | 8,100 | 1.000 | 8,100 |
| Pipe Insulation | 706 | 100% | 706 | 1.000 | 706 |
| Restrictor Shower Valve | 1,632 | 100% | 1,632 | 1.000 | 1,632 |
| Door Sweep | 856 | 100% | 856 | 1.000 | 856 |
| Bathroom Faucet Aerator | 1,445 | 100% | 1,445 | 1.000 | 1,445 |
| Wall Plate Gasket | 434 | 100% | 436 | 1.000 | 436 |
| Attic Insulation | 929 | 89% | 831 | 1.000 | 831 |
| Air Sealing | 434 | 94% | 409 | 1.000 | 409 |
| Low Energy Storm Window | 799 | 7% | 57 | 1.000 | 57 |
| Total | 51,797 | 98% | 50,990 | 1.000 | 50,990 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Ductless Heat Pump (23% of ex ante energy savings and negative demand savings): The gross realization rate for ductless heat pumps was 107% for kWh and 91% for kW.
  + For 14% of measures (n=76), the evaluation team applied the IL-TRM V12.0-recommended “ductless save” factor (0.85) to projects where ductless units replaced ducted ones, whereas the implementation team did not account for the ductless save factor in these instances, resulting in higher verified energy and demand savings.
  + For 3% of measures (n=12), the evaluation team applied IL-TRM V12.0-recommended assumptions for an unknown existing cooling system because there was no information in the data, whereas the implementation team applied assumptions for no existing cooling system, resulting in lower verified demand savings.
* Air Purifier (15% of ex ante energy savings and 32% of demand savings): The gross realization rate for air purifiers was 66% for kWh and kW.
  + For 100% of measures (n=4,653), the evaluation team applied the IQ baseline adjustment factor as recommended by the IL-TRM V12.0, whereas the implementation team applied the IQ baseline adjustment factor to deemed values that that already accounted for it, resulting in lower verified energy and demand savings.
* Standard LED (Common Area) (5% of ex ante energy savings and 10% of demand savings): The gross realization rate for common area standard LEDs was 63% for kWh and 4% for kW.
  + For 96% of measures (n=2,600), The evaluation team assigned IL-TRM V12.0-recommended assumptions for exterior common area lighting because units were installed as external pathway lighting, whereas the implementation team applied assumptions for internal common area lighting, resulting in lower verified energy and demand savings.
* Low Energy Storm Window (<1% of ex ante energy savings, <1% of demand savings, and 2% of gas savings): The gross realization rate for low energy storm windows was 7% for kWh, 8% for kW, and 7% for therms.
  + For 100% of measures (n=14), the evaluation team multiplied per-unit savings by the “window area” field, which accounted for both window quantity and sizing, whereas the implementation team multiplied per-unit savings by both “quantity” and “window area” fields, resulting in lower verified energy, demand and gas savings.
  + For 100% of measures (n=14), the evaluation team applied the cooling FLH values recommended for multifamily housing by the IL-TRM V12.0, whereas the implementation applied cooling FLH values recommended for single-family housing, resulting in higher verified demand savings. However, this adjustment did not supersede the effects of the quantity-related discrepancy.

### Market Rate Multifamily Initiative

#### Initiative Description

AIC recruits properties into the Market Rate Multifamily Initiative if the property does not meet IQ Multifamily channel or Public Housing eligibility (as outlined in Sections 3.3.3 and 3.3.5). Incentives are provided at a lower reimbursement level than for IQ Multifamily channel properties. All DI measures are provided at no cost to the property, and incentives of $5,000 per system are offered for HVAC upgrades. Building envelope upgrades are also available to market rate properties, but the Initiative does not provide an incentive (i.e., properties pay 100% of the cost).

#### Participation Summary

In 2024, the Market Rate Multifamily Initiative served 45 unique properties consisting of 189 buildings and 2,057 individual tenant units, as shown in Table 66.

Table 66. 2024 Market Rate Multifamily Initiative Participation Summary

| Number of Properties | Number of Buildings | Number of Tenant Units |
| --- | --- | --- |
| 45 | 189 | 2,057 |

The most common measures provided to Market Rate Multifamily Initiative participants were wall plate gaskets, advanced power strips, and showerheads, each of which were delivered to at least 80% of participating properties, as shown in Table 67.

Table 67. 2024 Market Rate Multifamily Initiative Measure Mix

|  |  |  |
| --- | --- | --- |
| Measure Category | Properties Served | Percent of Properties |
| Wall Plate Gasket | 37 | 82% |
| Advanced Power Strip - Tier 1 | 37 | 82% |
| Showerhead | 36 | 80% |
| Kitchen Faucet Aerator | 35 | 78% |
| Bathroom Faucet Aerator | 33 | 73% |
| Restrictor Shower Valve | 28 | 62% |
| Advanced Thermostat | 27 | 60% |
| Pipe Insulation | 25 | 56% |
| Door Sweep | 8 | 18% |
| Air Source Heat Pump | 2 | 4% |

Additional participation summaries containing are reported in Appendix D.[[30]](#footnote-30)

#### Savings Detail

Table 68 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Market Rate Multifamily Initiative in 2024.

Table 68. 2024 Market Rate Multifamily Initiative Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 949 | 100% | 948 | 1.000 | 948 |
| Air Source Heat Pump | 528 | 100% | 528 | 0.835 | 441 |
| Showerhead | 327 | 100% | 327 | 1.004 | 328 |
| Kitchen Faucet Aerator | 101 | 100% | 101 | 1.004 | 101 |
| Pipe Insulation | 89 | 100% | 89 | 0.831 | 74 |
| Advanced Power Strip - Tier 1 | 88 | 100% | 88 | 0.994 | 88 |
| Restrictor Shower Valve | 30 | 100% | 30 | 0.862 | 26 |
| Bathroom Faucet Aerator | 23 | 100% | 23 | 1.004 | 23 |
| Wall Plate Gasket | 16 | 100% | 16 | 0.936 | 15 |
| Door Sweep | 9 | 100% | 9 | 0.865 | 7 |
| Total | 2,160 | 100% | 2,159 | 0.950 | 2,052 |

Table 69 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Market Rate Multifamily Initiative in 2024.

Table 69. 2024 Market Rate Multifamily Initiative Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 0.16 | 100% | 0.16 | 1.000 | 0.16 |
| Air Source Heat Pump | 0.02 | 100% | 0.02 | 0.863 | 0.01 |
| Showerhead | 0.04 | 100% | 0.04 | 1.004 | 0.04 |
| Kitchen Faucet Aerator | 0.02 | 100% | 0.02 | 1.004 | 0.02 |
| Pipe Insulation | 0.01 | 101% | 0.01 | 0.831 | 0.01 |
| Advanced Power Strip - Tier 1 | 0.01 | 100% | 0.01 | 0.994 | 0.01 |
| Restrictor Shower Valve | 0.002 | 100% | 0.002 | 0.861 | 0.002 |
| Bathroom Faucet Aerator | 0.02 | 100% | 0.02 | 1.004 | 0.02 |
| Wall Plate Gasket | 0.003 | 100% | 0.003 | 0.907 | 0.003 |
| Door Sweep | 0.0002 | 100% | 0.0002 | 0.861 | 0.0002 |
| Total | 0.28 | 100% | 0.28 | 0.984 | 0.28 |

Table 70 presents the ex ante, verified gross, and verified net gas savings achieved through the Market Rate Multifamily Initiative in 2024.

Table 70. 2024 Market Rate Multifamily Initiative Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 10,566 | 100% | 10,566 | 1.000 | 10,566 |
| Showerhead | 2,793 | 100% | 2,793 | 1.000 | 2,793 |
| Kitchen Faucet Aerator | 1,690 | 100% | 1,690 | 1.000 | 1,690 |
| Pipe Insulation | 517 | 100% | 517 | 1.000 | 517 |
| Restrictor Shower Valve | 639 | 100% | 639 | 0.959 | 613 |
| Bathroom Faucet Aerator | 599 | 100% | 599 | 1.000 | 599 |
| Wall Plate Gasket | 85 | 446% | 380 | 1.000 | 380 |
| Total | 16,890 | 102% | 17,185 | 0.998 | 17,159 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report on one discrepancy that led to a particularly high realization rate for wall plate gaskets.

* Wall Plate Gasket (<1% of ex ante energy savings, <1% of demand savings and <1% of gas savings): The gross realization rate for wall plate gaskets was 100% for energy and demand savings and 446% for gas savings.
  + In 30% of measures (n=899), the evaluation team included gas savings for participants with a natural gas furnace, whereas the implementation team did not include gas savings, resulting in significantly higher verified gas savings.

### Public Housing Initiative

#### Initiative Description

The Public Housing Initiative serves public sector housing managed or owned by government entities, encompassing federal, state, county, and municipal housing authorities. Incentives offered are consistent with the IQ Multifamily channel; all DI measures are provided at no cost to the property, HVAC incentives are offered at $7,500 per system, and building envelope measures, such as attic insulation and air sealing upgrades, are provided at no cost if the costs fall within a $5,000 per property cap. Any eligible health and safety needs for properties are addressed alongside weatherization upgrades. If a Program Ally visits a site and determines the property does not qualify for building envelope or HVAC measures, the Program Ally is eligible for a non-project stipend of $100 per unit, not to exceed $300.

#### Participation Summary

In 2024, the Public Housing Initiative served 64 unique properties consisting of 357 buildings and 1,391 tenant units, as shown in Table 71.

Table 71. 2024 Public Housing Initiative Participation Summary

| Number of Properties | Number of Buildings | Number of Tenant Units |
| --- | --- | --- |
| 64 | 357 | 1,391 |

The most common measures provided to Public Housing Initiative participants were standard LEDs and advanced power strips, each of which were delivered to about two-thirds of participating properties, as shown in Table 72. In 2024, 19% of properties also received building envelope measures such as air sealing and attic insulation, measures which were available but not actually installed in 2023.

Table 72. 2024 Public Housing Initiative Measure Mix

|  |  |  |
| --- | --- | --- |
| Measure Category | Properties Served | Percent of Properties |
| Standard LED | 42 | 66% |
| Advanced Power Strip - Tier 1 | 41 | 64% |
| Kitchen Faucet Aerator | 31 | 48% |
| Wall Plate Gasket | 30 | 47% |
| Bathroom Faucet Aerator | 25 | 39% |
| Showerhead | 24 | 38% |
| Advanced Thermostat | 22 | 34% |
| Restrictor Shower Valve | 21 | 33% |
| Pipe Insulation | 20 | 31% |
| Door Sweep | 13 | 20% |
| Air Sealing | 12 | 19% |
| Attic Insulation | 12 | 19% |
| Ductless Heat Pump | 3 | 5% |
| Standard LED (Common Area) | 1 | 2% |
| Low Energy Storm Window | 1 | 2% |
| Specialty LED | 1 | 2% |

Additional participation summaries containing the IQ Multifamily metrics agreed upon by the Illinois Program Administrators and non-financially interested stakeholders are reported in Appendix D.

#### Savings Detail

Table 73 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Public Housing Initiative in 2024.

Table 73. 2024 Public Housing Initiative Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Ductless Heat Pump | 783 | 90% | 708 | 1.000 | 708 |
| Low Energy Storm Window | 181 | 4% | 7 | 1.000 | 7 |
| Advanced Thermostat | 140 | 100% | 140 | 1.000 | 140 |
| Kitchen Faucet Aerator | 96 | 100% | 96 | 1.000 | 96 |
| Standard LED | 93 | 104% | 97 | 1.000 | 97 |
| Showerhead | 92 | 100% | 92 | 1.000 | 92 |
| Attic Insulation | 78 | 101% | 78 | 1.000 | 78 |
| Pipe Insulation | 36 | 100% | 36 | 1.000 | 36 |
| Advanced Power Strip - Tier 1 | 32 | 100% | 32 | 1.000 | 32 |
| Air Sealing | 30 | 101% | 30 | 1.000 | 30 |
| Bathroom Faucet Aerator | 15 | 100% | 15 | 1.000 | 15 |
| Restrictor Shower Valve | 13 | 100% | 13 | 1.000 | 13 |
| Door Sweep | 13 | 102% | 13 | 1.000 | 13 |
| Wall Plate Gasket | 11 | 101% | 11 | 1.000 | 11 |
| Specialty LED | 1 | 100% | 1 | 1.000 | 1 |
| Standard LED (Common Area) | 1 | 98% | 1 | 1.000 | 1 |
| Total | 1,614 | 85% | 1,371 | 1.000 | 1,371 |

Table 74 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Public Housing Initiative in 2024.

Table 74. 2024 Public Housing Initiative Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Ductless Heat Pump | -0.11 | 100% | -0.11 | 1.000 | -0.11 |
| Low Energy Storm Window | 0.005 | 4% | 0.0002 | 1.000 | 0.0002 |
| Advanced Thermostat | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Kitchen Faucet Aerator | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Standard LED | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Showerhead | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Attic Insulation | 0.003 | 143% | 0.004 | 1.000 | 0.004 |
| Pipe Insulation | 0.004 | 101% | 0.004 | 1.000 | 0.004 |
| Advanced Power Strip - Tier 1 | 0.004 | 100% | 0.004 | 1.000 | 0.004 |
| Air Sealing | 0.004 | 96% | 0.004 | 1.000 | 0.004 |
| Bathroom Faucet Aerator | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Restrictor Shower Valve | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Door Sweep | 0.0004 | 100% | 0.0004 | 1.000 | 0.0004 |
| Wall Plate Gasket | 0.001 | 96% | 0.001 | 1.000 | 0.001 |
| Specialty LED | 0.0002 | 100% | 0.0002 | 1.000 | 0.0002 |
| Standard LED (Common Area) | 0.0001 | 98% | 0.0001 | 1.000 | 0.0001 |
| Total | -0.01 | 147% | -0.01 | 1.000 | -0.01 |

Table 75 presents the ex ante, verified gross, and verified net gas savings achieved through the Public Housing Initiative in 2024.

Table 75. 2024 Public Housing Initiative Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 8,242 | 100% | 8,242 | 1.000 | 8,242 |
| Kitchen Faucet Aerator | 2,016 | 94% | 1,893 | 1.000 | 1,893 |
| Showerhead | 1,458 | 100% | 1,458 | 1.000 | 1,458 |
| Attic Insulation | 2,148 | 93% | 1,993 | 1.000 | 1,993 |
| Pipe Insulation | 296 | 100% | 296 | 1.000 | 296 |
| Air Sealing | 645 | 94% | 604 | 1.000 | 604 |
| Bathroom Faucet Aerator | 272 | 100% | 272 | 1.000 | 272 |
| Restrictor Shower Valve | 96 | 100% | 96 | 1.000 | 96 |
| Door Sweep | 234 | 100% | 234 | 1.000 | 234 |
| Total | 15,501 | 98% | 15,182 | 1.000 | 15,182 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Ductless Heat Pump (49% of ex ante energy savings and negative demand savings): The gross realization rate for ductless heat pumps is 90% for kWh and 100% for kW.
  + For 100% of measures (n=6), the evaluation team applied the HSPF2 Climate Adjustment Factors by climate zone recommended by the IL-TRM V12.0, whereas the implementation team applied HSPF2 Climate Adjustment Factors from an unknown source, resulting in lower verified energy savings.
* Low Energy Storm Windows (11% of ex ante energy savings and <1% of demand savings): The gross realization rate for storm windows was 4% for kWh and kW.
  + For 100% of measures (n=27), the evaluation team multiplied per-unit savings by the “window area” field, which accounted for both window quantity and sizing, whereas the implementation team multiplied per-unit savings by both “quantity” and “window area” fields, resulting in lower verified energy, demand and gas savings.
  + For 100% of measures (n=27), the evaluation team applied cooling FLH values recommended for multifamily housing by the IL-TRM V12.0, whereas the implementation team applied cooling FLH values recommended for single-family housing, resulting in higher verified demand savings. However, this adjustment had a much smaller effect on savings than the quantity-related discrepancy.
* Attic Insulation (5% of ex ante energy savings, <1% of demand savings and 14% of gas savings): The gross realization rate for attic insulation was 101% for kWh, 143% for kW and 93% for therms.
  + For 4% of measures (n=4), the evaluation team applied the summer system peak CF for CACs recommended by the IL-TRM V12.0, whereas the implementation team applied a CF of 45.5%, resulting in higher verified demand savings.
  + For 4% of measures (n=4), the evaluation team applied the cooling FLH and default existing heating efficiency values recommended by the IL-TRM V12.0, whereas the implementation applied cooling FLH values recommended by the IL-TRM V11.0 and unsourced heating efficiency values, resulting in lower verified energy savings, higher demand savings, and lower gas savings.

### Cumulative Persisting Annual Savings

Table 76 summarizes CPAS and WAML for the 2024 Multifamily Initiatives by Initiative and channel. The WAML for the Initiative is 12.8 years. CPAS and WAML for each channel at a measure level are presented in Table 77, Table 78, and Table 79.

Table 76. 2024 Multifamily Initiatives by Channel for CPAS and WAML

| Channel/Initiative | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | 2025 | 2026 | 2027 | … | 2030 | … |
| IQ Multifamily Channel | 12.9 | 11,136 | 1.000 | 11,136 | 11,136 | 11,136 | 11,136 | … | 10,892 | … | 141,243 |
| Market Rate Multifamily Initiative | 12.1 | 2,159 | 0.950 | 2,052 | 2,052 | 2,052 | 2,052 | … | 2,025 | … | 24,176 |
| Public Housing Initiative | 14.7 | 1,371 | 1.000 | 1,371 | 1,371 | 1,371 | 1,371 | … | 1,371 | … | 20,106 |
| 2024 CPAS | | 14,665 | 0.971 | 14,558 | 14,558 | 14,558 | 14,558 | … | 14,288 | … | 185,525 |
| Expiring 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 270 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 270 | … |  |
| WAML | 13.0 |  |  |  |  |  |  |  |  |  |  |

Table 77. 2024 Multifamily Initiatives – IQ Multifamily Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Ductless Heat Pump | 16.0 | 2,933 | 1.000 | 2,933 | | 2,933 | 2,933 | | 2,933 | | … | 2,868 | … | 46,281 |
| Air Source Heat Pump | 16.0 | 2,226 | 1.000 | 2,226 | | 2,226 | 2,226 | | 2,226 | | … | 2,047 | … | 33,828 |
| Advanced Thermostat | 11.0 | 1,263 | 1.000 | 1,263 | | 1,263 | 1,263 | | 1,263 | | … | 1,263 | … | 13,890 |
| Air Purifiers | 9.0 | 1,195 | 1.000 | 1,195 | | 1,195 | 1,195 | | 1,195 | | … | 1,195 | … | 10,755 |
| Showerhead | 10.0 | 922 | 1.000 | 922 | | 922 | 922 | | 922 | | … | 922 | … | 9,219 |
| Kitchen Faucet Aerator | 10.0 | 588 | 1.000 | 588 | | 588 | 588 | | 588 | | … | 588 | … | 5,882 |
| Standard LED | 8.0 | 509 | 1.000 | 509 | | 509 | 509 | | 509 | | … | 509 | … | 4,074 |
| Standard LED (Common Area) | 8.0 | 390 | 1.000 | 390 | | 390 | 390 | | 390 | | … | 390 | … | 3,117 |
| Pipe Insulation | 15.0 | 296 | 1.000 | 296 | | 296 | 296 | | 296 | | … | 296 | … | 4,442 |
| Advanced Power Strip - Tier 1 | 7.0 | 198 | 1.000 | 198 | | 198 | 198 | | 198 | | … | 198 | … | 1,387 |
| Restrictor Shower Valve | 10.0 | 170 | 1.000 | 170 | | 170 | 170 | | 170 | | … | 170 | … | 1,705 |
| Door Sweep | 20.0 | 137 | 1.000 | 137 | | 137 | 137 | | 137 | | … | 137 | … | 2,730 |
| Bathroom Faucet Aerator | 10.0 | 98 | 1.000 | 98 | | 98 | 98 | | 98 | | … | 98 | … | 983 |
| Wall Plate Gasket | 20.0 | 70 | 1.000 | 70 | | 70 | 70 | | 70 | | … | 70 | … | 1,403 |
| Specialty LED | 8.0 | 63 | 1.000 | 63 | | 63 | 63 | | 63 | | … | 63 | … | 505 |
| Specialty LED (Common Area) | 8.0 | 54 | 1.000 | 54 | | 54 | 54 | | 54 | | … | 54 | … | 435 |
| Attic Insulation | 30.0 | 16 | 1.000 | 16 | | 16 | 16 | | 16 | | … | 16 | … | 474 |
| Air Sealing | 20.0 | 7 | 1.000 | 7 | | 7 | 7 | | 7 | | … | 7 | … | 131 |
| Low Energy Storm Window | 20.0 | 0 | 1.000 | <1 | | <1 | <1 | | <1 | | … | <1 | … | 3 |
| 2024 CPAS |  | 11,136 | 1.000 | 11,136 | | 11,136 | 11,136 | | 11,136 | | … | 10,892 | … | 141,243 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 244 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 244 | … |  |
| WAML | 12.9 |  |  |  |  | | |  | |  |  |  |  |  |

Table 78. 2024 Multifamily Initiatives –Market Rate Multifamily Initiative CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Advanced Thermostat | 11.0 | 948 | 1.000 | 948 | | 948 | 948 | | 948 | | … | 948 | … | 10,430 |
| Air Source Heat Pump | 16.0 | 528 | 0.835 | 441 | | 441 | 441 | | 441 | | … | 415 | … | 6,796 |
| Showerhead | 10.0 | 327 | 1.004 | 328 | | 328 | 328 | | 328 | | … | 328 | … | 3,284 |
| Kitchen Faucet Aerator | 10.0 | 101 | 1.004 | 101 | | 101 | 101 | | 101 | | … | 101 | … | 1,012 |
| Pipe Insulation | 15.0 | 89 | 0.831 | 74 | | 74 | 74 | | 74 | | … | 74 | … | 1,107 |
| Advanced Power Strip - Tier 1 | 7.0 | 88 | 0.994 | 88 | | 88 | 88 | | 88 | | … | 88 | … | 613 |
| Restrictor Shower Valve | 10.0 | 30 | 0.862 | 26 | | 26 | 26 | | 26 | | … | 26 | … | 260 |
| Bathroom Faucet Aerator | 10.0 | 23 | 1.004 | 23 | | 23 | 23 | | 23 | | … | 23 | … | 228 |
| Wall Plate Gasket | 20.0 | 16 | 0.936 | 15 | | 15 | 15 | | 15 | | … | 15 | … | 295 |
| Door Sweep | 20.0 | 9 | 0.865 | 7 | | 7 | 7 | | 7 | | … | 7 | … | 149 |
| 2024 CPAS |  | 2,159 | 0.950 | 2,052 | | 2,052 | 2,052 | | 2,052 | | … | 2,025 | … | 24,176 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 26 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 26 | … |  |
| WAML | 12.1 |  |  |  |  | | |  | |  |  |  |  |  |

Table 79. 2024 Multifamily Initiatives – Public Housing Initiative CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Ductless Heat Pump | 16.0 | 708 | 1.000 | 708 | | 708 | 708 | | 708 | | … | 708 | … | 11,334 |
| Advanced Thermostat | 11.0 | 140 | 1.000 | 140 | | 140 | 140 | | 140 | | … | 140 | … | 1,544 |
| Standard LED | 8.0 | 97 | 1.000 | 97 | | 97 | 97 | | 97 | | … | 97 | … | 776 |
| Kitchen Faucet Aerator | 10.0 | 96 | 1.000 | 96 | | 96 | 96 | | 96 | | … | 96 | … | 962 |
| Showerhead | 10.0 | 92 | 1.000 | 92 | | 92 | 92 | | 92 | | … | 92 | … | 917 |
| Attic Insulation | 30.0 | 78 | 1.000 | 78 | | 78 | 78 | | 78 | | … | 78 | … | 2,324 |
| Pipe Insulation | 15.0 | 36 | 1.000 | 36 | | 36 | 36 | | 36 | | … | 36 | … | 544 |
| Advanced Power Strip - Tier 1 | 7.0 | 32 | 1.000 | 32 | | 32 | 32 | | 32 | | … | 32 | … | 227 |
| Air Sealing | 20.0 | 30 | 1.000 | 30 | | 30 | 30 | | 30 | | … | 30 | … | 580 |
| Bathroom Faucet Aerator | 10.0 | 15 | 1.000 | 15 | | 15 | 15 | | 15 | | … | 15 | … | 149 |
| Restrictor Shower Valve | 10.0 | 13 | 1.000 | 13 | | 13 | 13 | | 13 | | … | 13 | … | 131 |
| Door Sweep | 20.0 | 13 | 1.000 | 13 | | 13 | 13 | | 13 | | … | 13 | … | 256 |
| Wall Plate Gasket | 20.0 | 11 | 1.000 | 11 | | 11 | 11 | | 11 | | … | 11 | … | 214 |
| Low Energy Storm Window | 20.0 | 7 | 1.000 | 7 | | 7 | 7 | | 7 | | … | 7 | … | 134 |
| Specialty LED | 8.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 12 |
| Standard LED (Common Area) | 8.0 | 1 | 1.000 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 4 |
| 2024 CPAS |  | 1,371 | 1.000 | 1,371 | | 1,371 | 1,371 | | 1,371 | | … | 1,371 | … | 20,106 |
| Expiring 2024 CPAS |  |  |  |  | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  |  | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 14.7 |  |  |  |  | | |  | |  |  |  |  |  |

### Conclusions and Recommendations

Based on the results of this evaluation, the evaluation team offers the following key findings and recommendations for the Multifamily Initiatives moving forward.

* **Key Finding 1:** In calculating savings for air purifiers delivered to IQ customers, the implementation team effectively applied the IQ adjustment factor twice, substantially overestimating air purifier savings.
  + Recommendation: Ensure that air purifier savings algorithms appropriately account for IQ adjustments in line with recommendations from the current version of the IL-TRM.
* **Key Finding 2:** In calculating savings for low energy storm windows, the implementation team effectively double-counted the number of windows by multiplying per-unit savings by both “quantity” and “window area” fields when window area already accounts for both quantity and sizing, substantially overestimating air purifier savings.
  + Recommendation: Ensure that quantity fields are appropriately specified and applied for any such measures where units consist of multiple considerations.
* **Key Finding 3:** For one large IQ Multifamily channel project, lighting was incorrectly tracked as interior lighting, whereas supplementary data requested by the evaluation team showed the lighting was installed for exterior walkways.
  + Recommendation: Ensure that all lighting installation locations are appropriately tracked and accounted for in savings calculations, particularly for individual projects with disproportionately large contributions to channel savings.

## Market Rate Single Family Initiative

### Initiative Description

As part of the 2024 Residential Program, AIC operated the Market Rate Single Family Initiative, which delivered services to market rate residential customers through two distinct channels: the Midstream HVAC channel and the Home Efficiency channel. Each channel is described in more detail below.

### Initiative Annual Savings Summary

Table 80 presents the Market Rate Single Family Initiative annual savings achieved in 2024. The 2024 Market Rate Single Family Initiative achieved 8,964 MWh, 1.85 MW, and 339,061 therms in verified net savings.[[31]](#footnote-31)

Table 80. 2024 Market Rate Single Family Initiative Annual Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Metric | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| Ex Ante Gross Savings | 10,031 | 2.10 | 385,826 |
| Gross Realization Rate | 99% | 100% | 100% |
| Verified Gross Savings | 9,895 | 2.10 | 385,064 |
| NTGR | 0.906 | 0.881 | 0.881 |
| Verified Net Savings | 8,964 | 1.85 | 339,061 |

a Note that the NTGR for gas savings is slightly less than 1.000, which is not apparent due to rounding.

### Midstream HVAC Channel

#### Channel Description

The Midstream HVAC channel encourages market actors, such as distributors and contractors, in AIC territory to promote and install a range of energy-efficient equipment, including ductless heat pumps, ducted air source heat pumps, heat pump water heaters, and advanced thermostats. The channel offers incentives to distributors for approved sales of efficient equipment that will, in turn, lower the cost of efficient equipment for contractors, thus encouraging them to (1) pass those savings onto their customers and (2) install more efficient HVAC and water heating equipment than they would otherwise. The midstream model alleviates the need for customers to seek out the offering themselves or submit applications, instead relying on distributors and contractors to inform and market to customers.

The channel also provides training and marketing support to distributors and contractors. Channel staff engages a network of distributors, providing co-branded marketing and educational materials along with training on participation processes and eligibility requirements. Account managers from CMC Energy Services recruit and maintain relationships with individual distributors, enabling them to communicate programmatic changes, share information on data request processes and due dates, circulate promotional materials, and assist with issues as they arise. Midstream HVAC channel staff also coordinate with distributors around showcases, events, and training sessions to increase contractor awareness and engagement and collect market feedback. Any contractors servicing residential customers in AIC service territory can participate in the offering, but only those with ICC certification can enroll as Program Allies, entitling them to be listed on the channel website and receive additional marketing materials and informational updates.

Distributors receive incentives for qualifying sales after submitting equipment and customer information via an online portal managed by Leidos. Distributors are then required to pass a portion of the incentives on to contractors, who can, in turn, provide discounts to customers. In addition to the incentive, the channel offers end-use customers an on-bill financing option, which customers can apply for through their contractor.

In addition to encouraging the adoption of the directly incentivized equipment, the Midstream HVAC channel aims to shift the broader HVAC and water heating market within their service territory. The channel’s midstream model should theoretically help encourage increased sales of energy-efficient, eligible equipment that does not receive incentives through the channel and, therefore, is not tracked in channel tracking data. To help quantify these “market effects,” Midstream HVAC channel staff collect sales data from participating distributors that allows them to quantify the total amount of channel-eligible equipment sold in AIC service territory, both incentivized and non-incentivized.

##### Summary of Key Implementation Changes

We summarize key changes to the Midstream HVAC channel’s design and implementation in 2024 below:

* In April 2024, implementation staff lowered the incentive for high efficiency gas furnaces from $250 to $150. Later in the year, high efficiency gas furnaces were removed as channel-eligible measures.
* In April 2024, implementation staff reduced the maximum allowable percentage of incentive amounts that distributors could retain at their discretion to cover internal marketing and administrative costs associated with the channel from 25% to 10%.
* Implementation staff updated how incentive values were presented in customer-facing marketing materials. Instead of presenting customers with total incentive amount (of which distributors had the option of retaining a percentage), updated customer-facing materials display measure-level incentives with the 10% distributor discretionary funds already deducted with the goal of minimizing customer confusion and reducing pressure on distributors to not retain the allowable portion of incentives.
* Implementation staff altered the template and process for requesting distributor sales data inclusive of non-incentivized sales needed for assessment of market effects. Rather than requesting more specific subsets of non-incentivized distributor sales, which sometimes created an administrative burden for distributor staff, implementation staff began requesting *all* sales of relevant equipment types using a template that better aligns with distributors’ internal POS systems. As part of the updated process, distributors were asked to consistently populate sale dates, branch locations, and individual equipment model numbers, allowing implementation and evaluation staff to determine efficiency levels and applicability of individual sales for market effects savings analysis.

#### Participation Summary

The Midstream HVAC channel distributed more than 9,000 measures to over 6,000 participants in 2024. Central air conditioners and high efficiency gas furnaces were the most common measures sold, each accounting for at least one-quarter of total sales (34% for central AC and 25% for furnaces). Ductless heat pump sales dropped substantially from 2,522 units in 2023 to 1,197 units in 2024 (a 53% decrease). Other measures experienced at least moderate increases in sales relative to 2023, including central ACs (23% increase), centrally ducted air source heat pumps (42% increase), and high efficiency gas furnaces (16% increase). Heat pump water heaters remained the smallest contributor to overall sales (3%), but the total number of units sold did increase by more than half (57%) from 2023. Table 81 summarizes 2024 Midstream HVAC channel participation.

Table 81. 2024 Midstream HVAC Channel Participation Summary

| Measure Category | Measures | Participantsa |
| --- | --- | --- |
| Ductless Heat Pump | 1,197 | 1,016 |
| Central Air Conditioner | 3,038 | 2,820 |
| High Efficiency Gas Furnace | 2,237 | 2,202 |
| Air Source Heat Pump | 1,289 | 1,238 |
| Advanced Thermostat | 1,020 | 1,020 |
| Heat Pump Water Heater | 226 | 153 |
| Total | 9,007 | 6,361 |

a Values do not sum to totals because some projects include multiple measure categories.

The Midstream HVAC channel engaged 43 distributors in 2024. As seen in Table 82, distributor participation varied widely, with the top six distributors (in terms of volume) accounting for nearly two-thirds (61%) of sales. Conversely, 42% of participating distributors sold less than 50 units. Distributors tended to focus on either HVAC (equipment or thermostats) or water heating measures. Of the 43 distributors who sold equipment through the channel, 65% only sold HVAC measures (including HVAC equipment and thermostats), 16% only sold water heating measures, and 19% sold both.

Table 82. 2024 Midstream HVAC Channel Distributor Participation Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Count | Distributors | | Sales | |
| Count | Percent | Count | Percent |
| 1,000+ | 1 | 2% | 1,539 | 17% |
| 500 – 999 | 5 | 12% | 3,997 | 44% |
| 250 – 499 | 4 | 9% | 1,351 | 15% |
| 100 – 249 | 9 | 21% | 1,531 | 17% |
| 50 – 99 | 6 | 14% | 402 | 4% |
| 1 – 49 | 18 | 42% | 187 | 2% |
| Total | 43 | 100% | 9,007 | 100% |

#### Savings Detail

Table 83 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Midstream HVAC channel in 2024.

Table 83. 2024 Midstream HVAC Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Centrally Ducted Air Source Heat Pump | 4,696 | 100% | 4,696 | 0.732 | 3,439 |
| Ductless Heat Pump | 3,344 | 96% | 3,221 | 0.749 | 2,411 |
| Central Air Conditioner | 1,029 | 100% | 1,029 | 0.748 | 770 |
| Heat Pump Water Heater | 536 | 98% | 527 | 0.795 | 419 |
| Advanced Thermostat | 280 | 100% | 280 | 0.748 | 210 |
| Total | 9,885 | 99% | 9,753 | 0.743 | 7,248 |

Table 84 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Midstream HVAC channel in 2024.

Table 84. 2024 Midstream HVAC Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Centrally Ducted Air Source Heat Pump | 0.49 | 100% | 0.49 | 0.728 | 0.36 |
| Ductless Heat Pump | 0.39 | 100% | 0.39 | 0.747 | 0.29 |
| Central Air Conditioner | 0.98 | 100% | 0.98 | 0.748 | 0.73 |
| Heat Pump Water Heater | 0.03 | 99% | 0.02 | 0.795 | 0.02 |
| Advanced Thermostat | 0.16 | 100% | 0.16 | 0.744 | 0.12 |
| Total | 2.04 | 100% | 2.04 | 0.743 | 1.52 |

Table 85 presents the ex ante, verified gross, and verified net gas savings achieved through the Midstream HVAC channel in 2024.

Table 85. 2024 Midstream HVAC Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 51,049 | 100% | 50,980 | 0.873 | 44,526 |
| High Efficiency Gas Furnace | 307,953 | 100% | 307,953 | 0.826 | 254,353 |
| Total | 359,002 | 100% | 358,933 | 0.833 | 298,879 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Ductless Heat Pump (34% of ex ante energy and 19% of demand savings): The gross realization rate for Ductless Heat Pump was 96% for kWh and 100% for kW.
  + In 100% of measures (n=1,197), the evaluation team applied full and partial displacement heating split values of 0.5 and 0.5, as shown in the IL-TRM V12.0, whereas the implementation team applied a full and partial displacement heating split of approximately 0.57 and 0.43, respectively, resulting in lower verified energy savings.
* Heat Pump Water Heater (5% of ex ante energy and 1% of demand savings): The gross realization rate for Heat Pump Water Heater was 98% for kWh and 99% for kW.
  + In 3% of measures (n=6), the evaluation team applied a Uniform Energy Factor (UEF) value that corresponds to a tank size greater than 55 gallons, matching the tank size indicated in the tracking data, whereas the implementation team applied a UEF value that corresponds to a tank size of less than 55 gallons, resulting in lower verified energy savings.

#### Market Effects Savings

In addressing market barriers to installing high-efficiency HVAC and water heating equipment through the Midstream HVAC channel, AIC aims to broadly affect the HVAC and water heater market within their service territory. The channel’s program theory logic model (PTLM) hypothesizes that its various forms of marketing, education, and training should also increase sales of efficient equipment beyond those products directly incentivized by the channel. While some of these market changes are expected to occur over a long-term time horizon, AIC expects that the Midstream HVAC channel will directly or indirectly lead to increased sales of efficient, eligible units that do not receive channel incentives and, therefore, are not included in tracking data.

As part of the 2024 evaluation of the Midstream HVAC channel, Opinion Dynamics reviewed supplementary distributor sales data inclusive of non-incentivized products to determine market effects-eligible sales. We then applied adjustment factors based on primary research conducted with contractors and distributors in 2023 and 2024 to estimate savings attributable to market effects of the Midstream HVAC channel. Table 86 summarizes net savings associated with market effects from non-incentivized, energy-efficient sales attributable to Midstream HVAC channel efforts. Market effects methods and detailed results are included in Appendix A.

Table 86. 2024 Midstream HVAC Channel Market Effects Net Savings Summary

| Measure | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- |
| Air Source Heat Pump | 690 | 0.07 | 0 |
| Ductless Heat Pump | 686 | 0.08 | 0 |
| Advanced Thermostat | 100 | 0.06 | 18,603 |
| Central Air Conditioner | 71 | 0.07 | 0 |
| Heat Pump Water Heater | 50 | 0.002 | 0 |
| Total | 1,597 | 0.28 | 18,603 |

### Home Efficiency Channel

#### Channel Description

The Home Efficiency channel, launched in 2021, aims to increase residential customer awareness of home energy usage and increase the efficiency of existing, occupied single-family homes through building envelope improvements. The channel is designed to serve residential customers who do not qualify for the IQ Initiative (i.e., households with annual incomes over 299% of the FPL).

There is no customer-facing application for the Home Efficiency channel. Program allies generate leads for the channel and customer outreach directs interested customers to contact a registered Program Ally. Leidos, the channel’s primary implementer, employs Energy Field Specialists to recruit prospective Program Allies and encourage them to market the channel by providing them with cobranded outreach materials and helping them develop marketing campaigns. Additionally, in some instances, IQ Initiative staff may refer applicants identified as ineligible for IQ offerings to Home Efficiency channel offerings due to income levels.

Participation in the Home Efficiency channel begins with a Home Energy Assessment from a registered Program Ally to identify opportunities for larger building shell retrofits. Participants may need to pay for their assessment. As part of the assessment, Program Allies provide participants with educational materials on indoor air quality and American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) ventilation guidelines and create a customized project report. The customized project report details the home’s current energy efficiency state, presents basic health and safety test results, identifies options for building shell retrofits, summarizes relevant available incentives, and estimates the total out-of-pocket costs for the proposed upgrades. Eligible retrofits include air sealing, bathroom exhaust fans, and various types of insulation (ceiling/attic, wall, crawlspace/basement, and rim/band joist). Following this report, participants can choose whether to move forward with some or all of the recommendations.

Home Efficiency channel participants are responsible for a portion of project costs; however, AIC offers on-bill financing to help defray upfront project costs. Channel outreach and Program Allies also encourage participants to take advantage of the tax credits available for insulation and air sealing projects through the Inflation Reduction Act (IRA). Following the completion of a project, Program Allies receive a $200 project completion bonus.

##### Summary of Key Implementation Changes

We summarize key changes to the Home Efficiency channel’s design and implementation in 2024 below:

* Duct sealing was added as an “off-menu” option in early 2024, meaning participants could receive duct sealing incentives but the measure was not formally marketed to customers.
* In September 2024, channel eligibility broadened to include customers with propane service.
* Implementation staff focused on promoting availability of IRA tax credits, including mention of them in all marketing collateral. Implementation staff also strengthened marketing analytics efforts, placing greater emphasis on tracking the amount of traffic to the channel’s web page and its ‘sources of origin.’ They also employed region-specific QR codes on outreach postcards that allowed for monitoring of web page traffic by region.

#### Participation Summary

The Home Efficiency channel completed projects with 158 participants in 2024, as shown in Table 87. The channel achieved its 2024 goal of 150 participants and accomplished 36% year-over-year growth compared to 2023, in which the channel completed projects with 116 participants. Staff attributed this success to their actively engaged and growing pool of Program Allies along with increased and improved marketing efforts.

Table 87. 2024 Home Efficiency Channel Participation Summary

| Measure Category | Participants |
| --- | --- |
| Attic Insulation | 134 |
| Air Sealing | 157 |
| Crawlspace Insulation | 66 |
| Bathroom Exhaust Fan | 82 |
| Exterior Wall Insulation | 39 |
| Rim Joist Insulation | 98 |
| Duct Sealing | 1 |
| Total | 158 |

Note: Values do not sum to total because some participants received multiple measure categories.

#### Savings Detail

Table 88 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Home Efficiency channel in 2024.

Table 88. 2024 Home Efficiency Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Attic Insulation | 50 | 100% | 50 | 0.806 | 40 |
| Air Sealing | 40 | 100% | 40 | 0.895 | 36 |
| Crawlspace Insulation | 27 | 87% | 23 | 0.806 | 19 |
| Bathroom Exhaust Fan | 18 | 100% | 18 | 0.803 | 14 |
| Exterior Wall Insulation | 5 | 99% | 5 | 0.800 | 4 |
| Rim Joist Insulation | 4 | 100% | 4 | 0.804 | 3 |
| Duct Sealing | 1 | 100% | 1 | 0.800 | 1 |
| Total | 146 | 98% | 143 | 0.830 | 118 |

Table 89 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Home Efficiency channel in 2024.

Table 89. 2024 Home Efficiency Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Attic Insulation | 0.02 | 100% | 0.02 | 0.809 | 0.02 |
| Air Sealing | 0.02 | 100% | 0.02 | 0.898 | 0.02 |
| Crawlspace Insulation | 0.01 | 100% | 0.01 | 0.813 | 0.01 |
| Bathroom Exhaust Fan | 0.002 | 100% | 0.002 | 0.803 | 0.002 |
| Exterior Wall Insulation | 0.002 | 98% | 0.002 | 0.800 | 0.002 |
| Rim Joist Insulation | 0.001 | 100% | 0.001 | 0.808 | 0.001 |
| Duct Sealing | 0.001 | 100% | 0.001 | 0.800 | 0.001 |
| Total | 0.06 | 100% | 0.06 | 0.840 | 0.05 |

Table 90 presents the ex ante, verified gross, and verified net gas savings achieved through the Home Efficiency channel in 2023.

Table 90. 2024 Home Efficiency Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Attic Insulation | 12,088 | 98% | 11,816 | 0.810 | 9,565 |
| Air Sealing | 5,184 | 98% | 5,082 | 0.891 | 4,525 |
| Crawlspace Insulation | 6,132 | 98% | 6,008 | 0.815 | 4,897 |
| Exterior Wall Insulation | 1,854 | 91% | 1,685 | 0.800 | 1,349 |
| Rim Joist Insulation | 1,071 | 98% | 1,046 | 0.809 | 847 |
| Duct Sealing | 495 | 100% | 495 | 0.800 | 396 |
| Total | 26,824 | 97% | 26,131 | 0.826 | 21,579 |

We discuss major discrepancies between ex ante claims and the verified analysis below. While the analysis identified and characterized all discrepancies, we only report those with significant impacts on channel savings or measures with particularly high or low realization rates.

* Crawlspace Insulation (19% of ex ante energy savings, 12% of demand savings, and 23% of therm savings): The gross realization rate for Crawlspace Insulation was 87% for kWh, 100% for kW, and 98% for therms.
  + In 95% of measures (n=63), the evaluation team applied the average of the conditioned and unconditioned HDD from the IL-TRM V12.0 for all electric heating savings calculations, whereas the implementation team only applied the average of the conditioned and unconditioned HDD for part of their electric heating savings calculations, resulting in lower verified energy savings.
* Additionally, for 10 records across five measure categories (air sealing, attic insulation, wall insulation, crawlspace insulation, and rim joist insulation), the evaluation team did not calculate gas savings given tracking data indicated the participants were not gas customers, whereas the implementation team assigned gas savings, resulting in lower verified gas savings.

### Cumulative Persisting Annual Savings

Table 91 summarizes CPAS and WAML for the 2024 Market Rate Single Family Initiative by channel. The WAML for the Initiative is 15.8 years. CPAS and WAML for each channel at a measure level are presented in Table 92, Table 93, and Table 94.

Table 91. 2024 Market Rate Single Family Initiative CPAS and WAML

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Channel | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | Lifetime Savings (MWh) |
| 2024 | 2025 | 2026 | 2027 | … | 2030 | … |
| Midstream HVAC | 16.0 | 9,753 | 0.743 | 7,248 | 7,248 | 7,248 | 7,248 | … | 7,248 | … | 116,040 |
| Midstream HVAC Market Effects | 15.7 | 4,474 | 0.357 | 1,597 | 1,597 | 1,597 | 1,597 |  | 1,597 |  | 25,145 |
| Home Efficiency | 25.7 | 143 | 0.830 | 118 | 118 | 118 | 118 | … | 118 | … | 2,791 |
| 2024 CPAS | | 14,369 | 0.624 | 8,964 | 8,964 | 8,964 | 8,964 | … | 8,964 | … | 143,976 |
| Expiring 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 0 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | 0 | 0 | … | 0 | … |  |
| WAML | 15.8 |  |  |  |  |  |  |  |  |  |  |

Table 92. 2024 Market Rate Midstream HVAC Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Source Heat Pump | 16.0 | 4,696 | 0.732 | 3,439 | | 3,439 | 3,439 | | 3,439 | | … | 3,439 | … | 55,017 |
| Central Air Conditioner | 18.0 | 1,029 | 0.748 | 770 | | 770 | 770 | | 770 | | … | 770 | … | 13,859 |
| Ductless Heat Pump | 16.0 | 3,221 | 0.749 | 2,411 | | 2,411 | 2,411 | | 2,411 | |  | 2,411 |  | 38,575 |
| Heat Pump Water Heater | 15.0 | 527 | 0.795 | 419 | | 419 | 419 | | 419 | |  | 419 |  | 6,281 |
| Advanced Thermostat | 11.0 | 280 | 0.748 | 210 | | 210 | 210 | | 210 | | … | 210 | … | 2,308 |
| 2024 CPAS |  | 9,753 | 0.743 | 7,248 | | 7,248 | 7,248 | | 7,248 | | … | 7,248 | … | 116,040 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 16.0 |  |  |  |  | | |  | |  |  |  |  |  |

Table 93. 2024 Market Rate Midstream HVAC Channel Market Effects CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Source Heat Pump | 16.0 | 690 | N/A | 690 | | 690 | 690 | | 690 | | … | 690 | … | 11,033 |
| Ductless Heat Pump | 16.0 | 686 | N/A | 686 | | 686 | 686 | | 686 | | … | 686 | … | 10,983 |
| Advanced Thermostat | 11.0 | 100 | N/A | 100 | | 100 | 100 | | 100 | |  | 100 |  | 1,105 |
| Central Air Conditioner | 18.0 | 71 | N/A | 71 | | 71 | 71 | | 71 | |  | 71 |  | 1,274 |
| Heat Pump Water Heater | 15.0 | 50 | N/A | 50 | | 50 | 50 | | 50 | | … | 50 | … | 750 |
| 2024 CPAS |  | 1,597 | N/A | 1,597 | | 1,597 | 1,597 | | 1,597 | | … | 1,597 | … | 25,145 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 15.7 |  |  |  |  | | |  | |  |  |  |  |  |

Table 94. 2024 Market Rate Home Efficiency Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Air Sealing | 20.0 | 40 | 0.895 | 36 | | 36 | 36 | | 36 | | … | 36 | … | 658 |
| Attic Insulation | 30.0 | 50 | 0.806 | 40 | | 40 | 40 | | 40 | | … | 40 | … | 1,100 |
| Bathroom Exhaust Fan | 19.0 | 18 | 0.803 | 14 | | 14 | 14 | | 14 | | … | 14 | … | 274 |
| Wall Insulation | 30.0 | 5 | 0.800 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 116 |
| Duct Sealing | 20.0 | 1 | 0.800 | 1 | | 1 | 1 | | 1 | | … | 1 | … | 20 |
| Crawlspace Insulation | 30.0 | 23 | 0.806 | 19 | | 19 | 19 | | 19 | |  | 19 |  | 531 |
| Rim Joist Insulation | 30.0 | 4 | 0.804 | 3 | | 3 | 3 | | 3 | |  | 3 |  | 91 |
| 2024 CPAS |  | 143 | 0.830 | 118 | | 118 | 118 | | 118 | | … | 118 | … | 2,791 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 25.7 |  |  |  |  | | |  | |  |  |  |  |  |

### Conclusions and Recommendations

Based on the results of this evaluation, the evaluation team offers the following key findings and recommendations for the Market Rate Single Family Initiative moving forward.

* **Key Finding 1:** Midstream HVAC channel market effects represent a substantive impact of channel activities beyond directly incentivized measures. The availability of well-populated distributor sales data is critical to enabling continued estimation of market effects savings, and continuing to improve upon the existing template and process for soliciting and verifying distributor sales data remains a worthwhile focus.
  + Recommendation: The implementation team should continue to collect distributor data from participating distributors with an emphasis on limiting reported sales to Illinois branch locations and ensuring location fields are reliably populated.

## Kits Initiatives

In this chapter, we present the results of the impact evaluation of AIC’s kit and ad hoc measure distribution efforts in 2024. AIC formally operates three kit distribution channels as part of its portfolio: the School Kits and High School Innovation channels of the Direct Distribution Initiative, and the Community Kits channel of the IQ Initiative. In addition, this chapter includes mobile home kits distributed through the IQ Initiative’s MHAS channel, two types of kits distributed through the IQ Initiative’s Joint Utility and IQ CAA channel, and two additional types of measures distributed on an ad hoc basis through the School Kits and Community Kits channels.

### Initiative Description

The objectives of AIC’s Residential Kits Initiatives are to reach underserved communities, as well as low- to moderate-income customers with free energy-saving measures and educational materials designed to engage them in energy efficiency and give them immediate tools they can use to improve their quality of life.

### Initiative Annual Savings Summary

Table 95 presents the Kits Initiatives annual savings achieved in 2024. The 2024 Kits Initiatives achieved 13,789 MWh, 1.94 MW, and 264,184 therms in verified net savings.

Table 95. 2024 Kits Initiative Annual Savings

| Metric | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- |
| Ex Ante Gross Savings | 11,992 | 1.78 | 278,513 |
| Gross Realization Rate | 115% | 109% | 95% |
| Verified Gross Savings | 13,789 | 1.94 | 264,184 |
| NTGR | 1.000 | 1.000 | 1.000 |
| Verified Net Savings | 13,789 | 1.94 | 264,184 |

In addition to minor errors in ex ante savings calculations for a handful of kit measures, discussed later in this section, we note that, unlike calculations for other Initiatives, the implementation team calculates kit savings outside of the Residential Program tracking database and transfers assumptions into the database. This leads to minor rounding errors and differences between backup calculations provided to the evaluation team and savings recorded in the tracking database. For the purposes of internal consistency, we calculate all savings (ex ante, verified gross, and verified net) using measure-level savings for kits calculated at full precision and multiplied by the number of kits recorded in the tracking database, which results in very slight differences between ex ante savings recorded in the tracking database and those presented in this report.

### School Kits Channel

#### Channel Description

The Direct Distribution Initiative’s School Kits channelprovides school presentations, curriculum, in-class activities, and energy-saving kits to students in participating fifth grade classrooms with a focus on underserved communities in AIC service territory. In particular, the channel serves schools where 50% or more of the student body is participating in free or reduced-price lunch programs, or that are in designated IQ ZIP codes. By providing the kits in conjunction with energy conservation education in the classroom, AIC seeks to establish an interest in energy efficiency among participating students and reduce energy use in their homes. The School Kits channel is primarily implemented by the National Energy Foundation (NEF) as a subcontractor to Leidos. In partnership with the NEF, a team of Illinois-based educators deliver the school presentations.

##### Summary of Key Implementation Changes

In 2024, AIC began offering Joint Utility School Kits in AIC and Nicor Gas’ shared service territory. The NEF and Resource Innovations implement this offering.

#### Participation Summary

In 2024, the School Kits channel conducted energy efficiency education and distributed 9,500 energy-saving kits to students across 147 unique schools in AIC’s dual-fuel (gas and electric) service territory (Full School Kits). There were 406 teachers who participated in the Full School Kits portion of the channel in 2024. Table 96 summarizes the measures included in each kit.

Table 96. 2024 Full School Kits Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Specialty LED | 4 |
| Showerhead | 1 |
| Kitchen Faucet Aerator | 1 |
| Shower Timer | 1 |
| Advanced Power Strip – Tier 1 | 1 |
| Pipe Insulation | 1 |
| Door Sweep | 1 |
| Weatherstripping | 1 |
| Bathroom Faucet Aerator | 1 |

The channel also conducted energy efficiency education and distributed 1,500 energy-saving kits to students across 21 unique schools in AIC and Nicor’s shared service territory (Joint Utility School Kits). There were 56 teachers who participated in the Joint Utility School Kits portion of the channel in 2024. This kit was nearly identical to the Full School Kit but also included outlet gaskets. Table 97 summarizes the measures included in each kit.

Table 97. 2024 Joint Utility School Kits Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Specialty LED | 4 |
| Showerhead | 1 |
| Advanced Power Strip – Tier 1 | 1 |
| Kitchen Faucet Aerator | 1 |
| Shower Timer | 1 |
| Weatherstripping | 1 |
| Door Sweep | 1 |
| Pipe Insulation | 1 |
| Outlet Gaskets | 10 |
| Bathroom Faucet Aerator | 1 |

In addition to the energy-saving kits, the NEF partnered with Sparrow Energy Services to host seven “Community in Action” fundraising events at participating schools. At these events, families received one connected LED bulb and information on energy efficiency careers. A total of 400 connected LEDs were distributed at these events, included in the Full School Kits portion of the channel.

#### Savings Detail

Table 98 presents the ex ante, verified gross, and verified net electric energy savings achieved through the School Kits channel in 2024.

Table 98. 2024 School Kits Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Full School Kits | | | | | |
| Specialty LED | 1,936 | 100% | 1,937 | 1.000 | 1,937 |
| Showerhead | 1,495 | 131% | 1,958 | 1.000 | 1,958 |
| Kitchen Faucet Aerator | 1,080 | 131% | 1,412 | 1.000 | 1,412 |
| Shower Timer | 660 | 131% | 865 | 1.000 | 865 |
| Advanced Power Strip - Tier 1 | 507 | 100% | 505 | 1.000 | 505 |
| Pipe Insulation | 241 | 110% | 265 | 1.000 | 265 |
| Door Sweep | 205 | 162% | 333 | 1.000 | 333 |
| Weatherstripping | 199 | 183% | 364 | 1.000 | 364 |
| Bathroom Faucet Aerator | 131 | 132% | 173 | 1.000 | 173 |
| Connected LED | 15 | 101% | 15 | 1.000 | 15 |
| Full School Kits Total | 6,470 | 121% | 7,827 | 1.000 | 7,827 |
| Joint Utility School Kits | | | | | |
| Specialty LED | 306 | 100% | 306 | 1.000 | 306 |
| Showerhead | 107 | 210% | 225 | 1.000 | 225 |
| Advanced Power Strip - Tier 1 | 78 | 106% | 82 | 1.000 | 82 |
| Kitchen Faucet Aerator | 79 | 208% | 163 | 1.000 | 163 |
| Shower Timer | 47 | 210% | 99 | 1.000 | 99 |
| Weatherstripping | 27 | 155% | 41 | 1.000 | 41 |
| Door Sweep | 25 | 151% | 38 | 1.000 | 38 |
| Pipe Insulation | 16 | 186% | 29 | 1.000 | 29 |
| Outlet Gaskets | 19 | 136% | 25 | 1.000 | 25 |
| Bathroom Faucet Aerator | 10 | 194% | 20 | 1.000 | 20 |
| Joint Utility School Kits Total | 713 | 144% | 1,028 | 1.000 | 1,028 |

Table 99 presents the ex ante, verified gross, and verified net electric demand savings achieved through the School Kits channel in 2024.

Table 99. 2024 School Kits Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Full School Kits | | | | | |
| Specialty LED | 0.23 | 100% | 0.23 | 1.000 | 0.23 |
| Showerhead | 0.14 | 132% | 0.18 | 1.000 | 0.18 |
| Kitchen Faucet Aerator | 0.20 | 132% | 0.27 | 1.000 | 0.27 |
| Shower Timer | 0.15 | 110% | 0.17 | 1.000 | 0.17 |
| Advanced Power Strip - Tier 1 | 0.06 | 100% | 0.06 | 1.000 | 0.06 |
| Pipe Insulation | 0.03 | 110% | 0.03 | 1.000 | 0.03 |
| Door Sweep | 0.03 | 46% | 0.01 | 1.000 | 0.01 |
| Weatherstripping | 0.01 | 80% | 0.01 | 1.000 | 0.01 |
| Bathroom Faucet Aerator | 0.15 | 132% | 0.19 | 1.000 | 0.19 |
| Connected LED | 0.002 | 89% | 0.002 | 1.000 | 0.002 |
| Full School Kits Total | 0.99 | 116% | 1.15 | 1.000 | 1.15 |
| Joint Utility School Kits | | | | | |
| Specialty LED | 0.04 | 100% | 0.04 | 1.000 | 0.04 |
| Showerhead | 0.01 | 236% | 0.02 | 1.000 | 0.02 |
| Advanced Power Strip - Tier 1 | 0.01 | 106% | 0.01 | 1.000 | 0.01 |
| Kitchen Faucet Aerator | 0.01 | 220% | 0.03 | 1.000 | 0.03 |
| Shower Timer | 0.01 | 186% | 0.02 | 1.000 | 0.02 |
| Weatherstripping | 0.02 | 4% | 0.001 | 1.000 | 0.001 |
| Door Sweep | 0.02 | 10% | 0.002 | 1.000 | 0.002 |
| Pipe Insulation | 0.0002 | 185% | 0.003 | 1.000 | 0.003 |
| Outlet Gaskets | 0.02 | 35% | 0.01 | 1.000 | 0.01 |
| Bathroom Faucet Aerator | 0.01 | 235% | 0.02 | 1.000 | 0.02 |
| Joint Utility School Kits Total | 0.15 | 96% | 0.15 | 1.000 | 0.15 |

Table 100 presents the ex ante, verified gross, and verified net gas savings achieved through the School Kits channel in 2024. AIC claims no gas savings for Joint Utility School Kits as they were claimed by Nicor Gas.

Table 100. 2024 School Kits Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Full School Kits | | | | | |
| Showerhead | 64,320 | 108% | 69,618 | 1.000 | 69,618 |
| Kitchen Faucet Aerator | 45,387 | 108% | 49,121 | 1.000 | 49,121 |
| Shower Timer | 28,235 | 108% | 30,565 | 1.000 | 30,565 |
| Pipe Insulation | 10,756 | 90% | 9,704 | 1.000 | 9,704 |
| Door Sweep | 23,489 | 64% | 15,097 | 1.000 | 15,097 |
| Weatherstripping | 26,673 | 64% | 17,144 | 1.000 | 17,144 |
| Bathroom Faucet Aerator | 5,465 | 109% | 5,956 | 1.000 | 5,956 |
| Full School Kits Total | 204,325 | 97% | 197,204 | 1.000 | 197,204 |

We discuss discrepancies between ex ante claims and the verified analysis below for each of the school kits.

Full School Kit

The primary drivers of Full School Kit realization rates are differences in heating and water heating fuel type, household size, and home type. For these parameters, the evaluation team relied on self-reported responses from participating students’ 2024 Home Energy Worksheets, whereas the implementation team applied a combination of self-reported responses from the 2023 Home Energy Worksheets, 2013 Market Potential Study findings, and IL-TRM V12.0 default assumptions, resulting in higher verified energy and demand savings and lower verified gas savings. Table 101 compares the ex ante and verified assumptions for each parameter.

Table 101. 2024 Full School Kit Self-Reported Assumptions

| Parameter | Ex Ante Value | Verified Value | Impact on Verified Savings |
| --- | --- | --- | --- |
| Average Household Size (People per Household) | 4.67 | 5.59 | Higher electric and gas savings |
| Electric Water Heating (% of Participants) | 49% | 54% | Lower electric savings |
| Single-family Homes (% of Participants) | 79% | 77% | Higher electric savings  Lower gas savings |
| Multifamily Homes (% of Participants) | 21% | 23% |
| Single-family Homes with Gas Heat (% of Participants) | 74% | 47% | Higher electric savings  Lower gas savings |
| Multifamily Homes with Gas Heat (% of Participants) | 61% | 41% |

In addition, the following discrepancy affected Door Sweeps (3% of kit ex ante energy savings, 3% of kit demand savings, and 12% of kit gas savings) and Weatherstripping (3% of kit ex ante energy savings, 1% of kit demand savings, and 13% of kit gas savings):

* The evaluation team calculated cooling savings by applying the air sealing adjustment factor (80%) and, for Door Sweeps specifically, also applied the ISR for kits (57%) from the IL-TRM V12.0, whereas the implementation team did not apply these factors, resulting in lower verified energy and demand savings.

Joint Utility School Kit

The primary drivers of Joint Utility School Kit realization rates are differences in heating and water heating fuel type, household size, and home type. For these parameters, the evaluation team relied on self-reported responses from participating students’ 2024 Home Energy Worksheets, whereas the implementation team applied a combination of self-reported responses from the 2023 Home Energy Worksheets and IL-TRM V12.0 default assumptions, resulting in higher verified energy and demand savings. Table 102 compares the ex ante and verified assumptions for each parameter.

Table 102. 2024 Joint Utility School Kit Self-Reported Assumptions

| Parameter | Ex Ante Value | Verified Value | Impact on Verified Savings |
| --- | --- | --- | --- |
| Average Household Size (People per Household) | 4.67 | 5.72 | Higher electric savings |
| Electric Water Heating (% of Participants) | 20% | 37% | Higher electric savings |
| Single-family Homes (% of Participants) | 69% | 88% | Higher electric savings |
| Multifamily Homes (% of Participants) | 31% | 12% | Higher electric savings |
| Single-family Homes with Gas Heat (% of Participants)  Multifamily Homes With Gas Heat | 84% | 65% | Higher electric savings |
| Multifamily Homes with Gas Heat (% of Participants) | 59% | 48% | Higher electric savings |

In addition, the following discrepancy affected Door Sweeps (4% of kit ex ante energy savings and 15% of kit demand savings), Weatherstripping (4% of kit ex ante energy savings and 16% of kit demand savings), and Outlet Gaskets (3% of kit ex ante energy savings and 11% of kit demand savings):

* The evaluation team calculated demand savings including only cooling savings per the IL-TRM V12.0, whereas the implementation team included both cooling and heating savings when calculating demand, resulting in lower verified demand savings.

### High School Innovation Channel

#### Channel Description

The Direct Distribution Initiative’s High School Innovation channel aims to introduce high school students to advanced energy literacy education through curriculum, in-class activities, and the distribution of energy-saving kits. In particular, the channel serves schools where 50% or more of the student body is participating in free or reduced-price lunch programs, or that are in designated IQ ZIP codes. The presentations target science and math classrooms such as economics, chemistry, and biology classes. After each presentation, students receive take home energy-saving kits. The High School Innovation channel is primarily implemented by the NEF as a subcontractor to Leidos. In partnership with the NEF, a team of Illinois-based educators deliver the school presentations.

#### Participation Summary

In 2024, the High School Innovation channel conducted energy efficiency education and distributed 2,513 energy-saving kits to students across 30 unique schools in AIC service territory. There were 55 teachers who participated in the channel in 2024. Table 103 summarizes the measures included in each kit.

Table 103. 2024 High School Innovation Kit Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Specialty LED | 3 |
| Showerhead | 1 |
| LED Desk Lamp | 1 |
| Pipe Insulation | 1 |
| Weatherstripping | 1 |
| Outlet Gaskets | 10 |
| Bathroom Faucet Aerator | 1 |

#### Savings Detail

Table 104 presents the ex ante, verified gross, and verified net electric energy savings achieved through the High School Innovation channel in 2024.

Table 104. 2024 High School Innovation Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Specialty LED | 384 | 100% | 384 | 1.000 | 384 |
| Showerhead | 371 | 113% | 420 | 1.000 | 420 |
| LED Desk Lamp | 80 | 101% | 81 | 1.000 | 81 |
| Pipe Insulation | 64 | 115% | 73 | 1.000 | 73 |
| Weatherstripping | 53 | 191% | 100 | 1.000 | 100 |
| Outlet Gaskets | 38 | 150% | 57 | 1.000 | 57 |
| Bathroom Faucet Aerator | 33 | 111% | 36 | 1.000 | 36 |
| Total | 1,022 | 113% | 1,152 | 1.000 | 1,152 |

Table 105 presents the ex ante, verified gross, and verified net electric demand savings achieved through the High School Innovation channel in 2024.

Table 105. 2024 High School Innovation Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Specialty LED | 0.05 | 100% | 0.05 | 1.000 | 0.05 |
| Showerhead | 0.03 | 114% | 0.04 | 1.000 | 0.04 |
| LED Desk Lamp | 0.01 | 101% | 0.01 | 1.000 | 0.01 |
| Pipe Insulation | 0.01 | 115% | 0.01 | 1.000 | 0.01 |
| Weatherstripping | 0.002 | 80% | 0.002 | 1.000 | 0.002 |
| Outlet Gaskets | 0.01 | 80% | 0.01 | 1.000 | 0.01 |
| Bathroom Faucet Aerator | 0.04 | 114% | 0.04 | 1.000 | 0.04 |
| Total | 0.15 | 105% | 0.16 | 1.000 | 0.16 |

Table 106 presents the ex ante, verified gross, and verified net gas savings achieved through the High School Innovation channel in 2024.

Table 106. 2024 High School Innovation Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Showerhead | 15,958 | 84% | 13,418 | 1.000 | 13,418 |
| Pipe Insulation | 2,845 | 85% | 2,426 | 1.000 | 2,426 |
| Weatherstripping | 7,056 | 61% | 4,305 | 1.000 | 4,305 |
| Outlet Gaskets | 3,221 | 61% | 1,965 | 1.000 | 1,965 |
| Bathroom Faucet Aerator | 1,356 | 83% | 1,122 | 1.000 | 1,122 |
| Total | 30,435 | 76% | 23,235 | 1.000 | 23,235 |

We discuss discrepancies between ex ante claims and the verified analysis below.

The primary drivers of High School Innovation channel realization rates are differences in heating and water heating fuel type, household size, and home type. The evaluation team relied on self-reported responses from participating students’ 2024 Home Energy Worksheets, whereas the implementation team applied a combination of self-reported responses from the 2023 Home Energy Worksheets, 2013 Market Potential Study findings, and IL-TRM V12.0 default assumptions, resulting in higher verified energy and demand savings and lower verified gas savings. Table 107 compares the ex ante and verified assumptions for each parameter.

Table 107. 2024 High School Innovation Kit Self-Reported Assumptions

| Parameter | Ex Ante Value | Verified Value | Impact on Verified Savings |
| --- | --- | --- | --- |
| Average Household Size (People per Household) | 4.38 | 4.34 | Lower electric and gas savings |
| Electric Water Heating (% of Participants) | 57% | 56% | Higher electric savings  Lower gas savings |
| Single-family Homes (% of Participants) | 79% | 82% | Higher electric savings  Lower gas savings |
| Multifamily Homes (% of Participants) | 21% | 18% |
| Single-family Homes with Gas Heat (% of Participants) | 74% | 45% | Higher electric savings  Lower gas savings |
| Multifamily Homes with Gas Heat (% of Participants) | 61% | 39% |

In addition, the following discrepancy affected Weatherstripping (5% of kit ex ante energy savings, 1% of kit demand savings, and 23% of kit gas savings) and Outlet Gaskets (4% of kit ex ante energy savings, 8% of kit demand savings, and 11% of kit gas savings):

* The evaluation team calculated cooling savings by applying the air sealing adjustment factor (80%) from the IL-TRM V12.0, whereas the implementation team did not apply the air sealing adjustment factor to cooling savings, resulting in lower verified energy and demand savings.

### IQ Community Kits Channel

#### Channel Description

The IQ Initiative’s Community Kits channel provides energy-saving kits and educational materials to AIC low-to-moderate-income customers in under-served/challenged communities at community events or following home visits conducted as part of the IQ Initiative. The objective of the channel is to partner with CBOs to provide do-it-yourself no-cost energy savings measures that will help improve the quality of life for our customers and spark their interest in additional AIC energy efficiency offerings. The channel is implemented by Resource Innovations.

#### Participation Summary

In 2024, the IQ Community Kits channel distributed 3,000 energy-saving kits to AIC low-to-moderate-income customers in underserved/challenged communities. Table 108 summarizes the measures distributed through the Community Kits channel in 2024.

Table 108. 2024 IQ Community Kit Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Standard LED | 6 |
| Advanced Power Strip – Tier 1 | 1 |
| Showerhead | 2 |
| Pipe Insulation | 2 |
| Kitchen Faucet Aerator | 1 |
| Door Sweep | 1 |
| Bathroom Faucet Aerator | 2 |

In addition, channel staff delivered 6,700 8W standard LED bulbs at bill pay events offered by AIC.

#### Savings Detail

Table 109 presents the ex ante, verified gross, and verified net electric energy savings achieved through the Community Kits channel in 2024.

Table 109. 2024 IQ Community Kits Channel Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 920 | 100% | 920 | 1.000 | 920 |
| Advanced Power Strip - Tier 1 | 257 | 100% | 257 | 1.000 | 257 |
| Showerhead | 226 | 100% | 226 | 1.000 | 226 |
| Pipe Insulation | 91 | 100% | 91 | 1.000 | 91 |
| Kitchen Faucet Aerator | 90 | 100% | 90 | 1.000 | 90 |
| Door Sweep | 64 | 91% | 58 | 1.000 | 58 |
| Bathroom Faucet Aerator | 22 | 100% | 22 | 1.000 | 22 |
| Total | 1,670 | 100% | 1,665 | 1.000 | 1,665 |

Table 110 presents the ex ante, verified gross, and verified net electric demand savings achieved through the Community Kits channel in 2024.

Table 110. 2024 IQ Community Kits Channel Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 0.11 | 100% | 0.11 | 1.000 | 0.11 |
| Advanced Power Strip - Tier 1 | 0.03 | 100% | 0.03 | 1.000 | 0.03 |
| Showerhead | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Pipe Insulation | 0.01 | 100% | 0.01 | 1.000 | 0.01 |
| Kitchen Faucet Aerator | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Door Sweep | 0.01 | 50% | 0.004 | 1.000 | 0.004 |
| Bathroom Faucet Aerator | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Total | 0.22 | 98% | 0.21 | 1.000 | 0.21 |

Table 111 presents the ex ante, verified gross, and verified net gas savings achieved through the Community Kits channel in 2024.

Table 111. 2024 IQ Community Kits Channel Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Showerhead | 18,250 | 100% | 18,246 | 1.000 | 18,246 |
| Pipe Insulation | 8,078 | 100% | 8,078 | 1.000 | 8,078 |
| Kitchen Faucet Aerator | 7,014 | 100% | 7,011 | 1.000 | 7,011 |
| Door Sweep | 5,925 | 100% | 5,925 | 1.000 | 5,925 |
| Bathroom Faucet Aerator | 1,689 | 100% | 1,687 | 1.000 | 1,687 |
| Total | 40,955 | 100% | 40,947 | 1.000 | 40,947 |

We identified one discrepancy between ex ante claims and the verified analysis that had small impacts on overall kit savings, discussed below.

* Door Sweep (4% of kit ex ante energy savings, 4% of kit demand savings, and 14% of kit gas savings): The gross realization rate for Door Sweep was 91% for kWh, 50% for kW, and 100% for therms.
  + The evaluation team calculated cooling savings by applying both the air sealing adjustment factor (80%) and the ISR (62%) for self-install door sweeps in income qualified kits from the IL-TRM V12.0, whereas the implementation team did not apply either the air sealing adjustment factor or the ISR to cooling savings, resulting in lower verified energy and demand savings.

### Mobile Home Kits

#### Channel Description

The IQ Initiative’s MHAS channel provides energy-saving kits, as detailed in 3.2.7.

#### Participation Summary

In 2024, 330 mobile home kits were distributed through the MHAS channel. Table 112 summarizes the measures included in each kit.

Table 112. 2024 Mobile Home Kit Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Standard LED | 12 |
| Advanced Power Strip – Tier 1 | 1 |
| Showerhead | 1 |
| Kitchen Faucet Aerator | 1 |
| Thermostatic Restrictor Shower Valve | 1 |
| Bathroom Faucet Aerator | 1 |

#### Savings Detail

Table 113 presents the ex ante, verified gross, and verified net electric energy savings achieved through mobile home kits in 2024.

Table 113. 2024 Mobile Home Kits Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 152 | 100% | 152 | 1.000 | 152 |
| Advanced Power Strip - Tier 1 | 30 | 100% | 30 | 1.000 | 30 |
| Showerhead | 18 | 100% | 18 | 1.000 | 18 |
| Kitchen Faucet Aerator | 11 | 100% | 11 | 1.000 | 11 |
| Thermostatic Restrictor Shower Valve | 4 | 100% | 4 | 1.000 | 4 |
| Bathroom Faucet Aerator | 2 | 100% | 2 | 1.000 | 2 |
| Total | 216 | 100% | 216 | 1.000 | 216 |

Table 114 presents the ex ante, verified gross, and verified net electric demand savings achieved through mobile home kits in 2024.

Table 114. 2024 Mobile Home Kits Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 0.02 | 100% | 0.02 | 1.000 | 0.02 |
| Advanced Power Strip - Tier 1 | 0.003 | 100% | 0.003 | 1.000 | 0.003 |
| Showerhead | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Kitchen Faucet Aerator | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Thermostatic Restrictor Shower Valve | 0.0002 | 100% | 0.0002 | 1.000 | 0.0002 |
| Bathroom Faucet Aerator | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Total | 0.03 | 100% | 0.03 | 1.000 | 0.03 |

Table 115 presents the ex ante, verified gross, and verified net gas savings achieved through mobile home kits in 2024.

Table 115. 2024 Mobile Home Kits Gas Savings by Measure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| Showerhead | 1,447 | 100% | 1,447 | 1.000 | 1,447 |
| Kitchen Faucet Aerator | 879 | 100% | 879 | 1.000 | 879 |
| Thermostatic Restrictor Shower Valve | 291 | 100% | 291 | 1.000 | 291 |
| Bathroom Faucet Aerator | 181 | 100% | 181 | 1.000 | 181 |
| Total | 2,799 | 100% | 2,799 | 1.000 | 2,799 |

The evaluation team did not identify any discrepancies between ex ante and verified savings.

### BN Community Kits

#### Channel Description

Bloomington-Normal (BN) community kits were distributed through the IQ Initiative’s Joint Utility channel in partnership with Nicor Gas to customers in the Bloomington-Normal area, as detailed in Section 3.2.5.

#### Participation Summary

In 2024, 230 energy-saving kits were distributed through the Joint Utility channel. Table 116 summarizes the quantity of measures included in each of the kits.

Table 116. 2024 BN Community Kits Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Specialty LED | 1 |
| Smart Socket | 2 |
| Standard LED | 3 |
| Advanced Power Strip – Tier 1 | 1 |
| Connected LED | 1 |
| LED Desk Lamp | 1 |

#### Savings Detail

Table 117 presents the ex ante, verified gross, and verified net electric energy savings achieved through the BN community kits in 2024.

Table 117. 2024 BN Community Kits Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Specialty LED | 40 | 100% | 40 | 1.000 | 40 |
| Smart Socket | 19 | 100% | 19 | 1.000 | 19 |
| Standard LED | 17 | 100% | 17 | 1.000 | 17 |
| Advanced Power Strip – Tier 1 | 16 | 100% | 16 | 1.000 | 16 |
| Connected LED | 10 | 100% | 10 | 1.000 | 10 |
| LED Desk Lamp | 7 | 100% | 7 | 1.000 | 7 |
| Total | 110 | 100% | 110 | 1.000 | 110 |

Table 118 presents the ex ante, verified gross, and verified net electric demand savings achieved through the BN community kits in 2024.

Table 118. 2024 BN Community Kits Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Specialty LED | 0.004 | 100% | 0.004 | 1.000 | 0.004 |
| Smart Socket | 0.003 | 100% | 0.003 | 1.000 | 0.003 |
| Standard LED | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Advanced Power Strip – Tier 1 | 0.002 | 100% | 0.002 | 1.000 | 0.002 |
| Connected LED | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| LED Desk Lamp | 0.001 | 100% | 0.001 | 1.000 | 0.001 |
| Total | 0.01 | 100% | 0.01 | 1.000 | 0.01 |

The evaluation team did not identify any discrepancies between ex ante and verified savings.

### Food Bank Holiday Kit

#### Channel Description

AIC provided kits of energy-saving products at food banks via the IQ Initiative’s CAA channel in December 2024, as detailed in Section 3.2.4.

#### Participation Summary

In December 2024, 7,000 food bank holiday kits were distributed through the CAA channel. Table 119 summarizes the measures included in each kit.

Table 119. 2024 Food Bank Holiday Kits Contents

| Measure Category | Per-Kit Quantity |
| --- | --- |
| Standard LED | 4 |
| Smart Socket | 2 |

#### Savings Detail

Table 120 presents the ex ante, verified gross, and verified net electric energy savings achieved through food bank holiday kits in 2024.

Table 120. 2024 Food Bank Holiday Kits Electric Energy Savings by Measure

| Measure Category | Ex Ante Gross Savings (MWh) | Gross Realization Rate | Verified Gross Savings (MWh) | NTGR | Verified Net Savings (MWh) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 1,135 | 100% | 1,135 | 1.000 | 1,135 |
| Smart Socket | 656 | 100% | 656 | 1.000 | 656 |
| Total | 1,792 | 100% | 1,792 | 1.000 | 1,792 |

Table 121 presents the ex ante, verified gross, and verified net electric demand savings achieved through food bank holiday kits in 2024.

Table 121. 2024 Food Bank Holiday Kits Electric Demand Savings by Measure

| Measure Category | Ex Ante Gross Savings (MW) | Gross Realization Rate | Verified Gross Savings (MW) | NTGR | Verified Net Savings (MW) |
| --- | --- | --- | --- | --- | --- |
| Standard LED | 0.14 | 100% | 0.14 | 1.000 | 0.138 |
| Smart Socket | 0.09 | 100% | 0.09 | 1.000 | 0.091 |
| Total | 0.23 | 100% | 0.23 | 1.000 | 0.23 |

The evaluation team did not identify any discrepancies between ex ante and verified savings.

### Cumulative Persisting Annual Savings

Table 122 summarizes CPAS and WAML for the 2024 Kits Initiatives by channel or kit. The WAML for the Initiative is 9.3 years. CPAS and WAML for each channel or kit at a measure level are presented in Table 123 through Table 129 below.

Table 122. 2024 Kits Initiatives CPAS and WAML

| Channel/Kits | WAML | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | 2025 | 2026 | 2027 | … | 2030 | … |
| Full School Kits | 9.5 | 7,827 | 1.000 | 7,827 | 7,827 | 6,962 | 6,962 | … | 6,962 | … | 74,254 |
| Joint Utility School Kits | 9.6 | 1,028 | 1.000 | 1,028 | 1,028 | 929 | 929 | … | 929 | … | 9,825 |
| High School Innovation Kits | 10.9 | 1,152 | 1.000 | 1,152 | 1,152 | 1,152 | 1,152 | … | 1,152 | … | 12,535 |
| IQ Community Kits | 9.1 | 1,665 | 1.000 | 1,665 | 1,665 | 1,665 | 1,665 | … | 1,665 | … | 15,073 |
| Mobile Homes Kits | 8.2 | 216 | 1.000 | 216 | 216 | 216 | 216 | … | 216 | … | 1,769 |
| BN Community Kits | 7.9 | 110 | 1.000 | 110 | 110 | 110 | 110 | … | 110 | … | 843 |
| Food Bank Holiday Kits | 7.6 | 1,792 | 1.000 | 1,792 | 1,792 | 1,792 | 1,792 | … | 1,792 | … | 13,677 |
| 2024 CPAS | | 13,789 | 1.000 | 13,789 | 13,789 | 12,825 | 12,825 | … | 12,825 | … | 127,975 |
| Expiring 2024 CPAS | | | | 0 | 0 | 964 | 0 | … | 0 | … |  |
| Expired 2024 CPAS | | | | 0 | 0 | 964 | 964 | … | 964 | … |  |
| WAML | 9.3 |  |  |  |  |  |  |  |  |  |  |

Table 123. 2024 Kits Initiatives – Full School Kits Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Specialty LED | 8.0 | 1,937 | 1.000 | 1,937 | | 1,937 | 1,937 | | 1,937 | | … | 1,937 | … | 15,493 |
| Showerhead | 10.0 | 1,958 | 1.000 | 1,958 | | 1,958 | 1,958 | | 1,958 | | … | 1,958 | … | 19,579 |
| Kitchen Faucet Aerator | 10.0 | 1,412 | 1.000 | 1,412 | | 1,412 | 1,412 | | 1,412 | | … | 1,412 | … | 14,123 |
| Shower Timer | 2.0 | 865 | 1.000 | 865 | | 865 | 0 | | 0 | | … | 0 | … | 1,730 |
| Advanced Power Strip - Tier 1 | 7.0 | 505 | 1.000 | 505 | | 505 | 505 | | 505 | | … | 505 | … | 3,536 |
| Pipe Insulation | 15.0 | 265 | 1.000 | 265 | | 265 | 265 | | 265 | | … | 265 | … | 3,981 |
| Door Sweep | 20.0 | 333 | 1.000 | 333 | | 333 | 333 | | 333 | | … | 333 | … | 6,650 |
| Weatherstripping | 20.0 | 364 | 1.000 | 364 | | 364 | 364 | | 364 | | … | 364 | … | 7,286 |
| Bathroom Faucet Aerator | 10.0 | 173 | 1.000 | 173 | | 173 | 173 | | 173 | | … | 173 | … | 1,726 |
| Connected LED | 10.0 | 15 | 1.000 | 15 | | 15 | 15 | | 15 | | … | 15 | … | 150 |
| 2024 CPAS |  | 7,827 | 1.000 | 7,827 | | 7,827 | 6,962 | | 6,962 | | … | 6,962 | … | 74,254 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 865 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 865 | | 865 | | … | 865 | … |  |
| WAML | 9.5 |  |  |  |  | | |  | |  |  |  |  |  |

Table 124. 2024 Kits Initiatives – Joint Utility School Kits Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Specialty LED | 8.0 | 306 | 1.000 | 306 | | 306 | 306 | | 306 | | … | 306 | … | 2,446 |
| Showerhead | 10.0 | 225 | 1.000 | 225 | | 225 | 225 | | 225 | | … | 225 | … | 2,248 |
| Advanced Power Strip - Tier 1 | 7.0 | 82 | 1.000 | 82 | | 82 | 82 | | 82 | | … | 82 | … | 575 |
| Kitchen Faucet Aerator | 10.0 | 163 | 1.000 | 163 | | 163 | 163 | | 163 | | … | 163 | … | 1,630 |
| Shower Timer | 2.0 | 99 | 1.000 | 99 | | 99 | 0 | | 0 | | … | 0 | … | 199 |
| Weatherstripping | 20.0 | 41 | 1.000 | 41 | | 41 | 41 | | 41 | | … | 41 | … | 827 |
| Door Sweep | 20.0 | 38 | 1.000 | 38 | | 38 | 38 | | 38 | | … | 38 | … | 762 |
| Pipe Insulation | 15.0 | 29 | 1.000 | 29 | | 29 | 29 | | 29 | | … | 29 | … | 433 |
| Outlet Gaskets | 20.0 | 25 | 1.000 | 25 | | 25 | 25 | | 25 | | … | 25 | … | 507 |
| Bathroom Faucet Aerator | 10.0 | 20 | 1.000 | 20 | | 20 | 20 | | 20 | | … | 20 | … | 199 |
| 2024 CPAS |  | 1,028 | 1.000 | 1,028 | | 1,028 | 929 | | 929 | | … | 929 | … | 9,825 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 99 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 99 | | 99 | | … | 99 | … |  |
| WAML | 9.6 |  |  |  |  | | |  | |  |  |  |  |  |

Table 125. 2024 Kits Initiatives – High School Innovation Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Specialty LED | 8.0 | 384 | 1.000 | 384 | | 384 | 384 | | 384 | | … | 384 | … | 3,074 |
| Showerhead | 10.0 | 420 | 1.000 | 420 | | 420 | 420 | | 420 | | … | 420 | … | 4,196 |
| LED Desk Lamp | 8.0 | 81 | 1.000 | 81 | | 81 | 81 | | 81 | | … | 81 | … | 646 |
| Pipe Insulation | 15.0 | 73 | 1.000 | 73 | | 73 | 73 | | 73 | | … | 73 | … | 1,102 |
| Weatherstripping | 20.0 | 100 | 1.000 | 100 | | 100 | 100 | | 100 | | … | 100 | … | 2,009 |
| Outlet Gaskets | 20.0 | 57 | 1.000 | 57 | | 57 | 57 | | 57 | | … | 57 | … | 1,147 |
| Bathroom Faucet Aerator | 10.0 | 36 | 1.000 | 36 | | 36 | 36 | | 36 | | … | 36 | … | 361 |
| 2024 CPAS |  | 1,152 | 1.000 | 1,152 | | 1,152 | 1,152 | | 1,152 | | … | 1,152 | … | 12,535 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 10.9 |  |  |  |  | | |  | |  |  |  |  |  |

Table 126. 2024 Kits Initiatives – IQ Community Kits Channel CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Standard LED | 8.0 | 920 | 1.000 | 920 | | 920 | 920 | | 920 | | … | 920 | … | 7,359 |
| Advanced Power Strip - Tier 1 | 7.0 | 257 | 1.000 | 257 | | 257 | 257 | | 257 | | … | 257 | … | 1,802 |
| Showerhead | 10.0 | 226 | 1.000 | 226 | | 226 | 226 | | 226 | | … | 226 | … | 2,262 |
| Pipe Insulation | 15.0 | 91 | 1.000 | 91 | | 91 | 91 | | 91 | | … | 91 | … | 1,371 |
| Kitchen Faucet Aerator | 10.0 | 90 | 1.000 | 90 | | 90 | 90 | | 90 | | … | 90 | … | 898 |
| Door Sweep | 20.0 | 58 | 1.000 | 58 | | 58 | 58 | | 58 | | … | 58 | … | 1,160 |
| Bathroom Faucet Aerator | 10.0 | 22 | 1.000 | 22 | | 22 | 22 | | 22 | | … | 22 | … | 220 |
| 2024 CPAS |  | 1,665 | 1.000 | 1,665 | | 1,665 | 1,665 | | 1,665 | | … | 1,665 | … | 15,073 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 9.1 |  |  |  |  | | |  | |  |  |  |  |  |

Table 127. 2024 Kits Initiatives – Mobile Home Kits CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Standard LED | 8.0 | 152 | 1.000 | 152 | | 152 | 152 | | 152 | | … | 152 | … | 1,212 |
| Advanced Power Strip - Tier 1 | 7.0 | 30 | 1.000 | 30 | | 30 | 30 | | 30 | | … | 30 | … | 211 |
| Showerhead | 10.0 | 18 | 1.000 | 18 | | 18 | 18 | | 18 | | … | 18 | … | 176 |
| Kitchen Faucet Aerator | 10.0 | 11 | 1.000 | 11 | | 11 | 11 | | 11 | | … | 11 | … | 111 |
| Thermostatic Restrictor Shower Valve | 10.0 | 4 | 1.000 | 4 | | 4 | 4 | | 4 | | … | 4 | … | 36 |
| Bathroom Faucet Aerator | 10.0 | 2 | 1.000 | 2 | | 2 | 2 | | 2 | | … | 2 | … | 23 |
| 2024 CPAS |  | 216 | 1.000 | 216 | | 216 | 216 | | 216 | | … | 216 | … | 1,769 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 8.2 |  |  |  |  | | |  | |  |  |  |  |  |

Table 128. 2024 Kits Initiatives – BN Community Kits CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Specialty LED | 8.0 | 40 | 1.000 | 40 | | 40 | 40 | | 40 | | … | 40 | … | 319 |
| Smart Socket | 7.0 | 19 | 1.000 | 19 | | 19 | 19 | | 19 | | … | 19 | … | 133 |
| Standard LED | 8.0 | 17 | 1.000 | 17 | | 17 | 17 | | 17 | | … | 17 | … | 120 |
| Advanced Power Strip - Tier 1 | 7.0 | 16 | 1.000 | 16 | | 16 | 16 | | 16 | | … | 16 | … | 114 |
| Connected LED | 10.0 | 10 | 1.000 | 10 | | 10 | 10 | | 10 | | … | 10 | … | 98 |
| LED Desk Lamp | 8.0 | 7 | 1.000 | 7 | | 7 | 7 | | 7 | | … | 7 | … | 59 |
| 2024 CPAS |  | 110 | 1.000 | 110 | | 110 | 110 | | 110 | | … | 110 | … | 843 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 7.9 |  |  |  |  | | |  | |  |  |  |  |  |

Table 129. 2024 Kits Initiatives – Food Bank Holiday Kits CPAS and WAML

| Measure | Measure Life | Annual Verified Gross Savings (MWh) | NTGR | CPAS – Verified Net Savings (MWh) | | | | | | | | | | Lifetime Savings (MWh) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2024 | | 2025 | 2026 | | 2027 | | … | 2030 | … |
| Standard LED | 8.0 | 1,135 | 1.000 | 1,135 | | 1,135 | 1,135 | | 1,135 | | … | 1,135 | … | 9,082 |
| Smart Socket | 7.0 | 656 | 1.000 | 656 | | 656 | 656 | | 656 | | … | 656 | … | 4,594 |
| 2024 CPAS |  | 1,792 | 1.000 | 1,792 | | 1,792 | 1,792 | | 1,792 | | … | 1,792 | … | 13,677 |
| Expiring 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| Expired 2024 CPAS |  |  |  | 0 | | 0 | 0 | | 0 | | … | 0 | … |  |
| WAML | 7.6 |  |  |  |  | | |  | |  |  |  |  |  |

### Conclusions and Recommendations

Based on the results of this evaluation, the evaluation team offers the following key findings and recommendations for the Kits Initiatives moving forward.

#### Cross-Cutting

* **Key Finding 1:** For Full School Kits, Joint Utility School Kits, and High School Innovation Kits, the evaluation team relied on self-reported responses from participating students’ 2024 Home Energy Worksheets, whereas the implementation team applied a combination of self-reported responses from the 2023 Home Energy Worksheets, 2013 Market Potential Study, and IL-TRM V12.0.
  + Recommendation: As data availability allows, update savings assumptions to align with the most recent self-reported values as shown in Table 101, Table 102, and Table 107.
* **Key Finding 2:** For Full School Kits, High School Innovation Kits, and IQ Community Kits, the implementation team did not apply the air sealing adjustment factor to cooling savings for prescriptive air sealing measures (door sweeps, weatherstripping, and outlet gaskets) per the IL-TRM V12.0.
  + Recommendation: Apply the air sealing adjustment factor of 80% from the IL-TRM V12.0 to cooling savings calculations for prescriptive air sealing measures.

#### Full School Kits

* **Key Finding 1:** The evaluation team was unable to replicate ex ante savings for the additional 400 connected LEDs distributed through the seven “Community in Action” fundraising events, and therefore, unable to identify differences between ex ante claims and verified savings. These measures have limited implications for total savings, accounting for <0.5% of ex ante kit energy and demand kit savings; however, if single distribution measures continue in future program years, detailed savings calculations will be needed.
  + Recommendation: Provide detailed savings calculations for single distribution measures in the TRM calculations workbook.

#### Joint Utility School Kits

* **Key Finding 1:** The implementation team included both heating and cooling energy savings in demand savings calculations for prescriptive air sealing measures.
  + Recommendation: Update demand savings formulas for prescriptive air sealing measures to rely on cooling energy savings only.

#### Food Bank Holiday Kits

* **Key Finding 1:** For Food Bank Holiday Kits, the nature of their distribution prevented the implementation team or community partners from collecting backup documentation (i.e., participant information) associated with 7,000 kits distributed at food banks. As such, it is unclear what portion of recipients were truly AIC customers.
  + Recommendation: If AIC plans to continue with similar offerings in the future, the evaluation team recommends conducting research and engaging with the TRM working group in 2025 to establish an applicable leakage assumption to appropriately account for the proportion provided to non-AIC customers.

1. Impact Analysis Methodology

Retail Products Initiative

Gross Impact Methodology

The evaluation team calculated verified savings for the Retail Products Initiative by applying savings algorithms from the IL-TRM V12.0 to known information from initiative tracking data. We leveraged the wide range of measure specifications and participant information (e.g., LED wattage, bulb type, heating and cooling equipment type) from tracking data to inform savings assumptions. For parameters not informed by information from tracking data, the evaluation team relied on default recommendations from the IL-TRM V12.0. Table 130 lists the measures in the Retail Products Initiative, their corresponding IL-TRM entry, and whether or not TRM errata applied to the measure in the 2024 evaluation.

Table 130. 2024 Retail Products Initiative Measures Evaluated

| IL-TRM Measure Name | IL-TRM Measure | Errata Applied? |
| --- | --- | --- |
| ENERGY STAR Air Purifier/Cleaner | 5.1.1 | No errata present |
| ENERGY STAR Clothes Washers | 5.1.2 | No errata present |
| ENERGY STAR Dehumidifier | 5.1.3 | No errata present |
| ENERGY STAR Freezer | 5.1.5 | No errata present |
| ENERGY STAR and CEE Tier 2 Refrigerator | 5.1.6 | No errata present |
| ENERGY STAR Room Air Conditioner | 5.1.7 | Yes |
| ENERGY STAR Clothes Dryer | 5.1.10 | Errata not applicable/relevant |
| ENERGY STAR Water Coolers | 5.1.11 | No errata present |
| Advanced Power Strip – Tier 1 | 5.2.1 | No errata present |
| Smart Sockets | 5.2.4 | No errata present |
| Advanced Thermostats | 5.3.16 | No errata present |
| High Efficiency Bathroom Exhaust Fan | 5.3.9 | No errata present |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Errata not applicable/relevant |
| Gas Water Heater | 5.4.2 | No errata present |
| Heat Pump Water Heaters | 5.4.3 | No errata present |
| Low Flow Faucet Aerators | 5.4.4 | Errata not applicable/relevant |
| Low Flow Showerheads | 5.4.5 | Errata not applicable/relevant |
| LED Specialty Lamps | 5.5.6 & 4.5.4 | No errata present |
| LED Screw Based Omnidirectional Bulbs | 5.5.8 & 4.5.4 | No errata present |
| LED Fixtures | 5.5.9 & 4.5.4 | No errata present |
| LED Nightlights | 5.5.11 | No errata present |
| Connected LED Lamps | 5.5.12 & 5.5.6/5.5.8 | No errata present |
| EISA Exempt LED Lighting | 5.5.13 | No errata present |
| Air Sealing | 5.6.1 | No errata present |
| High Efficiency Pool Pumps | 5.7.1 | No errata present |

Measure Lives and Cumulative Persisting Annual Savings

The evaluation team calculated CPAS by applying measure lives, baseline shifts, and mid-life adjustments from the IL-TRM V12.0.

Net Impact Methodology

The evaluation team applied SAG-approved NTGRs to verified gross savings to calculate verified net savings. NTGRs vary depending on whether sales are assumed to reach market rate or IQ customers. Because the Retail Products Initiative does not verify customer income, we estimate the IQ allocation using a consistent methodology and apply NTGRs accordingly.

* For POS channel LED lighting, IQ allocations are deemed 100% by the IL-TRM V12.0 for retail stores included on the SAG-approved IQ Store List of store locations nearest to a community with a zip code where at least 65% of family households have an income equal to or less than 299% of the FPL for their household size.
* For POS channel non-lighting, IQ allocations are based on United States Census Bureau American Community Survey (ACS) data for all census tracts within a 10-mile radius of each store location. Each participating store location has an assigned percentage representing its expected incidence of IQ customers and, by extension, the expected portion of sales going to IQ customers. This approach does not apply to sales from thrift stores, for which IQ allocation is deemed at 100% in the absence of adequate research, but with the understanding that these types of retailers tend to attract a higher proportion of IQ customers than other retail channels.
* For Downstream Rebate and Online Marketplace offerings, tracking data included customer addresses from rebate applications, allowing for assignment of IQ allocations based on individual participant ZIP codes. These IQ allocations use household-level ACS data to calculate the incidence of IQ customers in each ZIP code in AIC’s service territory. The evaluation team used these ZIP code-based IQ allocations to estimate the portion of purchases made by IQ participants based on the incidence of IQ customers in that ZIP code.

Table 131 outlines the SAG-approved NTGR values applied to verified gross savings to calculate verified net savings.

Table 131. 2024 SAG-Approved Retail Products Initiative NTGRs

|  |  |  |
| --- | --- | --- |
| Measure Category | IQ NTGR | Market Rate NTGR |
| Advanced Thermostat (Cooling) | 1.000 | 0.800 |
| Advanced Thermostat (Heating) | 1.000 | 0.900 |
| Air Purifiers | 1.000 | 0.790 |
| Bathroom Vent Fans | 1.000 | 0.660 |
| Clothes Washers | 1.000 | 0.630 |
| Dehumidifiers | 1.000 | 0.670 |
| ENERGY STAR Clothes Dryer | 1.000 | 0.670 |
| ENERGY STAR Dishwasher | 1.000 | 0.800 |
| ENERGY STAR Room AC | 1.000 | 0.720 |
| Faucet Aerator | 1.000 | 0.800 |
| Freezers | 1.000 | 0.630 |
| Heat Pump Clothes Dryer | 1.000 | 0.800 |
| Heat Pump Water Heater | 1.000 | 0.800 |
| LED Lightinga | 1.000 | 0.690 |
| Pipe Insulation | 1.000 | 0.800 |
| Pool Pumps | 1.000 | 0.760 |
| Refrigerators | 1.000 | 0.650 |
| Showerhead | 1.000 | 0.800 |
| Showerhead Kits | 1.000 | 0.800 |
| Smart Sockets | 1.000 | 0.800 |
| Tier 1 Advanced Power Strips | 1.000 | 0.860 |
| Wall Plate Gasket | 1.000 | 0.800 |
| Water Dispensers | 1.000 | 0.670 |
| Weatherstripping | 1.000 | 0.800 |

a For LED lighting, the market rate NTGR is applied for all sales occurring at Big Box, DIY, or Warehouse retailers, regardless of IQ designation.

Income Qualified Initiative – Single Family Offerings

Gross Impact Methodology

The evaluation team calculated verified savings for the IQ Initiative Single Family Offerings by applying savings algorithms from the IL-TRM V12.0. The team leveraged initiative tracking data such as primary heating and cooling type, the delivery mechanism (e.g., DI, leave-behind), LED wattage, LED lamp type, project location (e.g., for weather-dependent variables), and installed measure location (e.g., for faucet aerators) to inform savings assumptions. For variables outside these parameters, the evaluation team typically relied on defaults from the IL-TRM V12.0. Table 132 lists the measures in the IQ Initiative Single Family Offerings, their corresponding IL-TRM entry, and whether TRM errata were applied to the measure in the 2024 evaluation.

Table 132. 2024 Income Qualified Initiative – Single Family Offerings Measures Evaluated

| IL-TRM Measure Name | IL-TRM Measure | Errata Applied? |
| --- | --- | --- |
| Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP) | 4.4.13 | No errata present |
| ENERGY STAR Air Purifier/Cleaner | 5.1.1 | No errata present |
| ENERGY STAR Clothes Dryer | 5.1.10 | No errata present |
| Income Qualified: ENERGY STAR and CEE Tier 2 Room Air Conditioner | 5.1.13 | Yes |
| Residential Induction Cooktop | 5.1.14 | No errata present |
| Advanced Power Strip - Tier 1 | 5.2.1 | No errata present |
| Smart Sockets | 5.2.4 | No errata present |
| Air Source Heat Pump (Centrally Ducted and Ductless) | 5.3.1 | No errata present |
| Central Air Conditioning | 5.3.3 | No errata present |
| Duct Insulation and Sealing | 5.3.4 | No errata present |
| Furnace Blower Motor | 5.3.5 | No errata present |
| Gas High Efficiency Boiler | 5.3.6 | No errata present |
| Gas High Efficiency Furnace | 5.3.7 | No errata present |
| High Efficiency Bathroom Exhaust Fan | 5.3.9 | No errata present |
| Advanced Thermostats | 5.3.16 | No errata present |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Errata not applicable/relevant |
| Gas Water Heater | 5.4.2 | No errata present |
| Heat Pump Water Heaters | 5.4.3 | No errata present |
| Low Flow Faucet Aerators | 5.4.4 | Errata not applicable/relevant |
| Low Flow Showerheads | 5.4.5 | Errata not applicable/relevant |
| LED Specialty Lamps | 5.5.6 | No errata present |
| LED Screw Based Omnidirectional Bulbs | 5.5.8 | No errata present |
| LED Fixtures | 5.5.9 | No errata present |
| Connected LEDs | 5.5.11 | No errata present |
| Air Sealing | 5.6.1 | No errata present |
| Basement Sidewall Insulation | 5.6.2 | No errata present |
| Floor Insulation Above Crawlspace | 5.6.3 | No errata present |
| Wall Insulation | 5.6.4 | No errata present |
| Ceiling/Attic Insulation | 5.6.5 | No errata present |
| Rim/Band Joist Insulation | 5.6.6 | No errata present |
| Tree Planting | 5.7.5 | No errata present |

(B-27) Electrification

As detailed in Section 3.2.9, AIC claimed savings for a limited number of electrification measures in 2024. These savings were calculated in accordance with the IL-TRM V12.0, Illinois statute (specifically 220 ILCS 5/8-103B subsection b-27) and the Policy Manual (Sections 11.3, 12.1, and 12.3). The savings presented in the body of this report are those AIC will claim against its goals. Actual energy impacts from electrification measures for use in cost-effectiveness testing are presented in Appendix B. Additional detail around electrification savings calculations, including average “at-the-meter” fossil fuel savings and electric consumption increases, are detailed in Appendix G.

Measure Lives and Cumulative Persisting Annual Savings

The evaluation team calculated CPAS by applying measure lives, baseline shifts, and mid-life adjustments from the IL-TRM V12.0.

Net Impact Methodology

The evaluation team applied SAG-approved 2024 NTGRs of 1.000 to verified gross savings to calculate verified net savings for IQ-targeted offerings.

The one exception is the Smart Savers channel. In 1% of cases, advanced thermostats were provided to ZIP codes we could not verify as IQ. The evaluation team treated these cases as market rate, applying NTGRs of 0.800 for cooling and 0.900 for cooling. The resulting overall NTGR for the Smart Savers channel was 0.998 for electric energy, 0.997 for demand, and 0.999 for gas.

Multifamily Initiatives

Gross Impact Methodology

The evaluation team calculated verified savings for the Multifamily Initiatives by applying savings algorithms from the IL-TRM V12.0. The team leveraged initiative tracking data such as primary heating and cooling type, the delivery mechanism (e.g., DI, leave-behind), LED wattage, LED lamp type, project location (e.g., for weather-dependent variables), clean air density rate (e.g., for air purifiers), and installed measure location (e.g., for faucet aerators) to inform savings assumptions. For variables outside these parameters, the evaluation team typically relied on defaults from the IL-TRM V12.0. Table 133 lists the measures in the Multifamily Initiatives, their corresponding IL-TRM entry, and whether TRM errata applied to the measure in the 2024 evaluation.

Table 133. 2024 Multifamily Initiative Measures Evaluated

|  |  |  |  |
| --- | --- | --- | --- |
| Channel | IL-TRM Measure Name | IL-TRM Measure | Errata Applied? |
| IQ Multifamily | LED Bulbs and Fixtures | 4.5.4 | No |
| ENERGY STAR Air Purifier/Cleaner | 5.1.1 | No |
| Advanced Power Strip - Tier 1 | 5.2.1 | No |
| Air Source Heat Pump (Centrally Ducted and Ductless) | 5.3.1 | No |
| Advanced Thermostats | 5.3.16 | No |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Yes |
| Low Flow Faucet Aerators | 5.4.4 | Yes |
| Low Flow Showerheads | 5.4.5 | Yes |
| Thermostatic Restrictor Shower Valve | 5.4.8 | Yes |
| LED Specialty Lamps | 5.5.6 | No |
| LED Screw Based Omnidirectional Bulbs | 5.5.8 | No |
| Air Sealing | 5.6.1 | No |
| Ceiling/Attic Insulation | 5.6.5 | No |
| Low-E Storm Window | 5.6.7 | No |
| MR Multifamily | Advanced Power Strip - Tier 1 | 5.2.1 | No |
| Air Source Heat Pump (Centrally Ducted and Ductless) | 5.3.1 | No |
| Advanced Thermostats | 5.3.16 | No |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Yes |
| Low Flow Faucet Aerators | 5.4.4 | Yes |
| Low Flow Showerheads | 5.4.5 | Yes |
| Thermostatic Restrictor Shower Valve | 5.4.8 | Yes |
| Air Sealing | 5.6.1 | No |
| Public Housing | LED Bulbs and Fixtures | 4.5.4 | No |
| Advanced Power Strip - Tier 1 | 5.2.1 | No |
| Air Source Heat Pump (Centrally Ducted and Ductless) | 5.3.1 | No |
| Advanced Thermostats | 5.3.16 | No |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Yes |
| Low Flow Faucet Aerators | 5.4.4 | Yes |
| Low Flow Showerheads | 5.4.5 | Yes |
| Thermostatic Restrictor Shower Valve | 5.4.8 | Yes |
| LED Specialty Lamps | 5.5.6 | No |
| LED Screw Based Omnidirectional Bulbs | 5.5.8 | No |
| Air Sealing | 5.6.1 | No |
| Ceiling/Attic Insulation | 5.6.5 | No |
| Low-E Storm Window | 5.6.7 | No |

Measure Lives and Cumulative Persisting Annual Savings

The evaluation team applied measure lives, baseline shifts, and mid-life adjustments from the IL-TRM V12.0 to calculate CPAS.

Net Impact Methodology

The evaluation team applied SAG-approved 2024 NTGRs to the verified gross savings to calculate verified net savings. Table 134 outlines the SAG-approved NTGR values applied to verified gross savings to calculate verified net savings.

Table 134. 2024 SAG-Approved Multifamily Initiatives NTGRs

|  |  |  |  |
| --- | --- | --- | --- |
| Channel | Measure Category | Electric NTGR | Gas NTGR |
| IQ Multifamily | All Measures | 1.000 | 1.000 |
| Public Housing | All Measures | 1.000 | 1.000 |
| MR Multifamily | Advanced Power Strip - Tier 1 | 0.980 | N/A |
| Air Source Heat Pump | 0.800 | 0.800 |
| Advanced Thermostat | 1.000 | 1.000 |
| Pipe Insulation | 0.794 | 1.000 |
| Bathroom Faucet Aerator | 1.004 | 1.000 |
| Kitchen Faucet Aerator | 1.004 | 1.000 |
| Showerhead | 1.004 | 1.000 |
| Restrictor Shower Valve | 0.800 | 0.800 |
| Wall Plate Gasket | 0.861 | 1.000 |
| Door Sweep | 0.861 | 1.000 |

Market Rate Single Family Initiative

Gross Impact Methodology

The evaluation team calculated verified savings for the Market Rate Single Family Initiative by applying savings algorithms from the IL-TRM V12.0. The team leveraged initiative tracking data such as primary heating and cooling type, new and existing heating and cooling efficiencies and capacities, project location (for weather-dependent variables), and water heater tank volumes. For variables outside these parameters, the evaluation team typically relied on defaults from the IL-TRM V12.0. Table 135 lists the measures in the Market Rate Single Family Initiative, their corresponding IL-TRM entry, and whether TRM errata were applied to the measure in the 2024 evaluation.

Table 135. 2024 Market Rate Single Family Initiative Measures Evaluated

|  |  |  |  |
| --- | --- | --- | --- |
| Channel | IL-TRM Measure Name | IL-TRM Measure | Errata Applied? |
| Midstream HVAC | Ductless Heat Pumps | 5.3.1 | No |
| Centrally Ducted Air Source Heat Pump | 5.3.1 | No |
| Central Air Conditioning | 5.3.3 | No |
| Heat Pump Water Heaters | 5.4.3 | No |
| Advanced Thermostats | 5.3.16 | No |
| Gas High Efficiency Furnace | 5.3.7 | No |
| Home Efficiency | Duct Sealing | 5.3.4 | No |
| High Efficiency Bathroom Exhaust Fan | 5.3.9 | No |
| Air Sealing | 5.6.1 | No |
| Basement Sidewall Insulation | 5.6.2 | No |
| Wall Insulation | 5.6.4 | No |
| Ceiling/Attic Insulation | 5.6.5 | No |
| Rim/ Band Joist Insulation | 5.6.6 | No |

Measure Lives and Cumulative Persisting Annual Savings

The evaluation team applied measure lives, baseline shifts, and mid-life adjustments from the IL-TRM V12.0 to calculate CPAS.

Net Impact Methodology

The evaluation team applied SAG-approved 2024 NTGRs to the verified gross savings to calculate verified net savings. Table 136 outlines the SAG-approved NTGR values applied to verified gross savings to calculate verified net savings.

Table 136. 2024 SAG-Approved Market Rate Single Family Initiative NTGRs

|  |  |  |  |
| --- | --- | --- | --- |
| Channel | Measure Category | Electric NTGR | Gas NTGR |
| Midstream HVAC | Air Conditioners and Heat Pumps | 0.700 | N/A |
| Heat Pump Water Heaters | 0.700 | N/A |
| Advanced Thermostats - Cooling | 0.700 | N/A |
| Advanced Thermostats - Heating | 0.850 | 0.850 |
| High Efficiency Gas Furnace | N/A | 0.800 |
| Home Efficiency | Air Sealing (when insulation is also installed) | 0.900 | 0.900 |
| Air Sealing (when insulation is not also installed) | 0.800 | 0.800 |
| Attic Insulation | 0.800 | 0.800 |
| Bathroom Exhaust Fan | 0.800 | 0.800 |
| Wall Insulation | 0.800 | 0.800 |
| Crawlspace Insulation | 0.800 | 0.800 |
| Rim Joist Insulation | 0.800 | 0.800 |
| Duct Sealing | 0.800 | 0.800 |

Midstream HVAC Channel Market Effects

Opinion Dynamics developed market effects savings estimates for 2024 based on supplemental distributor sales data provided by the implementation team and primary research with distributors and contractors, as outlined in a July 2024 presentation to the Illinois SAG.[[32]](#footnote-32) This methodology combines total non-incentivized channel-eligible equipment sales with two key multiplicative factors (i.e., the In-Region Factor and the Attribution Factor) to estimate the portion of non-incentivized energy-efficient sales attributable to the channel. Details on the development of the In-Region Factor and Attribution Factor are provided in a December 2024 memorandum delivered to the Illinois SAG.[[33]](#footnote-33)

Distributor Sales Data Review

The implementation team requested quarterly extracts of distributor sales data using throughout 2024, asking distributors to report total sales of HVAC systems, heat pump water heaters, and advanced thermostats occurring in Illinois (i.e., inclusive of non-incentivized sales) with the necessary information to determine equipment eligibility for market effects analysis. The template used by the implementation team aims to standardize the necessary fields for identifying channel-eligible sales based on timing, location, and efficiency level (i.e., date of sale, distributor branch location, and equipment model including efficiency specification).

The evaluation team conducted a comprehensive review of 2024 distributor sales data provided by the implementation team to identify non-incentivized channel-qualifying sales (i.e., total sales by distributor and measure category that occurred in or adjacent to AIC service territory and met channel efficiency thresholds):

* We reviewed records of total sales by distributor and measure category, excluding 52 records (37% of total) for which a distributor’s total sales of a given measure category did not align with incentivized sales from tracking data. These included instances of zero or near-zero total sales, cases where total sales were reportedly inclusive of the full year but did not exceed incentivized sales, and cases where the given distributor did not appear in 2024 tracking data.
* Among the remaining records, we reviewed available location information and conducted manual lookups to populate missing branch locations for sales records from 16 of 32 distributors. We ultimately excluded sales of 33,985 units (66% of remaining total) where sales occurred outside of the geographically eligible area or we were unable to confirm sales were limited to areas in or adjacent to AIC’s service territory.
* We then reviewed model-specific product efficiency information included in distributor sales data to determine whether equipment met the minimum efficiency thresholds for the Midstream HVAC channel. Based on this review, we determined that efficiency information was well-populated and excluded 11,374 units (64% of remaining total) that did not meet the efficiency thresholds.
* The evaluation team then subtracted total incentivized sales reflected in Midstream HVAC channel tracking data from the total channel-eligible sales established via supplemental distributor sales data to estimate the number of non-incentivized channel-eligible sales for each equipment type.
  + For 15 records (11% of total), the total sales by distributor and measure category only accounted for a portion of the 2024 calendar year and did not exceed corresponding incentivized sales reflected in tracking data. In these cases, we only subtracted incentivized sales associated with the portion of the year for which total sales were provided.

Application of In-Region Factor and Attribution Factor

The In-Region Factor reflects the share of non-incentivized channel-eligible sales installed in AIC service territory based on contractor research conducted in 2023 and 2024 that asked contractors to estimate what percentage of their total HVAC, thermostat, and water heater projects in Illinois in the past year were for customers in AIC service territory. The evaluation team averaged respondent-level input to calculate the In-Region Factor.

The Attribution Factor accounts for the share of non-incentivized channel-eligible sales that can be attributed to Midstream HVAC channel interventions. Contractor research conducted in 2023 and 2024 asked contractors who made sales of high-efficiency equipment not incentivized by the Midstream HVAC channel how influential their experience with the channel (including related materials, marketing, and training) was in helping them persuade customers to install high-efficiency equipment without the incentive. The evaluation averaged respondent-level input from 2023 and 2024 research to calculate the Attribution Factor.

The evaluation team developed In-Region and Attribution Factors as the average of respondent-level contractor research conducted in 2023 and 2024. We estimated an In-Region Factor of 0.675 and an Attribution Factor of 0.357, as shown in Table 137.

Table 137. 2024 Midstream HVAC Channel Market Effects In-Region And Attribution Factors

|  |  |
| --- | --- |
| Factor | Value |
| In-Region Factor (n=18) | 0.675 |
| Attribution Factor (n=7) | 0.357 |

The evaluation team estimated total *market effects units* for each equipment type by multiplying non-incentivized channel-eligible sales from distributor sales data by the In-Region Factor and the Attribution Factor. We then calculated the estimated market effects savings by applying measure-level average per-unit verified gross savings achieved through the 2024 Midstream HVAC channel for each equipment type, as established in Section 0 by applying recommendations from the IL-TRM V12.0 to Midstream HVAC channel tracking data.

Table 138 summarizes the measure-level per-unit gross verified savings established by the 2024 evaluation of the Midstream HVAC channel. These per-unit savings are applied to Market Effects Units to calculate total savings attributable to Market Effects.

Table 138. 2024 Midstream HVAC Channel Market Effects Per-Unit Savings

| Measure | Per-Unit Electric  Energy Savings (MWh) | Per-Unit Electric  Demand Savings (MW) | Per-Unit Gas Savings  (Therms) |
| --- | --- | --- | --- |
| Centrally Ducted Air Source Heat Pump | 3.65 | 0.00038 | 0 |
| Central Air Conditioner | 2.70 | 0.00033 | 0 |
| Advanced Thermostats | 0.27 | 0.00016 | 50 |
| Ductless Heat Pump | 0.34 | 0.00032 | 0 |
| Heat Pump Water Heater | 2.33 | 0.00011 | 0 |

Table 139 summarizes the measure-level non-incentivized offering-eligible sales reported by distributors in 2024, the number of market effects units (non-incentivized offering-eligible sales multiplied by In-Region Factor and Attribution Factor), and the claimable market effects savings (market effects units multiplied by per-unit gross savings).

Table 139. 2024 Midstream HVAC Channel Market Effects Units and Savings

| Measure | Non-Incentivized Energy-Efficient Sales (Units) | Market Effects Units | Electric Energy Savings (MWh) | Electric Demand Savings (MW) | Gas Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Centrally Ducted Air Source Heat Pump | 784 | 189 | 689.574 | 0.07 | 0 |
| Central Air Conditioner | 1,055 | 254 | 686.417 | 0.08 | 0 |
| Advanced Thermostats | 1,544 | 372 | 100.458 | 0.06 | 18,603 |
| Ductless Heat Pump | 864 | 208 | 70.789 | 0.07 | 0 |
| Heat Pump Water Heater | 89 | 21 | 49.971 | 0.002 | 0 |
| Total | 4,336 | 1,045 | 1,597 | 0.28 | 18,603 |

Kits Initiatives

Gross Impact Methodology

The evaluation team calculated verified savings for the Kits Initiatives by applying savings algorithms and default assumptions from the IL-TRM V12.0. Table 140 lists the measures in the Kits Initiatives, their corresponding IL-TRM entry, and whether TRM errata applied to the measure in the 2024 evaluation.

Table 140. 2024 Kits Initiatives Measures Evaluated

| IL-TRM Measure Name | IL-TRM Measure | Errata Applied? |
| --- | --- | --- |
| Advanced Power Strip – Tier 1 | 5.2.1 | No |
| Smart Sockets | 5.2.4 | No |
| Domestic Hot Water Pipe Insulation | 5.4.1 | Errata not applicable/relevant |
| Low Flow Faucet Aerators | 5.4.4 | Errata not applicable/relevant |
| Low Flow Showerheads | 5.4.5 | Errata not applicable/relevant |
| Thermostatic Restrictor Shower Valve | 5.4.8 | Errata not applicable/relevant |
| Shower Timer | 5.4.9 | Errata not applicable/relevant |
| LED Specialty Lamps | 5.5.6 | No |
| LED Screw Based Omnidirectional Bulbs | 5.5.8 | No |
| LED Fixtures | 5.5.9 | No |
| Connected LED Lamps | 5.5.12 | No |
| Air Sealing | 5.6.1 | No |

Measure Lives and Cumulative Persisting Annual Savings

The evaluation team applied measure lives, baseline shifts, and mid-life adjustments, where applicable, from the IL-TRM V12.0 to calculate CPAS.

Net Impact Methodology

The evaluation team applied SAG-approved 2024 NTGRs of 1.000 to verified gross savings to calculate verified net savings given that all Kits Initiatives targeted IQ customers.

1. Additional Impacts

Introduction

In this appendix, we provide additional quantified impacts from AIC's Residential Program that are not presented in the body of the report. Three specific types of additional inputs are provided:

* Summaries of fossil fuel impacts achieved by the Residential Program that cannot be directly claimed against AIC’s goals but can be used in cost-effectiveness testing and support savings conversions under Illinois law;
* Summaries of gas penalties that are not counted toward goal attainment but are required for cost-effectiveness analysis; and,
* Summaries of water savings and secondary electric energy savings from water supply and wastewater treatment required for cost-effectiveness analysis.

Additional Fossil Fuel Impacts

Some AIC customers receive natural gas service from other energy providers or use unregulated fuels such as propane to serve their energy needs. Measures that AIC provides to these customers through its existing programs may save units of these fuels in addition to energy sources provided by AIC. While these savings cannot be directly claimed against AIC’s energy savings goals, where possible, we quantify these impacts in this appendix to support both cost-effectiveness testing and savings conversions under Illinois state law.

The Retail Products Initiative, IQ Initiative (Single Family, CAA, Joint Utility, and Smart Savers channels), and Market Rate Single Family Initiative (Home Efficiency channel) produced quantifiable propane and/or non-AIC natural gas impacts in 2024.

Gas Heating Penalties

Per the Policy Manual, AIC is not required to account for gas heating penalties resulting from the installation of energy efficiency measures designed to save electricity when considering savings for goal attainment purposes.[[34]](#footnote-34),[[35]](#footnote-35) Therefore, we exclude those effects from all savings reported throughout the body of this report. However, these effects must be evaluated and considered as part of cost-effectiveness testing and are therefore presented in this appendix.

In the following sections, the evaluation team focuses specifically on gas heating penalties as follows:

* **Lighting Heating Penalties.** The inclusion of waste heat factors for lighting is based on the concept that heating loads are increased to supplement the reduction in waste heat that was once provided by the existing, less-efficient lamp type. The evaluation team applied the IL-TRM waste heat factors to lamps, based on heating fuel types provided in the tracking database, to arrive at gross heating penalties. For the cases where tracking data did not provide the heating type, the team assumed natural gas heating, per the IL-TRM.
* **Furnace Blower Motor Heating Penalties.** High-efficiency fan motors operate at cooler temperatures than traditional furnace blower motors. The amount of heat that is released decreases due to cooler operating conditions. Heating equipment must compensate for this heat loss during the heating season, resulting in an increase in HVAC heating loads. The team applied IL-TRM algorithms to calculate the associated heating penalty.
* **Heat Pump Water Heater Heating Penalties.** When heat pump water heaters are installed in conditioned space, they move heat from the ambient air into water stored in a tank. During the heating season, this can increase HVAC heating loads. The team applied IL-TRM algorithms to calculate the associated heating penalty.

All gas heating penalties were calculated using algorithms from the IL-TRM V12.0 (with applicable errata applied).

Secondary Electric Savings for Water Supply and Wastewater Treatment

Some measures delivered through the Residential Program produce water savings as well as energy savings. For applicable measures, the IL-TRM V12.0 includes an algorithm to calculate the secondary electric impacts of these water savings resulting from decreased electricity usage for water supply and wastewater treatment. As directly instructed in the IL-TRM, these savings may be included toward goal attainment but must be removed for the purpose of cost-effectiveness calculations. This is because secondary electric savings occur due to the displaced energy usage needed to power the water supply and wastewater treatment systems, but water savings are also included in the Illinois Total Resource Cost (TRC) test as gallons of water saved, and avoided water costs include the effects of this displaced energy usage. As such, secondary electric savings are excluded from the Illinois TRC to avoid double counting.

Therefore, we present these savings separately in this appendix to provide transparency on the reduced savings used for cost-effectiveness testing. All secondary electric savings were calculated using algorithms from the IL-TRM V12.0.

Electrification Impacts

Some measures delivered through the Residential Program are subject to rules on counting electrification savings outlined in Illinois statute[[36]](#footnote-36) and Policy Manual.[[37]](#footnote-37) Energy savings for these measures included in the body of this report are expressed in kWh equivalents for goal attainment purposes and are not appropriate for cost-effectiveness testing. Therefore, we present the actual at-the-meter energy impacts caused by these measures separately in this appendix to provide transparency on the impacts used for cost-effectiveness testing. Note, the electric demand savings presented in the body of this report are accurate for use in cost-effectiveness testing; therefore, no revised values are presented here.

Retail Products Initiative

Additional Fossil Fuel Impacts

A portion of the advanced thermostats rebated through the Retail Products initiative went to participants with propane heating. Propane savings associated with 1,784 thermostats distributed to customers with propane heating are presented in Table 141.

Table 141. 2024 Retail Products Initiative Propane Savings by Measure

| Channel | Measure Category | Ex Ante Gross Savings (Therms) | Gross  Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- | --- |
| Income Qualified | Advanced Thermostat | 31,120 | 101% | 31,374 | 1.000 | 31,374 |
| Market Rate | Advanced Thermostat | 93,408 | 100% | 93,874 | 0.900 | 84,487 |
| Total |  | 124,528 | 101% | 125,248 | 0.925 | 115,861 |

Gas Heating Penalties

Table 142 presents gas heating penalties not reported in the body of the report for the Retail Products Initiative.

Table 142. 2024 Retail Products Initiative Gas Heating Penalties

| Channel | Measure Category | Therms |
| --- | --- | --- |
| Income Qualified | Standard LED | -801,221 |
| Specialty LED | -323,199 |
| Fixture LED | -151,881 |
| Nightlight LED | -63,958 |
| Connected LED | -1,006 |
| Heat Pump Water Heater | -57 |
| Market Rate | Fixture LED | -17,934 |
| Nightlight LED | -15,721 |
| Specialty LED | -5,433 |
| Heat Pump Water Heater | -150 |
| Total | | -1,380,560 |

Secondary Electric Savings for Water Supply and Wastewater Treatment

Table 143 presents water savings and secondary electric savings for the Retail Products Initiative.

Table 143. 2024 Retail Products Initiative Secondary Electric and Water Savings by Measure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Channel | Measure Category | Verified Gross Water Savings (Gallons) | Conversion Factor | Verified Gross Secondary Electric Savings (kWh) |
| Income Qualified | Showerhead Kit | 7,624,213 | 5,010 kWh/million gala | 38,197 |
| Clothes Washer | 1,450,960 | 7,269 |
| Showerhead | 46,567 | 233 |
| Faucet Aerator | 36,259 | 182 |
| Market Rate | Showerhead Kit | 4,232,672 | 21,206 |
| Clothes Washer | 3,814,367 | 19,110 |
| Showerhead | 106,659 | 534 |
| Faucet Aerator | 71,315 | 357 |
| Total | | 17,383,011 | 87,089 |

*Source*: IL-TRM V12.0.

Total Impacts for Cost-Effectiveness

Table 144 presents a summary of the 2024 Retail Products Initiative verified gross impacts adjusted for the above effects.

Table 144. 2024 Retail Products Initiative Verified Gross Impacts for Cost-Effectiveness

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Metric | Electric Energy (kWh) | Gas (Therms) | Non-AIC Gas (Therms) | Propane (Therms) | Water (Gallons) |
| Verified Gross Impacts for Goal Attainment | 101,712,839 | 1,561,454 | N/A | N/A | N/A |
| Gas Penalties | N/A | -1,380,560 | N/A | N/A | N/A |
| Water Savings | N/A | N/A | N/A | N/A | 17,383,011 |
| Secondary Electric Savings | -87,089 | N/A | N/A | N/A | N/A |
| Additional Fossil Fuel Impacts | N/A | N/A | 0 | 125,248 | N/A |
| Final Verified Gross Impacts for Cost-Effectiveness | 101,625,750 | 180,894 | 0 | 125,248 | 17,383,011 |

Note: All electric demand savings used in cost-effectiveness testing align with those presented in Section 3.

Income Qualified Initiative – Single Family Offerings

Additional Fossil Fuel Impacts

The Single Family, CAA, Joint Utility, and Smart Savers channels produced additional fossil fuel impacts, while MHAS and Healthier Home channels did not. AIC converted these savings to CPAS for the purposes of goal attainment. Those conversion-related savings are presented separately and detailed for each channel below.

In 2024, AIC implemented gas efficiency measures for eight AIC electric customers who receive gas service from other utilities as part of the Single Family channel. As allowed under 220 ILCS 5/8-103B(b-25), we verified non-AIC gas savings associated with these measures and present them in Table 145.

Table 145. 2024 Single Family Channel Non-AIC Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 61 | 918% | 561 | 1.000 | 561 |
| Pipe Insulation | 20 | 100% | 20 | 1.000 | 20 |
| Total | 81 | 715% | 582 | 1.000 | 582 |

We discuss discrepancies between ex ante claims and the verified analysis for Joint Utility channel non-AIC gas savings as follows:

* Advanced Thermostats (75% of ex ante non-AIC gas savings): The gross realization rate for Advanced Thermostats was 918%.
  + In 86% of non-AIC gas measures (n=6), the evaluation team included gas savings when the tracking database specified the primary heating system was a natural gas furnace, whereas the implementation team did not, resulting in higher verified non-AIC gas savings.

Similarly, AIC also provided measures to two electric customers who use propane for heating. As allowed under 220 ILCS 5/8-103B(b-25), we verified propane savings associated with these measures and present them in Table 146.

Table 146. 2024 Single Family Channel Propane Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 37 | 100% | 37 | 1.000 | 37 |
| Attic Insulation | 47 | 100% | 47 | 1.000 | 47 |
| Crawl Space Insulation | 110 | 100% | 110 | 1.000 | 110 |
| Advanced Thermostat | 73 | 100% | 73 | 1.000 | 73 |
| Rim Joist Insulation | 11 | 100% | 11 | 1.000 | 11 |
| Total | 278 | 100% | 278 | 1.000 | 278 |

In 2024, AIC completed building envelope upgrades for two AIC electric customers who received gas service from other utilities as part of the CAA channel. As allowed under 220 ILCS 5/8-103B(b-25), we verified non-AIC gas savings associated with these measures and present them in Table 147.

Table 147. 2024 CAA Channel Non-AIC Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 45 | 100% | 45 | 1.000 | 45 |
| Attic Insulation | 33 | 100% | 33 | 1.000 | 33 |
| Crawl Space Insulation | 62 | 100% | 62 | 1.000 | 62 |
| Floor Insulation | 161 | 100% | 161 | 1.000 | 161 |
| Wall Insulation | 6 | 100% | 6 | 1.000 | 6 |
| Rim Joist Insulation | 13 | 100% | 13 | 1.000 | 13 |
| Total | 320 | 100% | 320 | 1.000 | 320 |

Similarly, AIC completed building envelope upgrades for one AIC electric customer who used propane for heating. As allowed under 220 ILCS 5/8-103B(b-25), we verified propane savings associated with these measures and present them in Table 148.

Table 148. 2024 CAA Channel Propane Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 55 | 100% | 55 | 1.000 | 55 |
| Attic Insulation | 54 | 100% | 54 | 1.000 | 54 |
| Total | 109 | 100% | 109 | 1.000 | 109 |

In 2024, AIC paid for gas measures included in one Joint Utility channel project as allowed under 220 ILCS 5/8-103B(b-25). Non-AIC gas savings associated with the Joint Utility channel are presented in Table 149.

Table 149. 2024 Joint Utility Channel Non-AIC Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Pipe Insulation | 20 | 100% | 20 | 1.000 | 20 |
| Duct Sealing | 153 | 100% | 153 | 1.000 | 153 |
| Air Sealing | 61 | 100% | 61 | 1.000 | 61 |
| Floor Insulation | 179 | 100% | 179 | 1.000 | 179 |
| Rim Joist Insulation | 8 | 100% | 8 | 1.000 | 8 |
| Wall Insulation | 33 | 100% | 33 | 1.000 | 33 |
| Total | 454 | 100% | 454 | 1.000 | 454 |

In 2024, AIC provided advanced thermostats to one AIC electric customers who received gas service from other utilities as part of the Smart Savers Channel. As allowed under 220 ILCS 5/8-103B(b-25), we verified non-AIC gas savings associated with these measures and present them in Table 150.

Table 150. 2024 Smart Savers Channel Non-AIC Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 0 | N/A | 85 | 1.000 | 85 |
| Total | 0 | N/A | 85 | 1.000 | 85 |

Similarly, AIC also provided advanced thermostats to seven AIC electric customers who use propane for heating. As allowed under 220 ILCS 5/8-103B(b-25), we verified propane savings associated with these measures and present them in Table 151.

Table 151. 2024 Smart Savers Channel Propane Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Terms) |
| --- | --- | --- | --- | --- | --- |
| Advanced Thermostat | 487 | 100% | 487 | 1.000 | 487 |
| Total | 487 | 100% | 487 | 1.000 | 487 |

Gas Heating Penalties

Table 152 presents gas penalties not reported in the body of the report for the Income Qualified Initiative – Single Family Offerings. The Smart Savers Channel did not produce gas penalties.

Table 152. 2024 Income Qualified Initiative – Single Family Gas Heating Penalties

| Channel | Measure Category | Therms |
| --- | --- | --- |
| Single Family | Standard LED | -7,720 |
| Specialty LED | -2,688 |
| Furnace Blower Motor | -2,129 |
| Heat Pump Water Heater | -39 |
| Tree Planting | -2 |
| CAA | Standard LED | -1,735 |
| Furnace Blower Motor | -483 |
| Heat Pump Water Heater | -12 |
| Specialty LED | -90 |
| Joint Utility | Standard LED | -205 |
| Specialty LED | -17 |
| Furnace Blower Motor | -57 |
| MHAS | Furnace Blower Motor | -295 |
| Healthier Homes | Standard LED | -110 |
| Specialty LED | -33 |
| Connected LED | -12 |
| Furnace Blower Motor | -50 |
| Electrification | Heat Pump Water Heater | -11 |
| Total |  | -15,689 |

Secondary Electric Savings for Water Supply and Wastewater Treatment

Table 153 presents water savings and secondary electric savings for the IQ Initiative Single Family Offerings. The Smart Savers, MHAS, and Electrification channels did not produce secondary electric savings for water supply and wastewater treatment in 2024.

Table 153. 2024 Income Qualified Initiative – Single Family Secondary Electric and Water Savings by Measure

| Channel | Measure Category | Verified Gross Water Savings (Gallons) | Conversion Factor | Verified Gross Secondary Electric Savings (kWh) | |
| --- | --- | --- | --- | --- | --- |
| Single Family | Low Flow Showerhead | 901,577 | 5,010 kWh/million gala | 4,517 | |
| Faucet Aerator | 1,617,788 | 8,105 | |
| CAA | Low Flow Showerhead | 174,486 | 874 | |
| Faucet Aerator | 134,744 | 675 | |
| Joint Utility | Low Flow Showerhead | 92,710 | 464 | |
| Faucet Aerator | 107,714 | 540 | |
| Healthier Homes | Low Flow Showerhead | 6,947 | 35 | |
| Faucet Aerator | 7,119 | 36 | |
| Total | | 3,043,084 | 15,246 |

*Source:* IL-TRM V12.0.

Electrification Impacts

Table 154, Table 155, and Table 156 provide a summary of at-the-meter verified electric energy, natural gas, and propane impacts for the 2024 IQ Electrification channel to be used in cost-effectiveness testing.

Table 154. Electrification Channel Electric Energy Impacts by Measure

| Measure Category | Ex Ante Gross Impacts (kWh) | Gross Realization Rate | Verified Gross Impacts (kWh) | NTGR | Verified Net Impacts (kWh) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER, Electrification) | -90,611 | 92% | -83,754 | 1.000 | -83,754 |
| Heat Pump Water Heater (ER, Electrification) | -9,559 | 100% | -9,559 | 1.000 | -9,559 |
| Attic Insulation | 2,483 | 100% | 2,483 | 1.000 | 2,483 |
| Air Sealing | 3,267 | 100% | 3,267 | 1.000 | 3,267 |
| Crawl Space Insulation | 1,055 | 100% | 1,055 | 1.000 | 1,055 |
| Ductless Heat Pump (Electrification) | -3,747 | 91% | -3,394 | 1.000 | -3,394 |
| Advanced Thermostats (Electrification) | 5,613 | 100% | 5,613 | 1.000 | 5,613 |
| Basement Sidewall Insulation | 310 | 100% | 310 | 1.000 | 310 |
| Rim Joist Insulation | 221 | 100% | 221 | 1.000 | 221 |
| Kneewall Insulation | 153 | 100% | 153 | 1.000 | 153 |
| Induction Cooktop (Electrification) | -1,111 | 85% | -947 | 1.000 | -947 |
| Heat Pump Dryer (Electrification) | 421 | -100% | -421 | 1.000 | -421 |
| Total | -91,504 | 93% | -84,972 | 1.000 | -84,972 |

Table 155. Electrification Channel Gas Impacts by Measure

| Measure Category | Ex Ante Gross Impacts (Therms) | Gross Realization Rate | Verified Gross Impacts (Therms) | NTGR | Verified Net Impacts (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER, Electrification) | 544 | 100% | 544 | 1.000 | 544 |
| Heat Pump Water Heater (ER, Electrification) | 1,594 | 100% | 1,594 | 1.000 | 1,594 |
| Total | 2,138 | 100% | 2,138 | 1.000 | 2,138 |

Table 156. Electrification Channel Propane Impacts by Measure

| Measure Category | Ex Ante Gross Impacts (Therms) | Gross Realization Rate | Verified Gross Impacts (Therms) | NTGR | Verified Net Impacts (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER, Electrification) | 9,803 | 100% | 9,803 | 1.000 | 9,803 |
| Heat Pump Water Heater (ER, Electrification) | 794 | 100% | 794 | 1.000 | 794 |
| Attic Insulation | 700 | 100% | 700 | 1.000 | 700 |
| Air Sealing | 545 | 100% | 545 | 1.000 | 545 |
| Crawl Space Insulation | 519 | 100% | 519 | 1.000 | 519 |
| Ductless Heat Pump (Electrification) | 427 | 100% | 427 | 1.000 | 427 |
| Basement Sidewall Insulation | 164 | 100% | 164 | 1.000 | 164 |
| Rim Joist Insulation | 94 | 100% | 94 | 1.000 | 94 |
| Kneewall Insulation | 48 | 100% | 48 | 1.000 | 48 |
| Induction Cooktop (Electrification) | 85 | 100% | 85 | 1.000 | 85 |
| Heat Pump Dryer (Electrification) | 29 | 84% | 24 | 1.000 | 24 |
| Total | 13,209 | 100% | 13,204 | 1.000 | 13,204 |

Total Impacts for Cost-Effectiveness

Table 157 presents a summary of the 2024 Income Qualified Initiative Single Family Offerings verified gross impacts adjusted for the above effects.

Table 157. 2024 Income Qualified Initiative – Single Family Verified Gross Impacts for Cost-Effectiveness

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Metric | Electric Energy (kWh) | Gas (Therms) | Non-AIC Gas (Therms) | Propane (Therms) | Water (Gallons) |
| Verified Gross Impacts for Goal Attainment | 6,971,521 | 544,393 | N/A | N/A | N/A |
| Gas Penalties | N/A | -15,689 | N/A | N/A | N/A |
| Water Savings | N/A | N/A | N/A | N/A | 3,043,084 |
| Secondary Electric Savings | -15,246 | N/A | N/A | N/A | N/A |
| Additional Fossil Fuel Impacts | N/A | N/A | 987 | 874 | N/A |
| Electrification Conversionsa | -449,623 | 2,138 | 0 | 13,204 | 0 |
| Final Verified Gross Impacts for Cost-Effectiveness | 6,506,652 | 530,843 | 987 | 14,078 | 3,043,084 |

Note: All electric demand savings used in cost-effectiveness testing align with those presented in Section 3.

a Inclusive of both subsection (b-27) conversions as well as Policy Manual Section 12.3 conversions.

Multifamily Initiatives

Additional Fossil Fuel Impacts

There were no additional fossil fuel impacts for the Multifamily Initiatives.

Gas Heating Penalties

Table 158 presents gas penalties not reported in the body of the report for the Multifamily Initiatives.

Table 158. 2024 Multifamily Initiatives Gas Heating Penalties

| Initiative/Channel | Measure Category | Therms |
| --- | --- | --- |
| IQ Multifamily | Standard LED (Common Area) | -7,917 |
| Standard LED | -2,440 |
| Specialty LED | -298 |
| Specialty LED (Common Area) | -990 |
| Public Housing | Standard LED | -859 |
| Specialty LED | -31 |
| Total | | -12,535 |

Secondary Electric Savings for Water Supply and Wastewater Treatment

Table 159 presents water savings and secondary electric savings for the Multifamily Initiatives.

Table 159. 2024 Multifamily Initiatives Secondary Electric and Water Savings by Measure

| Initiative/Channel | Measure Category | Verified Gross Water Savings (Gallons) | Conversion Factor | Verified Gross Secondary Electric Savings (kWh) |
| --- | --- | --- | --- | --- |
| IQ Multifamily | Showerhead | 8,841,023 | 5,010 kWh/million gala | 44,294 |
| Kitchen Faucet Aerator | 6,785,899 | 33,997 |
| Restrictor Shower Valve | 1,560,153 | 7,816 |
| Bathroom Faucet Aerator | 1,368,860 | 6,858 |
| Multifamily MR | Showerhead | 2,942,431 | 14,742 |
| Kitchen Faucet Aerator | 1,217,641 | 6,100 |
| Bathroom Faucet Aerator | 373,730 | 1,872 |
| Restrictor Shower Valve | 329,099 | 1,649 |
| Public Housing | Kitchen Faucet Aerator | 1,234,253 | 6,184 |
| Showerhead | 927,846 | 4,649 |
| Bathroom Faucet Aerator | 218,581 | 1,095 |
| Restrictor Shower Valve | 115,387 | 578 |
| Total | | 25,914,903 | 129,834 |

*Source:* IL-TRM V12.0.

Total Impacts for Cost-Effectiveness

Table 160 presents a summary of the 2024 Multifamily Initiatives verified gross impacts adjusted for the above effects.

Table 160. 2024 Multifamily Initiatives Verified Gross Impacts for Cost-Effectiveness

| Metric | Electric Energy (kWh) | Gas (Therms) | Non-AIC Gas (Therms) | Propane (Therms) | Water (Gallons) |
| --- | --- | --- | --- | --- | --- |
| Verified Gross Impacts for Goal Attainment | 14,665,476 | 83,357 | N/A | N/A | N/A |
| Gas Penalties | N/A | -12,535 | N/A | N/A | N/A |
| Water Savings | N/A | N/A | N/A | N/A | 25,914,903 |
| Secondary Electric Savings | -129,834 | N/A | N/A | N/A | N/A |
| Additional Fossil Fuel Impacts | N/A | N/A | 0 | 0 | N/A |
| Final Verified Gross Impacts for Cost-Effectiveness | 14,535,642 | 70,822 | 0 | 0 | 25,914,903 |

Note: All electric demand savings used in cost-effectiveness testing align with those presented in Section 3.

Market Rate Single Family Initiative

Additional Fossil Fuel Impacts

In 2024, AIC provided a variety of measures to one AIC electric customer who received gas service from other utilities as part of the Home Efficiency channel. As allowed under 220 ILCS 5/8-103B(b-25), we verified non-AIC gas savings associated with these measures and present them in Table 161.

Table 161. 2024 Home Efficiency Channel Non-AIC Gas Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Attic Insulation | 29 | 100% | 29 | 0.800 | 23 |
| Air Sealing | 60 | 100% | 60 | 0.900 | 54 |
| Crawlspace Insulation | 68 | 100% | 68 | 0.800 | 54 |
| Wall Insulation | 4 | 100% | 4 | 0.800 | 3 |
| Rim Joist Insulation | 11 | 100% | 11 | 0.800 | 9 |
| Total | 172 | 100% | 172 | 0.835 | 144 |

Similarly, AIC also provided air sealing and rim joist insulation to one AIC electric customer who used propane for heating as part of the Home Efficiency channel. As allowed under 220 ILCS 5/8-103B(b-25), we verified propane savings associated with these measures and present them in Table 162.

Table 162. 2024 Home Efficiency Channel Propane Savings by Measure

| Measure Category | Ex Ante Gross Savings (Therms) | Gross Realization Rate | Verified Gross Savings (Therms) | NTGR | Verified Net Savings (Therms) |
| --- | --- | --- | --- | --- | --- |
| Air Sealing | 29 | 100% | 29 | 0.800 | 24 |
| Rim Joist Insulation | 14 | 100% | 14 | 0.800 | 11 |
| Total | 43 | 100% | 43 | 0.800 | 35 |

Gas Heating Penalties

Table 163 presents gas penalties not reported in the body of the report for the Market Rate Single Family Initiative.

Table 163. 2024 Market Rate Single Family Initiative Gas Heating Penalties

| Channel | Measure Category | Therms |
| --- | --- | --- |
| Midstream HVAC | Heat Pump Water Heater | -223 |
| Total Gas Penalties |  | -223 |

Secondary Electric Savings for Water Supply and Wastewater Treatment

There were no water savings or secondary electric savings for the Market Rate Single Family Initiative.

Total Impacts for Cost-Effectiveness

Table 164 presents a summary of the 2024 Market Rate Single Family Initiative verified gross impacts adjusted for the above effects.

Table 164. 2024 Market Rate Single Family Initiative Verified Gross Impacts for Cost-Effectiveness

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Metric | Electric Energy (kWh) | Gas (Therms) | Non-AIC Gas (Therms) | Propane (Therms) | Water (Gallons) |
| Verified Gross Impacts for Goal Attainment | 9,895,199 | 385,064 | N/A | N/A | N/A |
| Gas Penalties | N/A | -223 | N/A | N/A | N/A |
| Water Savings | N/A | N/A | N/A | N/A | 0 |
| Secondary Electric Savings | 0 | N/A | N/A | N/A | N/A |
| Additional Fossil Fuel Impacts | N/A | N/A | 172 | 43 | N/A |
| Final Verified Gross Impacts for Cost-Effectiveness | 9,895,199 | 384,842 | 172 | 43 | 0 |

Note: All electric demand savings used in cost-effectiveness testing align with those presented in Section 3.

Kits Initiatives

Additional Fossil Fuel Impacts

There were no additional fossil fuel impacts for the Kits Initiatives.

Gas Heating Penalties

Table 165 presents gas penalties not reported in the body of the report for the Kits Initiatives.

Table 165. 2024 Kits Initiatives Gas Heating Penalties

| Channel/Kit | Measure Category | Therms |
| --- | --- | --- |
| Full School Kits | Specialty LED | -37,902 |
| Connected LED | -587 |
| Joint Utility School Kits | Specialty LED | -5,985 |
| High School Innovation Kits | Specialty LED | -7,520 |
| LED Desk Lamp | -1,566 |
| IQ Community Kits | Standard LED | -15,416 |
| Mobile Homes Kits | Standard LED | -2,492 |
| BN Community Kits | Standard LED | -334 |
| Connected LED | -382 |
| LED Desk Lamp | -143 |
| Food Bank Holiday Kits | Standard LED | -22,114 |
| Total | | -94,440 |

Secondary Electric Savings for Water Supply and Wastewater Treatment

Table 166 presents water savings and secondary electric savings for the Kits Initiatives.

Table 166. 2024 Kits Initiatives Secondary Electric and Water Savings by Measure

| Channel/Kit | Measure Category | Verified Gross Water Savings (Gallons) | Conversion Factor | Verified Gross Secondary Electric Savings (kWh) |
| --- | --- | --- | --- | --- |
| Full School Kits | Showerhead | 27,005,888 | 5,010 kWh/million gala | 135,299 |
| Kitchen Faucet Aerator | 22,810,767 | 114,282 |
| Shower Timer | 11,930,074 | 59,770 |
| Bathroom Faucet Aerator | 3,289,357 | 16,480 |
| Joint Utility School Kits | Showerhead | 4,363,252 | 21,860 |
| Kitchen Faucet Aerator | 3,685,460 | 18,464 |
| Shower Timer | 1,927,503 | 9,657 |
| Bathroom Faucet Aerator | 527,282 | 2,642 |
| High School Innovation Kits | Showerhead | 5,546,324 | 27,787 |
| Bathroom Faucet Aerator | 659,901 | 3,306 |
| IQ Community Kits | Showerhead | 6,174,745 | 30,935 |
| Kitchen Faucet Aerator | 2,840,583 | 14,231 |
| Bathroom Faucet Aerator | 812,810 | 4,072 |
| Mobile Home Kits | Showerhead | 453,218 | 2,271 |
| Kitchen Faucet Aerator | 330,541 | 1,656 |
| Thermostatic Restrictor Shower Valve | 91,259 | 457 |
| Bathroom Faucet Aerator | 80,394 | 403 |
| Total | | 92,529,357 | 463,572 |

*Source:* IL-TRM V12.0.

Total Impacts for Cost-Effectiveness

Table 167 presents a summary of the 2024 Kits Initiatives verified gross impacts adjusted for the above effects.

Table 167. 2024 Kits Initiatives Verified Gross Impacts for Cost-Effectiveness

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Metric | Electric Energy (kWh) | Gas (Therms) | Non-AIC Gas (Therms) | Propane (Therms) | Water (Gallons) |
| Verified Gross Impacts for Goal Attainment | 13,789,206 | 264,184 | N/A | N/A | N/A |
| Gas Penalties | N/A | -94,440 | N/A | N/A | N/A |
| Water Savings | N/A | N/A | N/A | N/A | 92,529,357 |
| Secondary Electric Savings | -463,572 | N/A | N/A | N/A | N/A |
| Additional Fossil Fuel Impacts | N/A | 0 | 0 | 0 | N/A |
| Final Verified Gross Impacts for Cost-Effectiveness | 13,325,634 | 169,744 | 0 | 0 | 92,529,357 |

Note: All electric demand savings used in cost-effectiveness testing align with those presented in Section 3.

1. Cumulative Persisting Annual Savings

This appendix presents detailed CPAS for the Residential Program initiatives and channels. Due to many years of CPAS, tables are challenging to read; please reference the separately provided CPAS spreadsheet for additional detail as needed.

Residential Program

Table 168 provides CPAS for the 2024 Residential Program through 2055. Lifetime savings for the 2024 Residential Program are 1,464,770 MWh.

Table 168. 2024 Residential Program CPAS and WAML



Retail Products Initiative

Table 169 provides CPAS for the 2024 Retail Products Initiative through 2046. Lifetime savings for the Initiative are 832,098 MWh.

Table 169. 2024 Retail Products Initiative CPAS and WAML



Income Qualified Initiative – Single Family Offerings

Table 170 provides CPAS for the 2024 Income Qualified Initiative – Single Family Offerings through 2055. Lifetime savings for the Initiative are 97,327 MWh.

Table 170. 2024 Income Qualified Initiative – Single Family Offerings CPAS and WAML



Multifamily Initiatives

Table 171 provides CPAS for the 2024 Multifamily Initiatives through 2055. Lifetime savings for the Initiatives are 185,525 MWh.

Table 171. 2024 Multifamily Initiatives CPAS and WAML



Market Rate Single Family Initiative

Table 172 provides CPAS for the 2024 Market Rate Single Family Initiative through 2055. Lifetime savings for the Initiative are 143,976 MWh.

Table 172. 2024 Market Rate Single Family Initiative CPAS and WAML



Kits Initiatives

Table 173 provides CPAS for the 2024 Kits Initiatives through 2045. Lifetime savings for the Initiatives are 127,975 MWh.

Table 173. 2024 Kits Initiatives CPAS and WAML



Carryover

Table 174 provides 2024 Residential Program CPAS achieved through carryover through 2041. Lifetime savings from Residential Program carryover are 114,306 MWh.

Table 174. 2024 Residential Program Carryover CPAS and WAML



1. Multifamily Initiatives Participation Summaries

In 2024, the Illinois Program Administrators and non-financially interested stakeholders reached an agreement on a set of IQ Multifamily metrics that each utility must report on annually.[[38]](#footnote-38) The evaluation team therefore conducted additional participation analyses based on 2024 tracking data to characterize the agreed upon metrics, presented in this appendix.

IQ Multifamily Channel

Most of the properties served by the IQ Multifamily channel in 2024 were buildings with 20 tenant units or less (120), while 42 properties had between 20 to 49 tenant units, and 36 had 50 or more tenant units (Table 175).

Table 175. 2024 IQ Multifamily Channel Building Types Treated

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Building Size | Housing Type | Number of Properties | Number of Buildings | Number of Tenant Units |
| Buildings < 20 Units | Total Buildings < 20 Units | 120 | 212 | 1,040 |
| *Subsidized* | 36 | 82 | 370 |
| *Unsubsidized* | 84 | 130 | 670 |
| Buildings 20 – 49 Units | Total Buildings 20 – 49 Units | 42 | 194 | 1,284 |
| *Subsidized* | 23 | 99 | 687 |
| *Unsubsidized* | 19 | 95 | 597 |
| Buildings ≥ 50 Units | Total Buildings ≥ 50 Units | 36 | 1,165 | 5,886 |
| *Subsidized* | 15 | 151 | 1,906 |
| *Unsubsidized* | 21 | 1,014 | 3,980 |

Notes: For evaluation purposes, the Public Housing Initiative participation summary is reported in Section 3.3.5.

The program tracking data currently lacks data to accurately identify properties, buildings, and/or tenant units with primary or individual central heating systems. As such, this table reports on the total number of properties, buildings, and tenant units.

The most common measures provided to IQ Multifamily channel buildings and tenant units were air purifiers, direct install in-unit measures, and common area lighting, as shown in Table 176.

Table 176. 2024 IQ Multifamily Channel Participating Buildings and Tenant Units by Measure

|  |  |  |
| --- | --- | --- |
| Measure Category | Number of Buildingsa | Number of Tenant Unitsb |
| Total Participants | 1,571 | 8,210 |
| Total Participants w/ Electric Heat | 571 | 5,361 |
|  | | |
| Air Purifier | 927 | 2,277 |
| Direct Install In-Unit | 582 | 5,585 |
| Common Area Lighting | 565 | 1,830 |
| Heat Pumpsb | 112 | 527 |
| Air Sealing | 6 | 84 |
| Attic Insulation | 7 | 88 |
| Other (Storm Windows) | 1 | 4 |
| Gas Heating System Replacements | 0 | 0 |
| Heat Pump Water Heaters | 0 | 0 |
| Other HVAC Equipment Measures | 0 | 0 |
| Other Insulation | 0 | 0 |

a The sum of the counts by measure will not add up to the total participants as some participating properties received more than one type of measure.

b Heat pumps include ductless heat pumps and air source heat pumps.

Note: For evaluation purposes, the Public Housing Initiative participation summary is reported in Section 3.3.5, under the Public Housing Initiative section.

In 2024, seven buildings, consisting of 88 tenant units in total, received air sealing and insulation measures. Notably, two-thirds (1,023) of buildings assessed qualified for air sealing and insulation but were deferred to a future year (Table 177).

Table 177. Reasons Building Envelope Measures Not Installed in IQ Multifamily Channel Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Buildings / Units Serveda | 2,496 | 16,386 |
| Total Buildings / Units Assessedb | 1,571 | 8,210 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Insulation/Air Sealing Measures | 7 | 88 |
| Did Not Install Insulation/Air Sealing Measures | 1,564 | 8,122 |
| A. Not qualified for measures | 539 | 4,969 |
| 1. Measure already there/already upgraded | 358 | 2,670 |
| 2. Not cost-effective | 14 | 125 |
| 3. Cannot access attic or other space | 53 | 346 |
| 4. Not applicable (e.g., no attic) | 113 | 1,822 |
| 5. Health and safety cost too high or extensive | 1 | 6 |
| B. Qualified and offered measure, but didn't install | 1,023 | 3,136 |
| 1. Building owner not willing to make co-pay | 0 | 0 |
| 2. Building owner sees no benefit | 0 | 0 |
| 3. Building owner will not accept disruption | 6 | 48 |
| 4. Deferring to a future year | 1,016 | 3,074 |
| 5. Building owner dislikes aesthetics | 0 | 0 |
| 6. Building owner non-responsive | 1 | 14 |
| 7. Building owner not willing/able to address health & safety work or deferrable conditions | 0 | 0 |
| C. Unknownc | 2 | 17 |

a Total Buildings/Units Served includes buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or equipment.

b Total Buildings/Units Assessed includes buildings and/or units that received an audit either in 2024 or before and also received at least one energy-saving upgrade or equipment in 2024.

c Data indicating reasons for not installing air sealing and/or insulation were not required or recorded prior to 2024; hence, data for properties that were audited before 2024 are either limited or unavailable.

Note: For evaluation purposes, the Public Housing Initiative participation summary is reported in Section 3.3.5, under the Public Housing Initiative section.

Almost one-fifth of the assessed IQ Multifamily buildings with electric heating received heat pumps in 2024. While more than half of the buildings qualified for heat pumps, the majority (294 of 308) of those that qualified for heat pumps were deferred to a future year, as shown in Table 178.

Table 178. Reasons Heat Pump Not Installed in IQ Multifamily Channel Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Electrically Heated Buildings / Units Servedab | 673 | 5,862 |
| Total Electrically Heated Buildings/Units Assessedc | 571 | 5,361 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Heat Pumps | 112 | 527 |
| Did Not Install Heat Pumps | 459 | 4,834 |
| A. Not qualified for measures | 39 | 643 |
| 1. Measure already there/already upgraded | 25 | 367 |
| 2. Not cost-effective | 14 | 276 |
| 3. No good location or space | 0 | 0 |
| B. Qualified and offered measures but didn't install | 308 | 2,763 |
| 1. Building owner not willing to make co-pay | 13 | 202 |
| 2. Building owner sees no benefit | 1 | 49 |
| 3. Building owner will not accept disruption | 0 | 0 |
| 4. Deferring to a future year | 294 | 2,512 |
| 5. Building owner dislikes aesthetics | 0 | 0 |
| 6. Building owner non-responsive | 0 | 0 |
| 7. Building owner not willing/able to address health & safety work or deferrable conditions | 0 | 0 |
| 8. Desired heat pump does not meet program specification requirements | 0 | 0 |
| Unknownd | 112 | 1,428 |

a Total Buildings/Units Served includes electrically heated buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or piece of equipment.

b There are participants for whom the channel or initiative is unknown or blank. As such, actual building and apartment counts may be larger than reported.

c Total Buildings/Units Assessed include electrically heated buildings and/or units that received both an audit either in 2024 or before and received at least one energy-saving upgrade or equipment in 2024.

d Data indicating reasons for not installing heat pumps were not recorded or required prior to 2024; hence, data for properties that were audited before 2024 are either limited or unavailable.

Note: For evaluation purposes, the Public Housing Initiative participation summary is reported in Section 3.3.5, under the Public Housing Initiative section.

Market Rate Multifamily Initiative

Most properties (34) that participated through the Market Rate Multifamily Initiative in 2024 have up to 49 tenant units, while 11 properties had 50 or more tenant units. (Table 179).

Table 179. Market Rate Multifamily Initiative Building Types Treated

|  |  |  |  |
| --- | --- | --- | --- |
| Building Size | Number of Properties | Number of Buildings | Number of Tenant Units |
| Buildings < 20 Units | 22 | 27 | 160 |
| Buildings 20 – 49 Units | 12 | 37 | 372 |
| Buildings ≥ 50 Units | 11 | 125 | 1,525 |

Note: The program tracking data lacks information to accurately identify properties, buildings, and/or tenant units with primary central heating systems or individual heating systems. As such, this table reports on the total number of properties, buildings, and tenant units.

Most Market Rate buildings received direct install in-unit measures, while five buildings received heat pumps (Table 180). While this number seems limited, Multifamily Initiatives staff reported that they reached the heat pump budget and installation goals for 2024.

Table 180. 2024 Market Rate Multifamily Initiative Participating Buildings and Tenant Units by Measure

|  |  |  |
| --- | --- | --- |
| Measure Category | Number of Buildingsa | Number of Tenant Unitsb |
| Total Participants | 189 | 2,057 |
| Total Participants w/ Electric Heat | 139 | 1,551 |
|  | | |
| Air Purifier | N/A | N/A |
| Direct Install In-Unit | 172 | 1,657 |
| Common Area Lighting | 0 | 0 |
| Heat Pumps | 5 | 50 |
| Air Sealing | N/A | N/A |
| Attic Insulation | N/A | N/A |
| Other (Storm Windows) | 0 | 0 |
| Gas Heating System Replacements | 0 | 0 |
| Heat Pump Water Heaters | 0 | 0 |
| Other HVAC Equipment Measures | 0 | 0 |
| Other Insulation | 0 | 0 |

a The sum of the counts by measure will not add up to the total participants as some participating properties received more than one type of measure.

None of the participating Market Rate Multifamily properties received building envelope measures as they are not cost-effective, as shown in Table 181.

Table 181. Reasons Building Envelope Measures Not Installed in Market Rate Multifamily Initiative Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Buildings/Units Serveda | 339 | 3,425 |
| Total Buildings/Units Assessedb | 189 | 2,057 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Insulation/Air Sealing Measures | N/A | N/A |
| Did Not Install Insulation/Air Sealing Measures | 189 | 2,057 |
| A. Not qualified for measures | 189 | 2,057 |
| 1. Measure already there/already upgraded | N/A | N/A |
| 2. Not cost-effective | 189 | 2,057 |
| 3. Cannot access attic or other space | N/A | N/A |
| 4. Not applicable (e.g., no attic) | N/A | N/A |
| 5. Health and safety cost too high or extensive | N/A | N/A |
| B. Qualified and offered measure, but didn't install | N/A | N/A |
| 1. Building owner not willing to make co-pay | N/A | N/A |
| 2. Building owner sees no benefit | N/A | N/A |
| 3. Building owner will not accept disruption | N/A | N/A |
| 4. Deferring to a future year | N/A | N/A |
| 5. Building owner dislikes aesthetics | N/A | N/A |
| 6. Building owner non-responsive | N/A | N/A |
| 7. Building owner not willing/able to address health & safety work or deferrable conditions | N/A | N/A |
| C. Unknown | N/A | N/A |

a Total Buildings/Units Served includes buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or equipment.

b Total Buildings /Units Assessed includes buildings and/or units that received both an audit either in 2024 or prior and received at least one energy-saving upgrade or equipment in 2024.

Most market rate properties that qualified for heat pumps were deferred to a future year (Table 182). Multifamily Initiatives staff noted that they have a pipeline for heat pump installations in market rate properties in 2025.

Table 182. Reasons Heat Pump Not Installed in Market Rate Multifamily Initiative Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Electrically Heated Buildings/Units Servedab | 139 | 1,551 |
| Total Electrically Heated Buildings/Units Assessedc | 139 | 1,551 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Heat Pumps | 5 | 50 |
| Did Not Install Heat Pumps | 134 | 1,501 |
| A. Not qualified for measures | 2 | 9 |
| 1. Measure already there/already upgraded | 2 | 9 |
| 2. Not cost-effective | 0 | 0 |
| 3. No good location or space | 0 | 0 |
| B. Qualified and offered measures but didn't install | 77 | 702 |
| 1. Building owner not willing to make co-pay | 3 | 18 |
| 2. Building owner sees no benefit | 0 | 0 |
| 3. Building owner will not accept disruption | 0 | 0 |
| 4. Deferring to a future year | 74 | 684 |
| 5. Building owner dislikes aesthetics | 0 | 0 |
| 6. Building owner non-responsive | 0 | 0 |
| 7. Building owner not willing/able to address health & safety work or deferrable conditions | 0 | 0 |
| 8. Desired heat pump does not meet program specification requirements | 0 | 0 |
| Unknownd | 55 | 790 |

a Total Buildings/Units Served includes electrically heated buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or equipment.

b There are participants for whom the channel or initiative is unknown or blank. As such, actual building and apartment counts may be larger than reported.

c Total Buildings/Units Assessed include electrically heated buildings and/or units that received an audit either in 2024 or before and received at least one energy-saving upgrade or equipment in 2024.

d Data indicating reasons for not installing heat pumps were not recorded or required prior to 2024; hence, data for properties that were audited prior to 2024 are either limited or unavailable.

Public Housing Initiative

The majority of the 64 public housing properties served by the Public Housing Initiative in 2024 consist of 20 tenant units or less, while 10 properties have 50 or more tenant units (Table 183).

Table 183. Public Housing Initiative Building Types Treated

|  |  |  |  |
| --- | --- | --- | --- |
| Building Size | Number of Properties | Number of Buildings | Number of Tenant Units |
| Buildings < 20 Units | 46 | 143 | 452 |
| Buildings 20 – 49 Units | 8 | 65 | 235 |
| Buildings ≥ 50 Units | 10 | 149 | 704 |

Note: The program tracking data lacks data to accurately identify properties, buildings, and/or tenant units that have primary central heating systems or individual heating systems. As such, this table reports on the total number of properties, buildings, and tenant units.

The most common measures provided to Public Housing Initiative participants were direct install in-unit measures, followed by heat pumps, and building envelope measures (Table 184).

Table 184. 2024 Public Housing Initiative Participating Buildings and Tenant Units by Measure

|  |  |  |
| --- | --- | --- |
| Measure Category | Number of Buildingsa | Number of Tenant Unitsb |
| Total Participants | 357 | 1,391 |
| Total Participants w/ Electric Heat | 207 | 810 |
|  | | |
| Air Purifier | 0 | 0 |
| Direct Install In-Unit | 280 | 995 |
| Common Area Lighting | 19 | 64 |
| Heat Pumps | 39 | 51 |
| Air Sealing | 28 | 90 |
| Attic Insulation | 28 | 90 |
| Other (Window Inserts) | 1 | 12 |
| Gas Heating System Replacements | 0 | 0 |
| Heat Pump Water Heaters | 0 | 0 |
| Other HVAC Equipment Measures | 0 | 0 |
| Other Insulation | 0 | 0 |

a The sum of the counts by measure will not add up to the total participants as some participating properties received more than one type of measure.

Of the 357 public housing properties assessed, 28 received air sealing and/or insulation measures. This is largely due to the prevalence of air sealing and insulation measures in public housing properties. As shown in Table 185, 116 public housing buildings did not qualify for building envelope measures as the measures were already installed or upgraded. Other reasons for the lack of installation of building envelope measures include deferment to a future year for buildings that qualified and cost-effectiveness reasons for buildings that did not qualify.

Table 185. Reasons Building Envelope Measures Not Installed in Public Housing Initiative Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Buildings/Units Serveda | 1,165 | 6,527 |
| Total Buildings/Units Assessedb | 357 | 1,391 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Insulation/Air Sealing Measures | 28 | 90 |
| Did Not Install Insulation/Air Sealing Measures | 329 | 1,301 |
| A. Not qualified for measures | 167 | 848 |
| 1. Measure already there/already upgraded | 116 | 408 |
| 2. Not cost-effective | 34 | 78 |
| 3. Cannot access attic or other space | 11 | 38 |
| 4. Not applicable (e.g., no attic) | 6 | 324 |
| 5. Health and safety cost too high or extensive | 0 | 0 |
| B. Qualified and offered measure, but didn't install | 69 | 202 |
| 1. Building owner not willing to make co-pay | 0 | 0 |
| 2. Building owner sees no benefit | 0 | 0 |
| 3. Building owner will not accept disruption | 0 | 0 |
| 4. Deferring to a future year | 69 | 202 |
| 5. Building owner dislikes aesthetics | 0 | 0 |
| 6. Building owner non-responsive | 0 | 0 |
| 7. Building owner not willing/able to address health & safety work or deferrable conditions | 0 | 0 |
| C. Unknownc | 93 | 251 |

a Total Buildings/Units Served includes buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or equipment.

b Total Buildings/Units Assessed includes buildings and/or units that received both an audit either in 2024 or prior and received at least one energy-saving upgrade or equipment in 2024.

In 2024, 39 public housing buildings with electric heating installed heat pumps despite the number of buildings that qualified for heat pumps. The main reason for the limited installation of heat pumps in eligible buildings is the cost, as most building owners were unwilling to make the co-pay. Additionally, 38 buildings that qualified were deferred to a future year.

Table 186. Reasons Heat Pump Not Installed in Public Housing Initiative Properties

|  |  |  |
| --- | --- | --- |
|  | Number of Buildings | Number of Tenant Units |
| Total Electrically Heated Buildings/Units Servedab | 272 | 1,267 |
| Total Electrically Heated Buildings/Units Assessedc | 207 | 810 |
| *Note: The following data are associated with buildings served with a Multifamily Energy Savings assessment.* | | |
| Installed Heat Pumps | 39 | 51 |
| Did Not Install Heat Pumps | 168 | 759 |
| A. Not qualified for measures | 21 | 63 |
| 1. Measure already there/already upgraded | 13 | 48 |
| 2. Not cost-effective | 8 | 15 |
| 3. No good location or space | 0 | 0 |
| B. Qualified and offered measures, but didn't install | 142 | 543 |
| 1. Building owner not willing to make co-pay | 104 | 279 |
| 2. Building owner sees no benefit | 0 | 0 |
| 3. Building owner will not accept disruption | 0 | 0 |
| 4. Deferring to a future year | 38 | 264 |
| 5. Building owner dislikes aesthetics | 0 | 0 |
| 6. Building owner non-responsive | 0 | 0 |
| 7. Building owner not willing/able to address Health & Safety work or deferrable conditions | 0 | 0 |
| 8. Desired heat pump does not meet program specification requirements | 0 | 0 |
| Unknownd | 5 | 153 |

a Total Buildings/Units Served includes electrically heated buildings and/or apartment units that only received an energy audit in 2024, as well as buildings and/or units that received at least one energy-saving upgrade or equipment.

b There are participants for whom the channel or initiative is unknown or blank. As such, actual building and apartment counts may be larger than reported.

c Total Buildings/Units Assessed include electrically heated buildings and/or units that received both an audit either in 2024 or before and received at least one energy-saving upgrade or equipment in 2024.

d Data indicating reasons for not installing heat pumps were not recorded or required prior to 2024; hence, data for properties that were audited prior to 2024 are either limited or unavailable.

1. Income Qualified Initiative Participation Summaries

Presented at stakeholder request, Table 187 through Table 191 provide a detailed summary of measures received by participants in the Single Family, CAA, Joint Utility, MHAS, and Healthier Homes channels of the 2024 IQ Initiative, with an explicit focus on characterizing the percentage of participants in each channel that received a given measure. For the MHAS channel, the base includes customers who only received Mobile Home kits (in order to properly characterize what proportion of channel participants received non-kit measures), but the kit measures are not presented below. Kit Initiatives participation by measure is documented in Appendix F.

Table 187. 2024 Detailed Single Family Channel Participation Summary

| Measure | IL-TRM Measure Name | Participants Receiving Measure | % Participants Receiving Measure (N=3,018) | Total Quantity | Unit | Average Quantity per Participant Receiving |
| --- | --- | --- | --- | --- | --- | --- |
| Air Purifier Fan | ENERGY STAR Air Purifier/Cleaner | 1,442 | 48% | 2,884 | Fans | 2 |
| Air Source Heat Pump (ER) | Air Source Heat Pump (Centrally Ducted and Ductless) | 88 | 3% | 90 | Systems | 1 |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 1,561 | 52% | 9,278 | Bulbs | 6 |
| Air Sealing | Air Sealing | 790 | 26% | 691,686 | CFM | 876 |
| Central AC (ER) | Central Air Conditioning | 160 | 5% | 161 | Systems | 1 |
| BPM Motor | Furnace Blower Motor | 518 | 17% | 529 | Motors | 1 |
| Attic Insulation | Ceiling/Attic Insulation | 773 | 26% | 836,680 | Square Feet | 1,082 |
| Advanced Power Strip | Advanced Power Strip - Tier 1 | 2,296 | 76% | 4,336 | Strips | 2 |
| Crawl Space Insulation | Basement Sidewall Insulation | 375 | 12% | 43,169 | Square Feet | 115 |
| Heat Pump Water Heater | Heat Pump Water Heaters | 87 | 3% | 87 | Systems | 1 |
| Advanced Thermostat | Advanced Thermostats | 604 | 20% | 603 | Thermostats | 1 |
| Bathroom Exhaust Fan | High Efficiency Bathroom Exhaust Fan | 726 | 24% | 727 | Fans | 1 |
| Ductless Heat Pump | Air Source Heat Pump (Centrally Ducted and Ductless) | 19 | 1% | 21 | Systems | 1 |
| Specialty LED | LED Specialty Lamps | 883 | 29% | 4,788 | Bulbs | 5 |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 1,177 | 39% | 9,616 | Linear Feet | 8 |
| Wall Insulation | Wall Insulation | 161 | 5% | 152,979 | Square Feet | 950 |
| Faucet Aerator | Low Flow Faucet Aerators | 828 | 27% | 1,309 | Aerators | 2 |
| Rim Joist Insulation | Rim/Band Joist Insulation | 598 | 20% | 72,834 | Linear Feet | 122 |
| Low Flow Showerhead | Low Flow Showerheads | 470 | 16% | 518 | Showerheads | 1 |
| Duct Sealing | Duct Insulation and Sealing | 18 | 1% | 18 | Participants | 1 |
| Air Source Heat Pump (TOS) | Air Source Heat Pump (Centrally Ducted and Ductless) | 8 | <1% | 8 | Systems | 1 |
| Room Air Conditioner (ER) | Income Qualified: ENERGY STAR and CEE Tier 2 Room Air Conditioner | 7 | <1% | 13 | Systems | 2 |
| Knee Wall Insulation | Wall Insulation | 79 | 3% | 17,481 | Square Feet | 221 |
| Door Sweep | Air Sealing | 74 | 2% | 121 | Door Sweeps | 2 |
| Central AC (TOS) | Central Air Conditioning | 4 | <1% | 7 | Systems | 2 |
| Smart Socket | Smart Sockets | 9 | <1% | 14 | Sockets | 2 |
| Induction Range | Residential Induction Cooktop | 1 | <1% | 1 | Ranges | 1 |
| High Efficiency Gas Furnace (ER) | Gas High Efficiency Furnace | 533 | 18% | 543 | Systems | 1 |
| High Efficiency Gas Furnace (TOS) | Gas High Efficiency Furnace | 153 | 5% | 153 | Systems | 1 |
| Gas High Efficiency Boiler (ER) | Gas High Efficiency Boiler | 17 | 1% | 17 | Systems | 1 |
| Gas Water Heater | Gas Water Heater | 37 | 1% | 37 | Systems | 1 |
| Gas High Efficiency Boiler (TOS) | Gas High Efficiency Boiler | 2 | <1% | 2 | Systems | 1 |
| Tree Planting | Tree Planting | 2 | <1% | 2 | Trees Planted | 1 |
| Total |  |  |  | 1,850,712 |  |  |

Table 188. 2024 Detailed CAA Channel Participation Summary

| Measure | IL-TRM Measure Name | Participants Receiving Measure | % Participants Receiving Measure (N=216) | Total Quantity | Unit | Average Quantity per Participant Receiving |
| --- | --- | --- | --- | --- | --- | --- |
| Air Sealing | Air Sealing | 198 | 92% | 405,369 | CFM | 2,047 |
| Attic Insulation | Ceiling/Attic Insulation | 165 | 76% | 169,283 | Square Feet | 1,026 |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 180 | 83% | 3,178 | Bulbs | 18 |
| Air Source Heat Pump (ER) | Air Source Heat Pump (Centrally Ducted and Ductless) | 12 | 6% | 12 | Systems | 1 |
| BPM Motor | Furnace Blower Motor | 111 | 51% | 115 | Motors | 1 |
| Crawl Space Insulation | Basement Sidewall Insulation | 103 | 48% | 12,940 | Square Feet | 126 |
| Bathroom Exhaust Fan | High Efficiency Bathroom Exhaust Fan | 170 | 79% | 182 | Fans | 1 |
| PTHP | Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP) | 1 | <1% | 12 | Systems | 12 |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 117 | 54% | 1,628 | Linear Feet | 14 |
| Heat Pump Water Heater | Heat Pump Water Heaters | 11 | 5% | 11 | Systems | 1 |
| Floor Insulation | Floor Insulation Above Crawlspace | 31 | 14% | 30,892 | Square Feet | 997 |
| Low Flow Showerhead | Low Flow Showerheads | 65 | 30% | 91 | Showerheads | 1 |
| Wall Insulation | Wall Insulation | 49 | 23% | 39,553 | Square Feet | 807 |
| Faucet Aerator | Low Flow Faucet Aerators | 101 | 47% | 183 | Aerators | 2 |
| Rim Joist Insulation | Rim/Band Joist Insulation | 138 | 64% | 18,221 | Linear Feet | 132 |
| Specialty LED | LED Specialty Lamps | 31 | 14% | 245 | Bulbs | 8 |
| Advanced Thermostat | Advanced Thermostats | 18 | 8% | 18 | Thermostats | 1 |
| Room Air Conditioner (ER) | Income Qualified: ENERGY STAR and CEE Tier 2 Room Air Conditioner | 4 | 2% | 4 | Systems | 1 |
| Door Sweep | Air Sealing | 1 | <1% | 15 | Door Sweeps | 15 |
| Knee Wall Insulation | Wall Insulation | 14 | 6% | 5,144 | Square Feet | 367 |
| Caulking | Air Sealing | 1 | <1% | 173 | Linear Feet | 173 |
| Ductless Heat Pump | Air Source Heat Pump (Centrally Ducted and Ductless) | 1 | <1% | 1 | Systems | 1 |
| Air Source Heat Pump (TOS) | Air Source Heat Pump (Centrally Ducted and Ductless) | 1 | <1% | 1 | Systems | 1 |
| High Efficiency Gas Furnace (ER) | Gas High Efficiency Furnace | 117 | 54% | 121 | Systems | 1 |
| Gas High Efficiency Boiler (ER) | Gas High Efficiency Boiler | 6 | 3% | 6 | Systems | 1 |
| Gas Water Heater | Gas Water Heater | 5 | 2% | 5 | Systems | 1 |
| High Efficiency Gas Furnace (TOS) | Gas High Efficiency Furnace | 3 | 1% | 3 | Systems | 1 |
| Total |  |  |  | 687,406 |  |  |

Table 189. 2024 Detailed Joint Utility Channel Participation Summary

| Measure | IL-TRM Measure Name | Participants Receiving Measure | % Participants Receiving Measure (N=99) | Total Quantity | Unit | Average Quantity per Participant Receiving |
| --- | --- | --- | --- | --- | --- | --- |
| Duct Sealing | Duct Insulation and Sealing | 92 | 93% | 92 | Participants | 1 |
| Air Sealing | Air Sealing | 90 | 91% | 111,425 | CFM | 1,238 |
| Advanced Power Strip | Advanced Power Strip - Tier 1 | 69 | 70% | 112 | Strips | 2 |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 43 | 43% | 245 | Bulbs | 6 |
| Advanced Thermostat | Advanced Thermostats | 35 | 35% | 36 | Thermostats | 1 |
| Smart Socket | Smart Sockets | 55 | 56% | 109 | Sockets | 2 |
| Attic Insulation | Ceiling/Attic Insulation | 16 | 16% | 17,152 | Square Feet | 1,072 |
| Floor Insulation | Floor Insulation Above Crawlspace | 14 | 14% | 17,004 | Square Feet | 1,215 |
| LED Fixtures | LED Fixtures | 51 | 52% | 79 | Fixtures | 2 |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 5 | 5% | 39 | Linear Feet | 8 |
| Specialty LED | LED Specialty Lamps | 11 | 11% | 33 | Bulbs | 3 |
| Faucet Aerator | Low Flow Faucet Aerators | 58 | 59% | 96 | Aerators | 2 |
| Low Flow Showerhead | Low Flow Showerheads | 43 | 43% | 47 | Showerheads | 1 |
| Wall Insulation | Wall Insulation | 3 | 3% | 1,211 | Square Feet | 404 |
| Rim Joist Insulation | Rim/Band Joist Insulation | 3 | 3% | 369 | Linear Feet | 123 |
| Total |  |  |  | 148,049 |  |  |

Table 190. 2024 Detailed MHAS Channel Participation Summary

| Measure | IL-TRM Measure Name | Participants Receiving Measure | % Participants Receiving Measure (N=344) | Total Quantity | Unit | Average Quantity per Participant Receiving |
| --- | --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER) | Air Source Heat Pump (Centrally Ducted and Ductless) | 11 | 3% | 11 | Systems | 1 |
| Floor Insulation | Floor Insulation Above Crawlspace | 74 | 22% | 81,338 | Square Feet | 1,099 |
| Air Sealing | Air Sealing | 100 | 29% | 99,751 | CFM | 998 |
| BPM Motor | Furnace Blower Motor | 70 | 20% | 70 | Motors | 1 |
| Advanced Thermostat | Advanced Thermostats | 76 | 22% | 76 | Thermostats | 1 |
| Ductless Heat Pump | Air Source Heat Pump (Centrally Ducted and Ductless) | 1 | <1% | 1 | Systems | 1 |
| Bathroom Exhaust Fan | High Efficiency Bathroom Exhaust Fan | 38 | 11% | 38 | Fans | 1 |
| Heat Pump Water Heater | Heat Pump Water Heaters | 1 | 0% | 1 | Systems | 1 |
| Crawl Space Insulation | Basement Sidewall Insulation | 3 | 1% | 738 | Square Feet | 246 |
| High Efficiency Gas Furnace (ER) | Gas High Efficiency Furnace | 72 | 21% | 72 | Systems | 1 |
| High Efficiency Gas Furnace (TOS) | Gas High Efficiency Furnace | 2 | 1% | 2 | Systems | 1 |
| Total |  |  |  | 182,098 |  |  |

Table 191. 2024 Detailed Healthier Homes Channel Participation Summary

| Measure | IL-TRM Measure Name | Participants Receiving Measure | % Participants Receiving Measure (N=16) | Total Quantity | Unit | Average Quantity per Participant Receiving |
| --- | --- | --- | --- | --- | --- | --- |
| Central AC ER | Central Air Conditioning | 5 | 31% | 5 | Systems | 1 |
| BPM Motor | Furnace Blower Motor | 12 | 75% | 12 | Motors | 1 |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 12 | 75% | 118 | Bulbs | 10 |
| Air Sealing | Air Sealing | 13 | 81% | 22,859 | CFM | 1,758 |
| Attic Insulation | Ceiling/Attic Insulation | 12 | 75% | 10,969 | Square Feet | 914 |
| Bathroom Exhaust Fan | High Efficiency Bathroom Exhaust Fan | 10 | 63% | 10 | Fans | 1 |
| Advanced Thermostat | Advanced Thermostats | 11 | 69% | 11 | Thermostats | 1 |
| Specialty LED | LED Specialty Lamps | 4 | 25% | 51 | Bulbs | 13 |
| Crawl Space Insulation | Basement Sidewall Insulation | 7 | 44% | 551 | Square Feet | 79 |
| Wall Insulation | Wall Insulation | 6 | 38% | 4,686 | Square Feet | 781 |
| Advanced Power Strip | Advanced Power Strip - Tier 1 | 8 | 50% | 10 | Power Strips | 1 |
| Ductless Heat Pump TOS | Air Source Heat Pump (Centrally Ducted and Ductless) | 1 | 6% | 1 | Systems | 1 |
| Central AC TOS | Central Air Conditioning | 2 | 13% | 2 | Systems | 1 |
| Duct Sealing | Duct Insulation and Sealing | 1 | 6% | 1 | Systems | 1 |
| Connected LED | Connected LED Lamps | 1 | 6% | 7 | Bulbs | 7 |
| Rim Joist Insulation | Rim/Band Joist Insulation | 11 | 69% | 1,214 | Square Feet | 110 |
| Knee Wall Insulation | Wall Insulation | 4 | 25% | 1,044 | Square Feet | 261 |
| Faucet Aerator | Low Flow Faucet Aerators | 6 | 38% | 7 | Aerators | 1 |
| Low Flow Showerhead | Low Flow Showerheads | 4 | 25% | 4 | Showerheads | 1 |
| Gas Furnace ER | Gas High Efficiency Furnace | 12 | 75% | 12 | Systems | 1 |
| Gas Boiler ER | Gas High Efficiency Boiler | 1 | 6% | 1 | Systems | 1 |
| Water Heater | Gas Water Heater | 1 | 6% | 1 | Systems | 1 |
| Total |  |  |  | **41,576** |  |  |

1. Kits Initiatives Participation Summaries

Table 192 through Table 197 summarize participation, by measure, for the Kits Initiatives, by channel and kit.

Table 192. School Kits Channel Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Full School Kits |  |  |  |
| Specialty LED | LED Specialty Lamps | 38,000 | Lamps |
| Showerhead | Low Flow Showerheads | 9,500 | Showerheads |
| Kitchen Faucet Aerator | Low Flow Faucet Aerators | 9,500 | Aerators |
| Shower Timer | Shower Timer | 9,500 | Shower timers |
| Advanced Power Strip - Tier 1 | Advanced Power Strip – Tier 1 | 9,500 | Power strips |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 28,500 | Linear feet |
| Door Sweep | Air Sealing | 9,500 | Door sweeps |
| Weatherstripping | Air Sealing | 161,500 | Linear feet |
| Bathroom Faucet Aerator | Low Flow Faucet Aerators | 9,500 | Aerators |
| Connected LED | Connected LED Lamps | 400 | Lamps |
| Full School Kits Total | | 285,400 | N/A |
| Joint Utility School Kits |  |  |  |
| Specialty LED | LED Specialty Lamps | 6,000 | Lamps |
| Showerhead | Low Flow Showerheads | 1,500 | Showerheads |
| Advanced Power Strip - Tier 1 | Advanced Power Strip – Tier 1 | 1,500 | Power strips |
| Kitchen Faucet Aerator | Low Flow Faucet Aerators | 1,500 | Aerators |
| Shower Timer | Shower Timer | 1,500 | Shower timers |
| Weatherstripping | Air Sealing | 25,500 | Linear feet |
| Door Sweep | Air Sealing | 1,500 | Door sweeps |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 4,500 | Linear feet |
| Outlet Gaskets | Air Sealing | 15,000 | Gaskets |
| Bathroom Faucet Aerator | Low Flow Faucet Aerators | 1,500 | Aerators |
| Joint Utility School Kits Total | | 60,000 | N/A |

Table 193. High School Innovation Channel Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Specialty LED | LED Specialty Lamps | 7,539 | Lamps |
| Showerhead | Low Flow Showerheads | 2,513 | Showerheads |
| LED Desk Lamp | LED Fixtures | 2,513 | Desk lamps |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 7,539 | Linear feet |
| Weatherstripping | Air Sealing | 42,721 | Linear feet |
| Outlet Gaskets | Air Sealing | 25,130 | Gaskets |
| Bathroom Faucet Aerator | Low Flow Faucet Aerators | 2,513 | Aerators |
| Total | | 90,468 | N/A |

Table 194. IQ Community Kit Channel Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 24,700 | Lamps |
| Advanced Power Strip - Tier 1 | Advanced Power Strip – Tier 1 | 3,000 | Power strips |
| Showerhead | Low Flow Showerheads | 6,000 | showerheads |
| Pipe Insulation | Domestic Hot Water Pipe Insulation | 18,000 | Linear feet |
| Kitchen Faucet Aerator | Low Flow Faucet Aerators | 3,000 | Aerators |
| Door Sweep | Air Sealing | 3,000 | Door sweeps |
| Bathroom Faucet Aerator | Low Flow Faucet Aerators | 6,000 | Aerators |
| Total | | 63,700 | N/A |

Table 195. Mobile Home Kit Channel Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 3,960 | Lamps |
| Advanced Power Strip - Tier 1 | Advanced Power Strip – Tier 1 | 330 | Power strips |
| Showerhead | Low Flow Showerheads | 330 | Showerheads |
| Kitchen Faucet Aerator | Low Flow Faucet Aerators | 330 | Aerators |
| Thermostatic Restrictor Shower Valve | Thermostatic Restrictor Shower Valve | 330 | Valves |
| Bathroom Faucet Aerator | Low Flow Faucet Aerators | 330 | Aerators |
| Total | | 5,610 | N/A |

Table 196. BN Community Kit Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Specialty LED | LED Specialty Lamps | 230 | Lamps |
| Smart Socket | Smart Sockets | 460 | Sockets |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 690 | Lamps |
| Advanced Power Strip - Tier 1 | Advanced Power Strip – Tier 1 | 230 | Power strips |
| Connected LED | Connected LED Lamps | 230 | Lamps |
| LED Desk Lamp | LED Fixtures | 230 | Desk lamps |
| Total | | 2,070 | N/A |

Table 197. Food Bank Holiday Kit Participation Summary

| Measure Category | IL-TRM Measure Name | Measure Quantity | Units |
| --- | --- | --- | --- |
| Standard LED | LED Screw Based Omnidirectional Bulbs | 28,000 | Lamps |
| Smart Socket | Smart Sockets | 14,000 | Sockets |
| Total | | 42,000 | N/A |

1. (B-27) Electrification Reporting

As directed by statute, each year AIC must make an annual informational filing to the Commission in which it shall:

*“identify the specific electrification measures offered under this subsection (b-27); the quantity of each electrification measure that was installed by its customers; the average total cost, average utility cost, average reduction in fossil fuel consumption, and average increase in electricity consumption associated with each electrification measure; the portion of installations of each electrification measure that were in low-income single-family housing, low-income multifamily housing, non-low-income single-family housing, non-low-income multifamily housing, commercial buildings, and industrial facilities; and the quantity of savings associated with each measure category in each customer category that are being counted toward the utility's applicable annual total savings requirement.”[[39]](#footnote-39)*

This appendix summarizes the required information to be included in the informational filing based on evaluated results for 2024.

Table 198. Electrification Measures – Measures Offered and Quantities Installed

| Measure Category | Measure Quantity | Units | Customers Receiving Measure |
| --- | --- | --- | --- |
| Air Source Heat Pump (ER) | 12 | # of systems | 11 |
| Ductless Heat Pump | 1 | # of systems | 1 |
| Heat Pump Water Heater (ER) | 14 | # of systems | 13 |
| Heat Pump Dryer | 1 | # of dryers | 1 |
| Induction Cooktop | 4 | # of cooktops | 4 |
| Other Necessary Improvementsa | 10 | # of homes | 10 |

a Non-energy-saving improvements required to complete electrification; e.g. electric service or panel upgrades and/or new wiring.

Table 199. Electrification Measures – Costs and Energy Changes

| Measure Category | Average Total Cost | Average Utility Cost | Average Annual Reduction in Fossil Fuel Consumption (Therms) | Average Annual Increase in Electric Consumption (kWh) |
| --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER) | $11,717.85 | $11,717.85 | 941 | 10,124 |
| Ductless Heat Pump | $8,335.00 | $8,335.00 | 427 | 4,256 |
| Heat Pump Water Heater (ER) | $4,957.14 | $4,957.14 | 171 | 805 |
| Heat Pump Dryer | $2,100.00 | $2,100.00 | 24 | 467 |
| Induction Cooktop | $2,589.75 | $2,589.75 | 21 | 283 |
| Other Necessary Improvements | $7,528.39 | $7,528.39 | N/A | N/A |

Notes: Values are expressed on a per measure basis.

Savings in this table include subsection (b-27) savings only and do not include efficiency savings associated with measures presented in this section.

Table 200. Electrification Measures – Share of Measures Installed by Customer Category

| Measure Category | Low-Income Single-Family Housing | Low-Income Multifamily Housing | Non Low-Income Single-Family Housing | Non Low-Income Multifamily Housing | Commercial Buildings | Industrial Facilities |
| --- | --- | --- | --- | --- | --- | --- |
| Air Source Heat Pump (ER) | 100% | 0% | 0% | 0% | 0% | 0% |
| Ductless Heat Pump | 100% | 0% | 0% | 0% | 0% | 0% |
| Heat Pump Water Heater (ER) | 100% | 0% | 0% | 0% | 0% | 0% |
| Heat Pump Dryer | 100% | 0% | 0% | 0% | 0% | 0% |
| Induction Cooktop | 100% | 0% | 0% | 0% | 0% | 0% |

Table 201. Electrification Measures – Savings Being Counted Toward AATS

| Measure Category | Savings Counted Toward Applicable Annual Total Savings Requirement (kWh) |
| --- | --- |
| Air Source Heat Pump (ER) | 191,901 |
| Ductless Heat Pump | 8,259 |
| Heat Pump Water Heater (ER) | 59,080 |
| Heat Pump Dryer | 240 |
| Induction Cooktop | 1,367 |
| Total | 260,846 |

Note: Savings in this table include subsection (b-27) savings only and do not include efficiency savings associated with measures presented in this section.

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Description automatically generated

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1. Illinois Energy Efficiency Stakeholder Advisory Group. *Weighted Average Measure Life Report.* 2018. Accessed at <https://www.ilsag.info/wp-content/uploads/SAG_files/SAG_Reports/SAG_WAML_Report_Final_2-20-18.pdf>. [↑](#footnote-ref-1)
2. Ibid. [↑](#footnote-ref-2)
3. The annual total savings requirement is the AAIG plus the additional savings that need to be acquired on an annual basis to replace any savings from measures at the end of their measure life before progress can be counted toward AAIG. [↑](#footnote-ref-3)
4. Prior to the passage of CEJA, the (b-25) savings conversion was capped at 10% of AAIG, rather than the annual total savings requirement. [↑](#footnote-ref-4)
5. Opinion Dynamics. *Ameren Illinois Company Energy Efficiency Portfolio 2024 Net-to-Gross Ratios*. Accessed at: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2024/>. [↑](#footnote-ref-5)
6. The process of computing savings from the residential NPSO adder is complex. See Section 2.3.1 for more detail. [↑](#footnote-ref-6)
7. In future years, the evaluation team will apply updated versions of these manuals to the evaluation of this Program as required by law, Illinois Commerce Commission orders, and changes to the manuals themselves. [↑](#footnote-ref-7)
8. Due to changes made to lighting measures in IL-TRM V11.0, the IL-TRM V10.0 and IL-TRM V10.0 errata memo is the final reference source for key lighting assumptions necessary for remaining carryover from certain lighting measures sold prior to 2023. [↑](#footnote-ref-8)
9. Opinion Dynamics. *Ameren Illinois Company Lighting Carryover Savings Claimable in 2024*. Accessed at <https://www.ilsag.info/wp-content/uploads/AIC-2024-Lighting-Carryover-Savings-Memo-FINAL-2025-01-21.pdf>. [↑](#footnote-ref-9)
10. *Illinois Energy Efficiency Policy Manual V3.0,* Section 7.4. Accessed at <https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf>. [↑](#footnote-ref-10)
11. Ibid. [↑](#footnote-ref-11)
12. Opinion Dynamics. *Overview of Disadvantaged Areas Net-to-Gross Tracking for Ameren Illinois*. Accessed at <https://www.ilsag.info/wp-content/uploads/SAG-NTGR-for-Disadvantaged-Areas-Presentation_ODC_2024-07-17.pdf>. [↑](#footnote-ref-12)
13. Opinion Dynamics. *Ameren Illinois Company Energy Efficiency Portfolio 2024 Net-to-Gross Ratios*. Accessed at: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2024/>. [↑](#footnote-ref-13)
14. For the Market Rate Single Family Initiative’s Midstream HVAC channel, we also estimated net savings associated with market effects resulting from channel influences on sales of non-incentivized energy-efficient equipment, which relied on supplementary distributor sales data and primary research with distributors and contractors. [↑](#footnote-ref-14)
15. All product or company names that may be mentioned in this publication are tradenames, trademarks, or registered trademarks of their respective owners. [↑](#footnote-ref-15)
16. These values do not include fossil fuel impacts captured as part of IQ electrification efforts. [↑](#footnote-ref-16)
17. While not depicted in Table 22, 1,013 customers received health and safety measures that may enable them to qualify for additional future upgrades. [↑](#footnote-ref-17)
18. The application of the converted EER2 value instead of the IL-TRM V12.0 EER2 value also impacted Central AC (ER), though the impact on savings was negligible. [↑](#footnote-ref-18)
19. While not depicted in Table 27, 190 customers also received health and safety services. [↑](#footnote-ref-19)
20. The misapplication of single-family assumptions for multifamily projects also impacted Standard LEDs, Specialty LEDs, and LED Fixtures, though the impact on savings was negligible. [↑](#footnote-ref-20)
21. CBOs include CAAs and other nonprofit community organizations. Historically, AIC has established the majority of channel partnerships through existing industry relationship. [↑](#footnote-ref-21)
22. Eligibility requires (1) residing in mobile home with AIC electric service and (2) using propane as a primary fuel source. [↑](#footnote-ref-22)
23. The same discrepancy also affected floor insulation, air sealing, and BPM motors, though the impact on savings was limited. [↑](#footnote-ref-23)
24. . These additional measures align with the Healthy Homes principles provided by the U.S. Department of Housing and Urban Development (HUD). [↑](#footnote-ref-24)
25. This is also the driver of the realization rates for Attic Insulation and Rim Joist Insulation. [↑](#footnote-ref-25)
26. See 220 ILCS 5/8-103B(b-27). [↑](#footnote-ref-26)
27. Illinois Energy Efficiency Stakeholder Advisory Group*. Illinois Energy Efficiency Policy Manual Version 3.0,* Section 12.3. 2023. Accessed at <https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf>. [↑](#footnote-ref-27)
28. Illinois Energy Efficiency Stakeholder Advisory Group. *Illinois Energy Efficiency Policy Manual Version 3.0*, Section 11.3 Counting Fossil Fuel Savings Toward Electric Savings Goals. 2023. Accessed at <https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf>. [↑](#footnote-ref-28)
29. In 2024, the Illinois Program Administrators and non-financially interested stakeholders reached an agreement on a set of IQ Multifamily metrics that each utility must report on annually. The new IQ Multifamily metrics for multifamily reporting are described in this document: <https://www.ilsag.info/wp-content/uploads/IQ-Multi-Family-Reporting-Metrics_FINAL-Clean-6-20-2024_v2.pdf>. [↑](#footnote-ref-29)
30. Note that while the stakeholders required new metrics specifically for the IQ Initiative, the evaluation team conducted the same analysis for the Market Rate Multifamily Initiative for consistency in reporting. [↑](#footnote-ref-30)
31. Verified net savings are inclusive of Midstream HVAC channel market effects savings of 1,597 MWh, 0.28 MW, and 18,603 therms. Initiative-level NTGR values are therefore inflated by the inclusion of market effect savings. [↑](#footnote-ref-31)
32. Opinion Dynamics. *Ameren Illinois (AIC) Residential Market Effects Evaluation Approach*. Presented at SAG Evaluation Working Group Meeting. Accessed at <https://www.ilsag.info/wp-content/uploads/AIC-Midstream-HVAC-Market-Effects-Evaluation-Approach_2024-07-16.pdf> [↑](#footnote-ref-32)
33. Opinion Dyanmics. *AIC 2024 Midstream HVAC Channel Market Effects and Process Research Findings Memorandum*. December 16, 2024. Accessed at<https://www.ilsag.info/wp-content/uploads/AIC-2024-Res-Midstream-HVAC-Market-Effects-and-Process-Memo_FINAL_2024-12-16.pdf> [↑](#footnote-ref-33)
34. *Illinois Energy Efficiency Policy Manual V3.0*, Section 7.7. Accessed at <https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf>. [↑](#footnote-ref-34)
35. AIC is, however, required to account for *electric* heating penalties resulting from the installation of energy efficiency measures designed to save electricity, and those effects are accounted for throughout this report. [↑](#footnote-ref-35)
36. 220 ILCS 5/8-103B(b-27). [↑](#footnote-ref-36)
37. Illinois Energy Efficiency Stakeholder Advisory Group*. Illinois Energy Efficiency Policy Manual Version 3.0*, Section 12.3. 2023. Accessed at <https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf> [↑](#footnote-ref-37)
38. Illinois Energy Efficiency Stakeholder Advisory Group*. Illinois Energy Efficiency Policy Manual Version 3.0*. “Income Qualified Multi-Family Reporting Principles Policy.” June 20,2024. Accessed at <https://www.ilsag.info/wp-content/uploads/IQ-Multi-Family-Reporting-Metrics_FINAL-Clean-6-20-2024_v2.pdf>. [↑](#footnote-ref-38)
39. 220 ILCS 5/8-103B(b-27). [↑](#footnote-ref-39)