Opinion Dynamics

AMEREN ILLINOIS COMPANY

2024 ENERGY EFFICIENCY PORTFOLIO COST-EFFECTIVENESS RESULTS

FINAL

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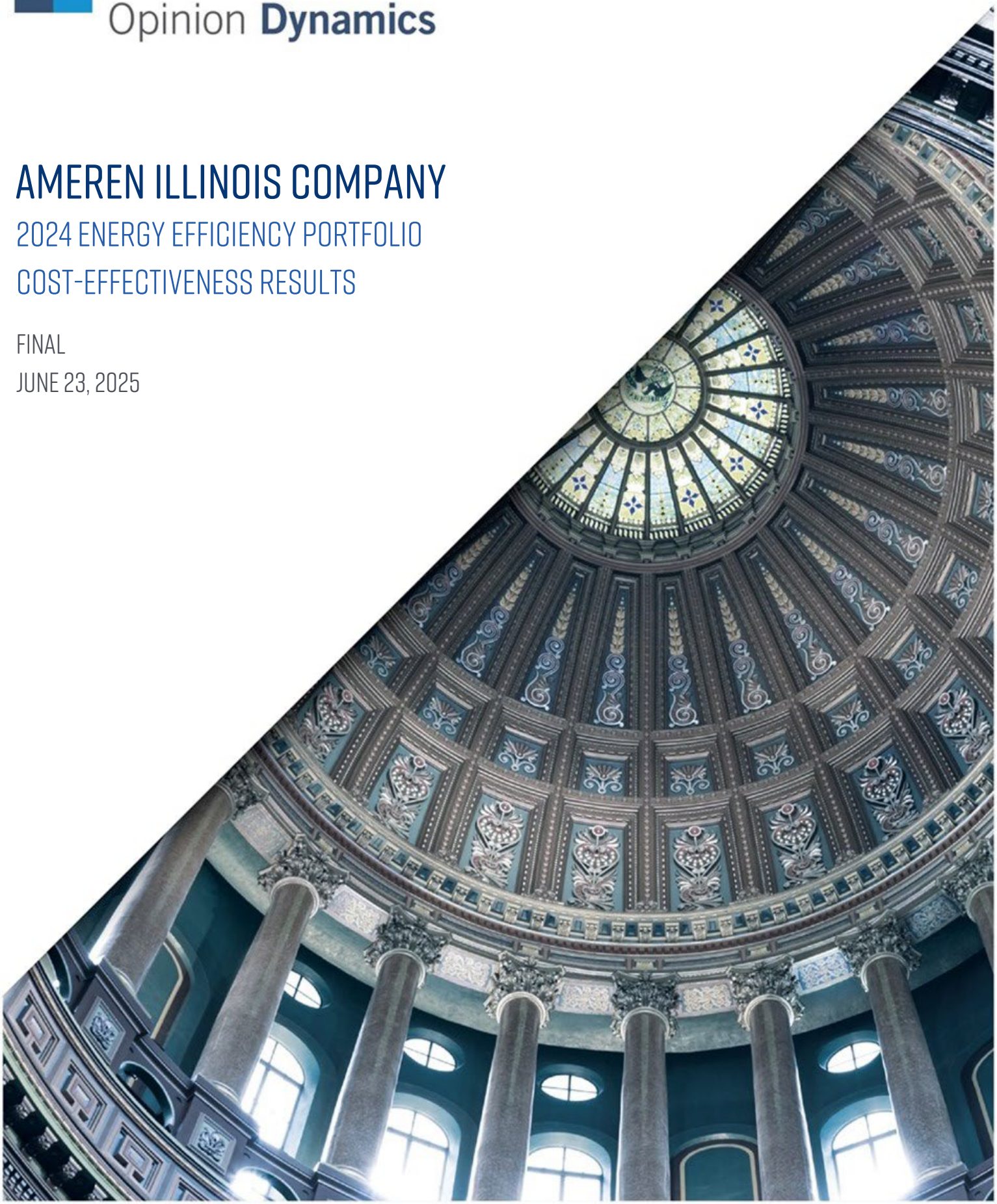

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I. EXECUTIVE SUMMARY

This report presents the results of cost-effectiveness testing conducted for Ameren Illinois Company's (AIC) portfolio of energy efficiency programs implemented during 2024.

I.1 BACKGROUND

Illinois state law directs utilities to operate cost-effective energy efficiency programs and to demonstrate that their energy efficiency portfolios are cost-effective using the Illinois Total Resource Cost (TRC) test. In accordance with the law, relevant Illinois Commerce Commission (ICC) orders, and policy developed by the Illinois Stakeholder Advisory Group (SAG), Opinion Dynamics conducted cost-effectiveness testing for AIC's 2024 portfolio of energy efficiency programs. Cost-effectiveness testing for the Illinois TRC presented in this report aligns with national standard practice, as well as directives presented in the Illinois Energy Efficiency Policy Manual Version 3.0, and incorporates information from AIC program tracking data, Opinion Dynamics' 2024 evaluations of AIC's portfolio and supporting information from the Illinois TRM (IL-TRM).

I.2 2024 COST-EFFECTIVENESS RESULTS

Opinion Dynamics used two tests to establish benefit-cost ratios for AIC's 2024 portfolio: the Illinois TRC test and the Program Administrator Cost (PAC) test. The tests are similar in most respects but consider slightly different benefits and costs in determining a benefit-cost ratio.

Illinois state legislation directs that cost-effectiveness testing for investment in energy efficiency or demand response should be conducted using the Illinois TRC test. The Illinois TRC considers the net present value of the total benefits of energy efficiency programs as compared to the total costs of energy efficiency programs. It takes a broad perspective, considering the net benefits that accrue to utilities, program participants, and society from the operation of the programs, and uses a societal discount rate to account for the time value of money.

Additionally, Illinois stakeholders have requested that cost-effectiveness testing also use the PAC test to provide additional context for directing future energy efficiency investments. The PAC analyzes the costs and benefits of energy efficiency investment from the perspective of AIC and does not consider benefits or costs that accrue to other entities in energy efficiency programs.

We report cost-effectiveness results separately for AIC's 2024 Residential and Business Programs and AIC's 2024 Voltage Optimization Program. The programs are funded through separate mechanisms and track spending separately, and therefore, separate cost-effectiveness results were deemed appropriate by the evaluation team. For clarity, throughout this report, when we refer to "AIC's 2024 energy efficiency portfolio," we are referencing AIC's 2024 portfolio excluding Voltage Optimization.

Overall, AIC's 2024 energy efficiency portfolio was cost-effective as defined by the Illinois TRC and PAC tests. Table 1 provides the Illinois TRC and PAC test benefit-cost ratios, calculated for the energy efficiency portfolio, the Residential and Business Programs, and the initiatives and channels that compose them.

Table 1. Illinois TRC and PAC Test Results for the 2024 AIC Energy Efficiency Portfolio

Program	Initiative	Channel	Illinois TRC Benefit-Cost Ratio	PAC Benefit-Cost Ratio
Residential	Retail Products	Retail Products	5.36	2.06
	Income Qualified	Retail Products	3.49	2.71
		Single Family	0.58[a]	0.27[a]
		CAA	0.70[b]	0.44[b]
		Multifamily	1.30	0.46
		Smart Savers	1.40	0.79
		Community Kits	4.75	1.32
		Healthier Homes	0.14	0.08
		New Construction	0.00	0.00
		Manufactured Homes	0.72	0.33
		Electrification	0.53	0.01
	Public Housing	Public Housing	0.92	0.31
	Multifamily - Market Rate	Multifamily - Market Rate	4.88	1.77
	Market Rate Single Family	Home Efficiency	1.24	0.67
		Midstream HVAC	1.76	1.69
	Direct Distribution	School Kits	20.60	12.88
		High School Innovation	4.57	0.67
	Market Transformation	Market Transformation	0.00[c]	0.00[c]
Residential Program Total			*2.23*	*1.12*
Business	Standard	Standard	4.28[d]	2.78[d]
	Custom	Custom	3.74[e]	2.11[e]
	Midstream	Lighting	3.12	3.77
		HVAC	0.69	0.38
		Food Service	3.78	1.58
	Small Business	Direct Install	3.42	1.39
		Energy Performance	1.01	0.47
	Retro-Commissioning	Retro-Commissioning	2.27	1.17
	Streetlighting	Municipality Owned	0.74	0.32
		Utility Owned	8.21	7.39
	Market Transformation	Market Transformation	0.00[h]	0.00[h]
Business Program Total			*3.71*	*2.31*
2024 AIC Energy Efficiency Portfolio			**2.69**	**1.43**
2024 AIC Energy Efficiency Portfolio (not including IQ)[g]			**3.17**	**1.78**

[a] Results for the Income Qualified Initiative's Single Family channel include costs and benefits for the Joint Utility offering that AIC co-funds with Nicor Gas. These results only include the costs and benefits associated with the AIC-funded portion of the offering.
[b] The Income Qualified Initiative's CAA channel is co-funded by AIC and the Illinois Department of Commerce and Economic Opportunity's Home Weatherization Assistance Program. These results only include the costs associated with the AIC-funded portion of the offering.
[c] The Residential Program's Market Transformation (MT) offerings did not produce quantifiable benefits in 2024 but did incur non-incentive costs for both electric and gas.
[d] Includes the Online Store and Building Operator Certification (BOC) channels.
[e] Includes all benefits and costs directly associated with the Custom Initiative.
[f] The Business Program's MT offerings did not produce quantifiable benefits in 2024 but did incur electric and gas non-incentive costs, as well as electric incentive costs.
[g] IQ includes all channels in the Income Qualified Initiative as well as the Public Housing Initiative.

AIC's 2024 Voltage Optimization Program was also cost-effective as defined by the Illinois TRC and PAC tests. Table 2 provides the Illinois TRC and PAC test benefit-cost ratios calculated for the Program.

Table 2. Illinois TRC and PAC Test Results for the 2024 AIC Voltage Optimization Program

Program	Illinois TRC Benefit-Cost Ratio	PAC Benefit-Cost Ratio
Voltage Optimization	2.32	1.48

2. BACKGROUND

Opinion Dynamics analyzed the cost-effectiveness of Ameren Illinois Company's (AIC) 2024 energy efficiency portfolio and Voltage Optimization Program using the Illinois Total Resource Cost (TRC) test and the Program Administrator Cost (PAC) test. Illinois state legislation directs that cost-effectiveness testing for investment in energy efficiency or demand response should be conducted using the Illinois TRC test. Additionally, Illinois stakeholders have requested that cost-effectiveness testing also use the PAC test to provide additional context for directing future energy efficiency investments. The combination of the TRC and PAC test values provides useful context to direct future investments.

As defined by Illinois state law (220 ILCS 5/8-103B [Section 8-103B]) and presented in the Illinois Energy Efficiency Policy Manual Version 3.0 (the Illinois Policy Manual), the definition of the Illinois TRC test for electric energy efficiency is as follows:

> *"Total resource cost test" or "TRC test" means a standard that is met if, for an investment in energy efficiency or demand-response measures, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. A total resource cost test compares the sum of avoided electric utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures and including avoided costs associated with reduced use of natural gas or other fuels, avoided costs associated with reduced water consumption, and avoided costs associated with reduced operation and maintenance costs, as well as other quantifiable societal benefits, to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side program, to quantify the net savings obtained by substituting the demand-side program for supply resources. In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases. In discounting future societal costs and benefits for the purpose of calculating net present values, a societal discount rate based on actual, long-term Treasury bond yields should be used. Notwithstanding anything to the contrary, the TRC test shall not include or take into account a calculation of market price suppression effects or demand reduction induced price effects.*[1]

Illinois state law (220 ILCS 5/8-104 [Section 8-104]) also defines the Illinois TRC for natural gas energy efficiency:

> *"Cost-effective" means that the measures satisfy the total resource cost test which, for purposes of this Section, means a standard that is met if, for an investment in energy efficiency, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the measures to the net present value of the total costs as calculated over the lifetime of the measures. The total resource cost test compares the sum of avoided natural gas utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures, as well as other quantifiable societal benefits, including avoided electric utility costs, to the sum of all incremental costs of end use measures (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side measure, to quantify the net savings obtained by substituting demand-side measures for supply resources. In calculating avoided costs, reasonable estimates shall be included for financial costs likely to be imposed by future regulation of emissions of greenhouse gases. The low-income programs described in item (4) of subsection (f) of this Section shall not be required to meet the total resource cost test.*

[1] 20 ILCS 3855/1-10.

As directed by state law, our analysis includes reasonable estimates of the avoided costs associated with the portfolio that relate to future regulation of greenhouse gas emissions. Additionally, as directed by the legislation, we utilized a societal discount rate to calculate the future societal costs and benefits delivered by the programs.

It is valuable for readers to note that the Illinois TRC test exhibits differences from tests referred to as "TRC" conducted in other jurisdictions. In particular, the Illinois TRC's directive to use a societal discount rate differs from the test specification in many other jurisdictions. The Illinois TRC also includes non-energy impacts, such as avoided operation and maintenance (O&M) costs, avoided water costs, and avoided costs associated with greenhouse gas emissions.

3. COST-EFFECTIVENESS EVALUATION METHODS

Opinion Dynamics used program data provided by AIC and the 2024 impact evaluation results to develop the cost-effectiveness analyses at the measure level, utilizing a proprietary Opinion Dynamics tool. These results were then rolled up to produce Illinois TRC and PAC benefit-cost ratios at the channel, initiative, program, and energy efficiency portfolio level. A detailed summary of the benefits and costs associated with each channel/initiative and the broader energy efficiency portfolio is provided in the appendices to this report.

Illinois state law requires AIC's portfolio to be cost-effective at the portfolio level (not including income qualified initiatives), but individual programs, initiatives, channels, or measures are not required to be cost-effective. Nevertheless, our analysis provides program-, initiative-, and channel-level benefit-cost ratios where possible to provide further insight for program planning. In addition, our analysis complies with all Illinois-specific guidance, including the Illinois TRC provisions and definitions of costs included in the Illinois Policy Manual. Table 3 provides high-level detail on the inputs used in the cost-effectiveness analysis and the sources of these inputs.

Table 3. Inputs and Sources for Cost-Effectiveness Analysis

Category	Input	Source
Program-specific inputs	▪ Net electric energy savings (including heating penalties and not including secondary savings from water supply and wastewater treatment)[a,b] ▪ Net electric demand savings[a] ▪ Net natural gas energy savings (including heating penalties)[a] ▪ Net propane savings[a] ▪ Measure counts	Opinion Dynamics evaluation of the 2024 AIC portfolio
	▪ Incremental measure costs ▪ Operations and maintenance costs ▪ Water savings (gallons)	Opinion Dynamics analysis using IL-TRM V12.0
	▪ Incentive costs ▪ Non-incentive costs	AIC
Portfolio inputs	▪ Portfolio administrative, Market Development Initiative (MDI), marketing, and evaluation, measurement, and verification (EM&V) costs	AIC
	▪ Net electric energy savings (including heating penalties and secondary savings) from residential nonparticipant spillover (NPSO) ▪ Net electric demand savings from residential NPSO ▪ Net natural gas energy savings (including heating penalties) from residential NPSO	Opinion Dynamics evaluation of the 2024 AIC portfolio
Assumptions	▪ Avoided costs of electricity production ▪ Avoided costs of electricity capacity ▪ Avoided costs of natural gas production ▪ Avoided costs of propane ▪ Avoided costs of water ▪ Avoided costs of greenhouse gas emissions ▪ Line losses	AIC
	▪ Discount rate	IL-TRM V12.0
	▪ Avoided costs of public health impacts[c] ▪ Avoided participant medical payments[d]	Opinion Dynamics research

[a] All net savings include temporal elements (e.g., measure lives, baseline shifts) per the Illinois persisting savings framework.

[b] Secondary savings from water supply and wastewater treatment are not included in the Illinois TRC because monetized benefits from water savings inherently include these benefits.

[c] As presented in the 2023 Ameren Illinois Societal Health Non-Energy Impacts Report, accessed at: https://www.ilsag.info/wp-content/uploads/2023-AIC-Societal-Health-NEI-Report-FINAL-2024-12-09.pdf

[d] As presented in the 2023 Ameren Illinois Income Qualified Participant Non-Energy Impacts Assessment, accessed at: https://www.ilsag.info/wp-content/uploads/AIC-IQ-Participant-NEI-Report-FINAL-2023-10-31.pdf

To assess cost-effectiveness, the team began with a valuation of each program's and the portfolio's net total benefits and costs, discussed in more detail in Sections 3.1 and 3.2.

3.1 PORTFOLIO BENEFITS CONSIDERED

As directed in Illinois state law, our analysis included benefits associated with the 2024 AIC portfolio. These benefits comprise a number of avoided costs which are no longer incurred due to the energy efficiency programs under evaluation. Our analysis included avoided costs as defined in Table 4.

Table 4. Portfolio Benefits Considered

Benefit	Definition	Included in	
		Illinois TRC	PAC
Avoided cost of electric energy (electric production)	Dollars per net kWh saved	✓	✓
Avoided cost of demand for electricity (electric capacity)	Dollars per net kW saved	✓	✓
Avoided cost of natural gas (gas production)	Dollars per net therm saved	✓	✓
Avoided cost of propane (propane production)	Dollars per net gallon saved	✓	
Avoided line losses (transmission and distribution [T&D] costs)	Percentage of energy lost during T&D applied to net savings	✓	✓
Avoided O&M costs	Net dollars saved	✓	
Avoided cost of water	Dollars per net gallon saved	✓	
Avoided costs of greenhouse gas emissions	Dollars per net kWh, therm, and/or gallon saved	✓	
Avoided costs of public health impacts	Dollars per net kWh, therm, and/or gallon saved	✓	
Avoided participant medical payments	Dollars per income qualified program participant receiving HVAC or weatherization measures	✓	

Note: The PAC test only includes avoided natural gas costs associated with AIC gas service. The Illinois TRC includes avoided natural gas costs associated with AIC gas service and non-AIC gas service, where applicable.

Opinion Dynamics developed estimates of units of energy and water saved over time, as well as dollar estimates of avoided O&M costs. AIC provided avoided cost schedules and line loss factors. We combined these items with the societal discount rate specified in the IL-TRM V12.0 to convert units of energy and water saved over time to a net present value (NPV) of total avoided costs in dollars.[2]

All the benefits listed above are included in the Illinois TRC test. The avoided water, propane, non-AIC gas, and O&M costs are participant benefits only and are excluded from the PAC test calculation. Avoided costs of greenhouse gas emissions, public health impacts, and avoided participant medical payments are societal benefits explicitly defined for consideration in the Illinois TRC and are also excluded from the calculation of the PAC test.

[2] The assumptions used in this report align with those employed by AIC in their 2022–2025 Energy Efficiency Plan filing, except for the discount rate, which we updated to match the value presented in the IL-TRM V12.0, as required by the Illinois Policy Manual V3.0.

3.2 PORTFOLIO COSTS CONSIDERED

Our analysis also considered costs associated with the operation of the portfolio. The costs considered fall into four categories as defined in Table 5 and align with cost definitions from the Illinois Policy Manual.

Table 5. Portfolio Costs Considered

Cost	Definition	Included In	
		Illinois TRC	PAC
Net incremental measure costs	▪ Incremental expenses associated with the installation of energy efficiency measures, including both customer- and utility-side costs ▪ For cost-effectiveness analysis, net-to-gross ratios (NTGRs) are applied to incremental costs to ensure that only net incremental costs are considered in the analysis	✓	✓[a]
Administrative costs associated with individual initiatives	AIC incurs administrative costs to operate energy efficiency programs; this category includes non-incentive costs associated with the operation of individual initiatives	✓	✓
Administrative costs associated with the portfolio	AIC incurs administrative costs to operate energy efficiency programs; this category includes non-incentive costs associated with the operation of the portfolio overall, including marketing and education, the MDI, and EM&V	✓	✓
Incentive costs	Financial incentives paid to customers and to third parties (as defined by the Illinois Policy Manual)		✓

[a] Incremental measure costs are not typically included in the PAC test. However, the ongoing O&M costs associated with the Voltage Optimization Program are considered to be the incremental costs. Since the utility incurs these costs, we include them in the PAC.

All costs listed above are included in the PAC test. Incentive costs are not included in the calculation of the Illinois TRC test to prevent double-counting.[3]

3.2.1 INCREMENTAL COSTS

As defined in the Illinois Policy Manual, "incremental costs" are the difference between the cost of an efficient measure and the cost of the most relevant baseline measure that would have been installed in the absence of an energy efficiency program. The Illinois Policy Manual directs those conducting cost-effectiveness testing to consider installation and O&M costs in calculating incremental costs if there is a difference between the baseline and efficient measures. However, in accordance with further Policy Manual guidance to consider avoided O&M costs as a benefit in some cases, we do not include avoided O&M costs in incremental costs as part of this analysis, but break them out separately for consideration.

Opinion Dynamics generally used the IL-TRM to define gross incremental costs in the 2024 cost-effectiveness analysis. In some cases, prescriptive incremental costs are not provided in the IL-TRM, or the IL-TRM recommends using actual installation costs (e.g., retrofit measures where the assumed baseline expenditure is $0). We sourced measure cost information from the program tracking database in those cases.

As directed by the Illinois Policy Manual, we applied net-to-gross ratios (NTGRs) to ensure that only net incremental costs were considered in our analysis. Table 6 provides additional detail on the source of incremental costs used in our analysis by initiative.

[3] Illinois Policy Manual for Energy Efficiency Version 3.0, Page 54, footnote 67.

Table 6. Incremental Cost Source Detail

Program	Initiative	Incremental Cost Source
Residential Program	Retail Products	Measure costs or measure cost assumptions were sourced from a combination of the IL-TRM V12.0 and program tracking data.
	Income Qualified	Measure costs for most measures were sourced from the program tracking data. In cases where it was necessary to use IL-TRM assumptions (e.g., early replacements), we utilized cost assumptions from IL-TRM V12.0.
	Public Housing	Measure costs were sourced from the program tracking data.
	Multifamily	Measure costs for most measures were sourced from the program tracking data. In instances where it was necessary to use TRM assumptions (e.g., early replacements), we applied cost assumptions from IL-TRM V12.0.
	Market Rate Single Family	Measure costs or measure cost assumptions were sourced from a combination of the IL-TRM V12.0 and program tracking data.
	Direct Distribution	Measure costs were sourced from the program tracking data.
Business Program	Standard	For almost all measures, measure costs or measure cost guidance (e.g., incremental costs for some measures are defined as a function of measure size or another measure parameter) were sourced from the IL-TRM V12.0.
	Custom	In most cases, the evaluation team considered projects to be retrofits and used the total project costs provided by AIC as the incremental cost.
	Small Business	For almost all measures, measure costs or measure cost guidance (e.g., incremental costs for some measures are defined as a function of measure size or another measure parameter) were sourced from the IL-TRM V12.0.
	Midstream	Measure costs or measure cost guidance (e.g., incremental costs for some measures are defined as a function of measure size or another measure parameter) were sourced from the IL-TRM V12.0.
	Retro-Commissioning	For RCx Core, the evaluation team considered projects to be retrofits and used the reported project costs provided by AIC (including the cost of retro-commissioning studies) as the incremental cost. The Virtual Commissioning and Virtual Strategic Energy Management channels predominantly facilitated the implementation of no-cost measures in 2024; therefore, there are no incremental costs.
	Streetlighting	Per IL-TRM V12.0 guidance, we assumed that the total project cost was the incremental cost.
Voltage Optimization		AIC's ongoing O&M costs for Voltage Optimization over the life of the circuits are considered incremental costs for the Program. To determine these costs for our analysis, we took AIC's annual O&M cost estimates for circuits evaluated in 2024, extended them over the life of the circuits, and discounted costs to present value.

3.3 OTHER ASSUMPTIONS

As directed by legislation, Opinion Dynamics used a societal discount rate to conduct the 2024 cost-effectiveness analysis. Opinion Dynamics used a nominal discount rate of 2.40% in the analysis (real discount rate of 0.42%) as presented in the IL-TRM V12.0 and required by the Illinois Policy Manual V3.0.

4. RESULTS, FINDINGS, AND RECOMMENDATIONS

Overall, AIC's 2024 energy efficiency portfolio was cost-effective as defined by the Illinois TRC and PAC tests. Table 7 provides the Illinois TRC and PAC test benefit-cost ratios, calculated for the energy efficiency portfolio, the Residential and Business Programs, and the initiatives and channels that comprise them.

Table 7. Illinois TRC and PAC Test Results for the 2024 AIC Energy Efficiency Portfolio

Program	Initiative	Channel	Illinois TRC Benefit-Cost Ratio	PAC Benefit-Cost Ratio
Residential	Retail Products	Retail Products	5.36	2.06
	Income Qualified	Retail Products	3.49	2.71
		Single Family	0.58[a]	0.27[a]
		CAA	0.70[b]	0.44[b]
		Multifamily	1.30	0.46
		Smart Savers	1.40	0.79
		Community Kits	4.75	1.32
		Healthier Homes	0.14	0.08
		New Construction	0.00	0.00
		Manufactured Homes	0.72	0.33
		Electrification	0.53	0.01
	Public Housing	Public Housing	0.92	0.31
	Multifamily - Market Rate	Multifamily - Market Rate	4.88	1.77
	Market Rate Single Family	Home Efficiency	1.24	0.67
		Midstream HVAC	1.76	1.69
	Direct Distribution	School Kits	20.60	12.88
		High School Innovation	4.57	0.67
	Market Transformation	Market Transformation	0.00[c]	0.00[c]
Residential Program Total			*2.23*	*1.12*

Program	Initiative	Channel	Illinois TRC Benefit-Cost Ratio	PAC Benefit-Cost Ratio
Business	Standard	Standard	4.28[d]	2.78[d]
	Custom	Custom	3.74[e]	2.11[e]
	Midstream	Lighting	3.12	3.77
		HVAC	0.69	0.38
		Food Service	3.78	1.58
	Small Business	Direct Install	3.42	1.39
		Energy Performance	1.01	0.47
	Retro-Commissioning	Retro-Commissioning	2.27	1.17
	Streetlighting	Municipality Owned	0.74	0.32
		Utility Owned	8.21	7.39
	Market Transformation	Market Transformation	0.00[h]	0.00[h]
Business Program Total			*3.71*	*2.31*
2024 AIC Energy Efficiency Portfolio			**2.69**	**1.43**
2024 AIC Energy Efficiency Portfolio (not including IQ)[g]			**3.17**	**1.78**

[a] Results for the Income Qualified Initiative's Single Family channel include costs and benefits for the Joint Utility offering that AIC co-funds with Nicor Gas. These results only include the costs and benefits associated with the AIC-funded portion of the offering.

[b] The Income Qualified Initiative's CAA channel is co-funded by AIC and the Illinois Department of Commerce and Economic Opportunity's Home Weatherization Assistance Program. These results only include the costs associated with the AIC-funded portion of the offering.

[c] The Residential Program's MT offerings did not produce quantifiable benefits in 2024 but did incur both electric and gas non-incentive costs.

[d] Includes the Online Store and BOC channels.

[e] Includes all benefits and costs directly associated with the Custom Initiative.

[f] The Business Program's MT offerings did not produce quantifiable benefits in 2024 but did incur both electric and gas non-incentive costs, as well as electric incentive costs.

[g] IQ includes all channels in the Income Qualified Initiative as well as the Public Housing Initiative.

AIC's 2024 Voltage Optimization Program was also cost-effective as defined by the Illinois TRC and PAC tests. Table 8 provides the Illinois TRC and PAC test benefit-cost ratios calculated for the Program.

Table 8. Illinois TRC and PAC Test Results for the 2024 AIC Voltage Optimization Program

Program	Illinois TRC Benefit-Cost Ratio	PAC Benefit-Cost Ratio
Voltage Optimization	2.32	1.48

4.1 KEY FINDINGS

Key findings from the 2024 cost-effectiveness analysis are presented below:

- **Key Finding #1**: Overall, AIC's 2024 energy efficiency portfolio was cost-effective based on the Illinois TRC test.
- **Key Finding #2**: The 2024 Residential, Business, and Voltage Optimization Programs were cost-effective based on the Illinois TRC.[4]
- **Key Finding #3**: Six low-income Residential Program channels operated by AIC in 2024 were not cost-effective based on the Illinois TRC.[5]
  - The Income Qualified Initiative – Single Family channel had an Illinois TRC benefit-cost ratio of 0.58.
  - The Income Qualified Initiative – CAA channel had an Illinois TRC benefit-cost ratio of 0.70.
  - The Income Qualified Initiative – Healthier Homes channel had an Illinois TRC benefit-cost ratio of 0.14.
  - The Income Qualified Initiative – Manufactured Homes channel had an Illinois TRC benefit-cost ratio of 0.72.
  - The Income Qualified Initiative – Electrification channel had an Illinois TRC benefit-cost ratio of 0.53.
  - The Public Housing Initiative had an Illinois TRC benefit-cost ratio of 0.92.
- **Key Finding #4**: Two Business Program channels operated by AIC in 2024 were not cost-effective based on the Illinois TRC.
  - The Midstream HVAC channel had an Illinois TRC benefit-cost ratio of 0.69.
  - The Municipality-Owned Streetlighting channel had an Illinois TRC benefit-cost ratio of 0.74.

[4] Portfolio-level administrative costs were not considered as part of the benefit-cost ratios presented for individual programs or initiatives, and therefore, individual program and initiative benefit-cost ratios are inflated as compared to the portfolio-level benefit-cost ratio.

[5] The Residential and Business Market Transformation initiatives and Income Qualified – New Construction channel also did not screen as cost-effective but are not called out here because they did not claim any energy savings.

APPENDIX A. ENERGY EFFICIENCY PORTFOLIO COST-EFFECTIVENESS TABLES

Detailed cost-effectiveness results for the AIC energy efficiency portfolio, aligning with the SAG template for cost-effectiveness reporting and including initiative-level benefits, costs, and benefit-cost ratios, are provided in Table 9. Table 10, Table 11, and Table 12. The results are also attached as a spreadsheet.

Table 9. 2024 AIC Energy Efficiency Portfolio Cost-Effectiveness Benefits

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Participant NEI Cost Changes	Societal NEI Cost Changes
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Residential Program	$68,586,283	$17,588,115	$17,838,011	$18,628,737	$44,888,217	$19,503	$7,245,979
Retail Products	*$10,203,839*	*$6,121,182*	*$883,388*	*$3,331,579*	*$8,242,940*	*$0*	*$1,104,725*
Income Qualified - Retail Products	*$33,193,073*	*$3,028,223*	*$1,449,865*	*$12,268,465*	*$16,268,154*	*$0*	*$3,400,165*
Income Qualified - Single Family	*$4,063,553*	*$2,578,985*	*$381,112*	*$212,051*	*$3,910,589*	*$17,029*	*$415,613*
Income Qualified - CAA	*$1,488,650*	*$696,825*	*$43,331*	*$414,987*	*$1,258,740*	*$440*	*$157,533*
Income Qualified - Multifamily	*$4,418,040*	*$227,635*	*$2,600,163*	*$381,254*	*$3,806,538*	*$0*	*$626,474*
Income Qualified - Smart Savers	*$355,102*	*$248,231*	*$0*	*$0*	*$302,526*	*$0*	*$34,649*
Income Qualified - Community Kits	*$704,781*	*$201,198*	*$1,377,174*	*$318,766*	*$502,632*	*$0*	*$82,416*
Income Qualified - Healthier Homes	*$41,614*	*$61,273*	*$1,971*	*$2,317*	*$65,824*	*$228*	*$5,400*
Income Qualified – New Construction	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Income Qualified - Manufactured Homes	*$333,817*	*$324,497*	*$133,878*	*$50,632*	*$450,068*	*$1,628*	*$44,972*
Income Qualified - Electrification	*$3,277*	*$336,320*	*$0*	*$0*	*$15,299*	*$179*	*$293*
Public Housing	*$482,106*	*$81,826*	*$349,763*	*$48,259*	*$591,547*	*$0*	*$86,217*
Multifamily - Market Rate	*$1,100,689*	*$75,186*	*$678,434*	*$0*	*$679,501*	*$0*	*$113,693*
Single Family - Home Efficiency	*$220,877*	*$205,131*	*$0*	*$0*	*$254,793*	*$0*	*$19,639*
Single Family - Midstream HVAC	*$6,777,232*	*$2,156,139*	*$0*	*$0*	*$4,921,639*	*$0*	*$590,961*
School Kits	*$4,017,190*	*$827,985*	*$9,069,280*	*$1,362,515*	*$2,695,622*	*$0*	*$434,809*
High School Innovation	*$604,109*	*$120,839*	*$869,651*	*$237,912*	*$404,541*	*$0*	*$63,935*
Market Transformation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
NPSO	*$578,334*	*$296,639*	*$0*	*$0*	*$517,264*	*$0*	*$64,485*

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Participant NEI Cost Changes	Societal NEI Cost Changes
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Business Program	$117,405,324	$89,733,057	$699,830	$22,993,997	$86,810,131	$0	$11,428,857
Standard	*$41,222,787*	*$4,969,728*	*$549,368*	*$4,500,226*	*$23,076,264*	*$0*	*$3,617,999*
Custom	*$18,312,271*	*$84,250,100*	*$0*	*$0*	*$35,104,868*	*$0*	*$3,032,256*
Midstream - Lighting	*$27,319,699*	*$0*	*$0*	*$13,093,130*	*$10,515,431*	*$0*	*$1,826,574*
Midstream - HVAC	*$235,586*	*$27,040*	*$0*	*$0*	*$114,999*	*$0*	*$17,369*
Midstream - Food Service	*$241,199*	*$259,317*	*$150,462*	*$0*	*$361,342*	*$0*	*$41,982*
Small Business - Direct Install	*$21,162,344*	*$0*	*$0*	*$3,664,596*	*$9,594,757*	*$0*	*$1,714,279*
Small Business - Energy Performance	*$429,031*	*$226,873*	*$0*	*$0*	*$273,796*	*$0*	*$26,467*
Retro-Commissioning	*$1,657,109*	*$0*	*$0*	*$0*	*$1,369,124*	*$0*	*$290,450*
Streetlighting - Municipality Owned	*$28,753*	*$0*	*$0*	*$4,580*	*$26,994*	*$0*	*$3,607*
Streetlighting - Utility Owned	*$6,796,545*	*$0*	*$0*	*$1,731,465*	*$6,372,557*	*$0*	*$857,874*
Market Transformation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Portfolio Costs	$0	$0	$0	$0	$0	$0	$0
Market Development Initiative	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
EM&V	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Marketing & Education	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Administrative Expenses	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Program Implementation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
AIC 2024 Portfolio	**$185,991,607**	**$107,321,172**	**$18,537,840**	**$41,622,734**	**$131,698,349**	**$19,503**	**$18,674,836**

Note: “Other fuels” include AIC-provided gas service, non-AIC-provided gas service, and propane.

Table 10. 2024 AIC Energy Efficiency Portfolio Cost-Effectiveness Costs

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Participant NEI Cost Changes	Societal NEI Cost Changes	Non-Incentive Costs (Electric)	Non-Incentive Costs (Gas)	Incentive Costs (Electric)	Incentive Costs (Gas)	Incremental Costs (Net)
(a)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Residential Program	$47,776	$4,953,024	$0	$0	$51	$0	$6,284	$21,438,572	$2,980,454	$38,147,504	$6,642,519	$48,893,764
Retail Products	*$0*	*$187,057*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,730,225*	*$330,152*	*$3,288,206*	*$1,520,256*	*$3,332,083*
Income Qualified - Retail Products	*$0*	*$4,371,787*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,538,383*	*$115,809*	*$6,429,163*	*$663,166*	*$13,921,612*
Income Qualified - Single Family	*$2,474*	*$42,834*	*$0*	*$0*	*$0*	*$0*	*$0*	*$7,851,960*	*$1,132,006*	*$12,421,729*	*$2,144,115*	*$10,911,320*
Income Qualified - CAA	*$0*	*$78,250*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,915,106*	*$631,937*	*$1,572,144*	*$779,112*	*$3,205,291*
Income Qualified - Multifamily	*$0*	*$37,466*	*$0*	*$0*	*$0*	*$0*	*$0*	*$3,157,553*	*$215,425*	*$6,506,265*	*$131,496*	*$5,854,458*
Income Qualified - Smart Savers	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$353,962*	*$37,894*	*$344,359*	*$15,565*	*$281,753*
Income Qualified - Community Kits	*$0*	*$49,595*	*$0*	*$0*	*$0*	*$0*	*$0*	*$387,602*	*$53,531*	*$131,271*	*$66,530*	*$180,357*
Income Qualified - Healthier Homes	*$693*	*$630*	*$0*	*$0*	*$0*	*$0*	*$0*	*$493,515*	*$65,579*	*$720,189*	*$22,701*	*$675,595*
Income Qualified – New Construction	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$18,226*	*$0*	*$0*	*$0*	*$0*
Income Qualified - Manufactured Homes	*$0*	*$8,731*	*$0*	*$0*	*$0*	*$0*	*$0*	*$716,925*	*$115,747*	*$864,248*	*$281,366*	*$1,008,536*
Income Qualified - Electrification	*$44,609*	*$0*	*$0*	*$0*	*$51*	*$0*	*$6,284*	*$367,454*	*$0*	*$257,760*	*$0*	*$251,973*
Public Housing	*$0*	*$2,862*	*$0*	*$0*	*$0*	*$0*	*$0*	*$650,056*	*$72,677*	*$1,014,761*	*$68,498*	*$1,052,447*
Multifamily - Market Rate	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$179,285*	*$10,590*	*$439,339*	*$33,742*	*$352,552*
Single Family - Home Efficiency	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$199,298*	*$49,592*	*$164,002*	*$209,291*	*$315,774*
Single Family - Midstream HVAC	*$0*	*$1,046*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,335,151*	*$79,399*	*$3,304,324*	*$575,526*	*$6,793,000*
School Kits	*$0*	*$143,537*	*$0*	*$0*	*$0*	*$0*	*$0*	*$93,942*	*$12,666*	*$106,037*	*$20,047*	*$643,626*
High School Innovation	*$0*	*$29,230*	*$0*	*$0*	*$0*	*$0*	*$0*	*$320,568*	*$39,811*	*$583,709*	*$111,108*	*$113,387*
Market Transformation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$129,360*	*$17,640*	*$0*	*$0*	*$0*
NPSO	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Participant NEI Cost Changes	Societal NEI Cost Changes	Non-Incentive Costs (Electric)	Non-Incentive Costs (Gas)	Incentive Costs (Electric)	Incentive Costs (Gas)	Incremental Costs (Net)
(a)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Business Program	$1,392,709	$4,698,779	$0	$0	$127	$0	$22	$17,459,887	$2,193,034	$29,868,185	$3,065,558	$63,051,722
Standard	*$3,176*	*$1,049,431*	*$0*	*$0*	*$104*	*$0*	*$18*	*$4,349,706*	*$1,132,002*	*$8,689,245*	*$1,368,605*	*$11,681,079*
Custom	*$1,389,388*	*$1,973*	*$0*	*$0*	*$0*	*$0*	*$0*	*$3,415,379*	*$607,527*	*$7,987,786*	*$1,298,408*	*$32,171,992*
Midstream - Lighting	*$0*	*$2,054,254*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,268,143*	*$0*	*$3,916,105*	*$0*	*$13,575,420*
Midstream - HVAC	*$145*	*$696*	*$0*	*$0*	*$23*	*$0*	*$4*	*$404,914*	*$92,091*	*$192,991*	*$3,185*	*$78,340*
Midstream - Food Service	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$136,631*	*$26,478*	*$71,225*	*$81,690*	*$115,767*
Small Business - Direct Install	*$0*	*$1,592,425*	*$0*	*$0*	*$0*	*$0*	*$0*	*$5,881,756*	*$0*	*$7,735,417*	*$0*	*$3,084,876*
Small Business - Energy Performance	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$423,990*	*$261,203*	*$232,738*	*$313,669*	*$258,780*
Retro-Commissioning	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,229,571*	*$41,599*	*$142,114*	*$0*	*$188,290*
Streetlighting - Municipality Owned	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$78,363*	*$0*	*$11,351*	*$0*	*$8,589*
Streetlighting - Utility Owned	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$30,620*	*$0*	*$889,212*	*$0*	*$1,888,589*
Market Transformation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$240,814*	*$32,136*	*$0*	*$0*	*$0*
Portfolio Costs	$0	$0	$0	$0	$0	$0	$0	$18,428,509	$2,088,087	-$564,760	$127,809	$0
Market Development Initiative	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$3,675,220*	*$0*	*$0*	*$0*	*$0*
EM&V	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$3,535,352*	*$562,269*	*$0*	*$0*	*$0*
Marketing & Education	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$4,190,226*	*$572,096*	*$0*	*$0*	*$0*
Administrative Expenses	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$6,243,158*	*$856,318*	*$0*	*$0*	*$0*
Program Implementation	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$784,553*	*$97,405*	*-$564,760*	*$127,809*	*$0*
AIC 2024 Portfolio	**$1,440,485**	**$9,651,804**	**$0**	**$0**	**$178**	**$0**	**$6,305**	**$57,326,968**	**$7,261,575**	**$67,450,929**	**$9,835,885**	**$111,945,486**

Note: “Other fuels” include AIC-provided gas service, non-AIC-provided gas service, and propane.

Table 11. 2024 AIC Energy Efficiency Portfolio Illinois Total Resource Cost Test

Program	IL TRC Benefits	IL TRC Costs	IL TRC Test Net Benefits	IL TRC Test Ratio – with NEIs	IL TRC Test Ratio – without NEIs
(a)	(u)=(b+c+d+e+f+g+h)	(v)=(i+j+k+l+m+n+o+p+q+t)	(w)=(u-v)	*(x)=(u/v)*	(ab)=[(u-(g+h))/(v-(n+o))]
Residential Program	$174,794,845	$78,319,924	$96,474,921	2.23	2.14
Retail Products	*$29,887,653*	*$5,579,516*	*$24,308,137*	*5.36*	*5.16*
Income Qualified - Retail Products	*$69,607,944*	*$19,947,591*	*$49,660,353*	*3.49*	*3.32*
Income Qualified - Single Family	*$11,578,931*	*$19,940,594*	*-$8,361,663*	*0.58*	*0.56*
Income Qualified - CAA	*$4,060,506*	*$5,830,585*	*-$1,770,079*	*0.70*	*0.67*
Income Qualified - Multifamily	*$12,060,103*	*$9,264,902*	*$2,795,201*	*1.30*	*1.23*
Income Qualified - Smart Savers	*$940,508*	*$673,609*	*$266,899*	*1.40*	*1.34*
Income Qualified - Community Kits	*$3,186,969*	*$671,085*	*$2,515,884*	*4.75*	*4.63*
Income Qualified - Healthier Homes	*$178,628*	*$1,236,012*	*-$1,057,385*	*0.14*	*0.14*
Income Qualified – New Construction	*$0*	*$18,226*	*-$18,226*	*0.00*	*0.00*
Income Qualified - Manufactured Homes	*$1,339,492*	*$1,849,939*	*-$510,447*	*0.72*	*0.70*
Income Qualified - Electrification	*$355,369*	*$670,370*	*-$315,001*	*0.53*	*0.53*
Public Housing	*$1,639,718*	*$1,778,042*	*-$138,325*	*0.92*	*0.87*
Multifamily - Market Rate	*$2,647,503*	*$542,427*	*$2,105,076*	*4.88*	*4.67*
Single Family - Home Efficiency	*$700,441*	*$564,664*	*$135,777*	*1.24*	*1.21*
Single Family - Midstream HVAC	*$14,445,970*	*$8,208,595*	*$6,237,375*	*1.76*	*1.69*
School Kits	*$18,407,402*	*$893,771*	*$17,513,631*	*20.60*	*20.11*
High School Innovation	*$2,300,986*	*$502,995*	*$1,797,991*	*4.57*	*4.45*
Market Transformation	*$0*	*$147,000*	*-$147,000*	*0.00*	*0.00*
NPSO	*$1,456,723*	*$0*	*$1,456,723*	*N/A*	*N/A*

Program	IL TRC Benefits	IL TRC Costs	IL TRC Test Net Benefits	IL TRC Test Ratio – with NEIs	IL TRC Test Ratio – without NEIs
(a)	(u)=(b+c+d+e+f+g+h)	(v)=(i+j+k+l+m+n+o+p+q+t)	(w)=(u-v)	*(x)=(u/v)*	(ab)=[(u-(g+h))/(v-(n+o))]
Business Program	$329,071,196	$88,796,280	$240,274,916	3.71	3.58
Standard	*$77,936,372*	*$18,215,516*	*$59,720,855*	*4.28*	*4.08*
Custom	*$140,699,495*	*$37,586,259*	*$103,113,235*	*3.74*	*3.66*
Midstream - Lighting	*$52,754,833*	*$16,897,816*	*$35,857,017*	*3.12*	*3.01*
Midstream - HVAC	*$394,994*	*$576,212*	*-$181,218*	*0.69*	*0.66*
Midstream - Food Service	*$1,054,301*	*$278,876*	*$775,425*	*3.78*	*3.63*
Small Business - Direct Install	*$36,135,975*	*$10,559,056*	*$25,576,919*	*3.42*	*3.26*
Small Business - Energy Performance	*$956,167*	*$943,972*	*$12,195*	*1.01*	*0.98*
Retro-Commissioning	*$3,316,684*	*$1,459,460*	*$1,857,224*	*2.27*	*2.07*
Streetlighting - Municipality Owned	*$63,934*	*$86,953*	*-$23,019*	*0.74*	*0.69*
Streetlighting - Utility Owned	*$15,758,441*	*$1,919,209*	*$13,839,232*	*8.21*	*7.76*
Market Transformation	*$0*	*$272,950*	*-$272,950*	*0.00*	*0.00*
Portfolio Costs	$0	$20,516,596	-$20,516,596	N/A	N/A
Market Development Initiative	*$0*	*$3,675,220*	*-$3,675,220*	*N/A*	*N/A*
EM&V	*$0*	*$4,097,620*	*-$4,097,620*	*N/A*	*N/A*
Marketing & Education	*$0*	*$4,762,322*	*-$4,762,322*	*N/A*	*N/A*
Administrative Expenses	*$0*	*$7,099,475*	*-$7,099,475*	*N/A*	*N/A*
Program Implementation	*$0*	*$881,958*	*-$881,958*	*N/A*	*N/A*
AIC 2024 Portfolio	**$503,866,041**	**$187,632,800**	**$316,233,241**	**2.69**	**2.59**
AIC 2024 Portfolio (not including IQ)[a]	**$398,917,874**	**$125,751,844**	**$273,166,029**	**3.17**	**3.06**

[a] This row excludes the benefits and costs from all of the Income Qualified channels, as well as the Public Housing Initiative.

Table 12. 2024 AIC Energy Efficiency Portfolio Utility Cost Test/Program Administrator Cost Test

Program	PAC Benefits	PAC Costs	PAC Test Net Benefits	PAC Test Ratio
(a)	(aa) = (b+c)[a]	(ab) = (i+j+p+q+r+s)	(ac) = (aa-ab)	(ad) = (aa/ab)
Residential Program	$83,160,051	$74,209,848	$8,950,203	1.12
Retail Products	$14,516,758	$7,055,895	$7,460,863	*2.06*
Income Qualified - Retail Products	$35,549,802	$13,118,308	$22,431,494	*2.71*
Income Qualified - Single Family	$6,480,165	$23,595,118	-$17,114,953	*0.27*
Income Qualified - CAA	$2,165,644	$4,976,549	-$2,810,905	*0.44*
Income Qualified - Multifamily	$4,645,675	$10,048,205	-$5,402,530	*0.46*
Income Qualified - Smart Savers	$591,503	$751,780	-$160,277	*0.79*
Income Qualified - Community Kits	$905,980	$688,528	$217,452	*1.32*
Income Qualified - Healthier Homes	$102,888	$1,303,307	-$1,200,419	*0.08*
Income Qualified – New Construction	$0	$18,226	-$18,226	*0.00*
Income Qualified - Manufactured Homes	$658,315	$1,987,017	-$1,328,702	*0.33*
Income Qualified - Electrification	$6,618	$669,823	-$663,205	*0.01*
Public Housing	$563,932	$1,808,854	-$1,244,922	*0.31*
Multifamily - Market Rate	$1,175,875	$662,956	$512,919	*1.77*
Single Family - Home Efficiency	$418,431	$622,182	-$203,751	*0.67*
Single Family - Midstream HVAC	$8,933,371	$5,295,445	$3,637,925	*1.69*
School Kits	$4,845,175	$376,229	$4,468,946	*12.88*
High School Innovation	$724,948	$1,084,426	-$359,478	*0.67*
Market Transformation	$0	$147,000	-$147,000	*0.00*
NPSO	$874,973	$0	$874,973	*N/A*

Program	PAC Benefits	PAC Costs	PAC Test Net Benefits	PAC Test Ratio
(a)	(aa) = (b+c)[a]	(ab) = (i+j+p+q+r+s)	(ac) = (aa-ab)	(ad) = (aa/ab)
Business Program	$135,435,751	$58,678,152	$76,757,599	2.31
Standard	$46,147,585	$16,592,165	$29,555,419	*2.78*
Custom	$30,977,288	$14,700,462	$16,276,826	*2.11*
Midstream - Lighting	$27,319,699	$7,238,502	$20,081,198	*3.77*
Midstream - HVAC	$262,626	$694,022	-$431,396	*0.38*
Midstream - Food Service	$500,516	$316,023	$184,492	*1.58*
Small Business - Direct Install	$21,162,344	$15,209,598	$5,952,746	*1.39*
Small Business - Energy Performance	$583,286	$1,231,599	-$648,313	*0.47*
Retro-Commissioning	$1,657,109	$1,413,284	$243,825	*1.17*
Streetlighting - Municipality Owned	$28,753	$89,714	-$60,961	*0.32*
Streetlighting - Utility Owned	$6,796,545	$919,833	$5,876,713	*7.39*
Market Transformation	$0	$272,950	-$272,950	*0.00*
Portfolio Costs	$0	$20,079,645	-$20,079,645	N/A
Market Development Initiative	*$0*	*$3,675,220*	*-$3,675,220*	*N/A*
EM&V	*$0*	*$4,097,620*	*-$4,097,620*	*N/A*
Marketing & Education	*$0*	*$4,762,322*	*-$4,762,322*	*N/A*
Administrative Expenses	*$0*	*$7,099,475*	*-$7,099,475*	*N/A*
Program Implementation	*$0*	*$445,006*	*-$445,006*	*N/A*
AIC 2024 Portfolio	**$218,595,802**	**$152,967,645**	**$65,628,157**	**1.43**
AIC 2024 Portfolio (not including IQ)	**$166,925,281**	**$94,001,930**	**$72,923,351**	**1.78**

[a] PAC benefits include AIC-provided gas impacts, but exclude non-AIC-provided gas and propane impacts.

APPENDIX B. VOLTAGE OPTIMIZATION PROGRAM COST-EFFECTIVENESS TABLES

Detailed cost-effectiveness results for the Voltage Optimization Program, aligning with the SAG template for cost-effectiveness reporting and including program-level benefits, costs, and benefit-cost ratios, are provided in Table 13, Table 14, Table 15, and Table 16. The results are also attached as a spreadsheet.

Table 13. 2024 AIC Voltage Optimization Program Cost-Effectiveness Benefits

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Societal NEI Cost Changes
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Voltage Optimization	$61,576,232	$0	$0	$0	$30,370,715	$4,829,852

Table 14. 2024 AIC Voltage Optimization Program Cost-Effectiveness Costs

Program	Electric Cost Changes	Other Fuel Cost Changes	Water Cost Changes	Avoided O&M Cost Changes	GHG Reduction Cost Changes	Societal NEI Cost Changes	Non-Incentive Costs (Electric)	Non-Incentive Costs (Gas)	Incentive Costs (Electric)	Incentive Costs (Gas)	Incremental Costs (Net)
(a)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Voltage Optimization	$0	$0	$0	$0	$0	$0	$30,638,443	$0	$0	$0	$11,042,063

Table 15. 2024 AIC Voltage Optimization Program Illinois Total Resource Cost Test

Program	IL TRC Benefits	IL TRC Costs	IL TRC Test Net Benefits	IL TRC Test Ratio – with NEIs	IL TRC Test Ratio – without NEIs
(a)	(s) =(b+c+d+e+f+g)	(t) =(h+i+j+k+l+m+n+o+r)	(u)=(s-t)	(v)=(s/t)	(z)=[(s-g)/(t-m)]
Voltage Optimization	$96,776,798	$41,680,506	$55,096,293	2.32	2.21

Table 16. 2024 AIC Voltage Optimization Program Utility Cost Test/Program Administrator Cost Test

Program	PAC Benefits	PAC Costs	PAC Test Net Benefits	PAC Test Ratio
(a)	(aa) = (b+c)	(ab) = (h+i+n+o+p+q+r)	(ac) = (aa-ab)	(ad) = (aa/ab)
Voltage Optimization	$61,576,232	$41,680,506	$19,895,726	1.48

Note: For the purposes of the PAC, the evaluation team adjusted the costs to include incremental measure costs because these costs are borne by the utility.

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