# ComEd Cost Effectiveness Analysis CY2025 Report

Energy Efficiency and Demand Response Plan

Program Year 2025 (CY2025)

(01/01/2025-12/31/2025)

**Prepared for:**

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# Table of Contents



# Table of Tables, Figures, and Equations

# 1 Overview

As part of ComEd's energy efficiency program evaluation for program year 2025 (CY2025), Guidehouse determined program and portfolio-level cost-effectiveness using the Illinois total resource cost (TRC) test and the utility cost test (UCT). This analysis included quantifying the program, measure, and portfolio costs for implementing the energy efficiency programs, along with the benefits derived from these investments. This report contains TRC values with and without Societal non-energy impacts (Societal NEIs). The following sections include the results of the cost-effectiveness analysis for each program in ComEd's portfolio and a detailed breakdown of all the costs and benefits included in the analysis.

The savings numbers and results included in this report are reflective of only ComEd's Energy Efficiency Portfolio Standard (EEPS) programs. For programs that are jointly implemented by ComEd and one or more Illinois gas utilities (including Nicor Gas, Peoples Gas [PG], and North Shore Gas [NSG]) only ComEd's portion of the program savings and costs are included in this report.[1] The combined joint TRC and UCT values for these programs will be shared in a separate memo.

The Illinois TRC test is defined in the Illinois Power Agency Act (see 20 ILCS 3855/1-10) as follows:[2]

> *"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 consider a calculation of market price suppression effects or demand reduction induced price effects.*

The Illinois TRC test differs from traditional TRC tests due to its requirement to include a reasonable estimate of the financial costs associated with future regulations and legislation on the emissions of greenhouse gases (GHG) and the use of the societal discount rate. These differences

[1] For programs that are jointly offered by ComEd and gas utilities, the therm savings claimed by ComEd are included in this analysis.
[2] See Section 1-10 Definitions of the Illinois Power Agency Act: http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapterID=5

add a benefit to investments in efficiency programs that are typically included in the societal cost test in other jurisdictions.

Table 1-1 summarizes the CY2025 TRC and UCT values for all EEPS programs in ComEd's CY2025 portfolio. Overall, the CY2025 portfolio aggregate TRCs and UCTs show the portfolio was cost-effective, with aggregate TRC values of 5.86 with Societal NEIs and 3.62 without Societal NEIs, and a UCT value of 2.81.

The CY2025 results represent a considerable year-over-year improvement. CY2024 aggregate TRC values were 4.88 with Societal NEIs and 2.83 without Societal NEIs, and a UCT value of 2.02.

**Table 1-1. Summary of CY2025 TRC and UCT Values for ComEd Programs**

| Program | TRC Test (With Societal NEIs)* | TRC Test (Without Societal NEIs)* | UCT* |
|---|---|---|---|
| ASI kWh Purchase** | 5.92 | 4.05 | 6.73 |
| Behavior - Res/IE | 7.11 | 3.93 | 2.83 |
| Contractor/Midstream Rebates | 7.21 | 3.38 | 2.83 |
| Electric Homes New Construction | 3.11 | 1.64 | 1.75 |
| Multifamily Upgrades | 3.11 | 2.02 | 1.24 |
| New Construction - IE | 8.83 | 4.96 | 1.87 |
| Product Distribution | 22.53 | 13.02 | 8.59 |
| Retail/Online | 9.36 | 6.45 | 8.91 |
| Single-Family Upgrades | 1.18 | 0.85 | 0.77 |
| Whole Home Electric | 1.50 | 0.78 | 0.48 |
| **Residential & Income Eligible Total*** | **7.62** | **4.88** | **4.36** |
| Behavior Bus/Pub | 4.24 | 1.99 | 1.21 |
| Business Energy Analyzer (BEA) | 5.75 | 3.28 | 15.34 |
| Incentives | 4.10 | 2.48 | 2.09 |
| Midstream/Upstream | 11.86 | 7.07 | 5.10 |
| New Construction - Bus/Pub | 1.63 | 1.07 | 2.31 |
| Small Business | 4.96 | 3.02 | 1.66 |
| Targeted Systems | 3.65 | 2.00 | 1.43 |
| **Business & Public Sector Total*** | **5.53** | **3.29** | **2.31** |
| Automated System Optimization | 1.02 | 0.52 | 0.65 |
| Virtual Energy Coach | 2.68 | 1.40 | 1.85 |
| **Pilots** | **1.88** | **0.97** | **1.27** |
| Voltage Optimization | 3.75 | 2.21 | 1.52 |
| **Portfolio Total without IE & with VO*** | **5.56** | **3.41** | **2.60** |
| **Portfolio Total with IE & without VO*** | **6.02** | **3.72** | **2.91** |
| **Portfolio Total without IE, VO, & Pilots** | **5.76** | **3.54** | **2.72** |
| **Portfolio Total with IE & VO*** | **5.86** | **3.62** | **2.81** |

**The TRC and UCT values are calculated as a ratio of all the offerings' benefits and costs. Values are rounded to 2 digits.*
*Source: Guidehouse analysis*

**Both the Residential and Business sectors achieved TRC cost-effectiveness in CY2025.** Performance remained strong across the portfolio. More details are provided in the Findings section at the end of this report.

- TRC costs decreased from $643M in CY2024 to $570M in CY2025. Voltage Optimization reduced software costs and more cost-effective implementation was the main driver.
- TRC benefits increased significantly from $1,818M in CY2024 to $2,062M in CY2025. The largest increase in benefits is attributable to electricity avoided costs, which rose from $757M in CY2024 to $1,074M in CY2025, primarily due to higher nominal avoided cost values.
- Income-Eligible (IE) components of applicable programs contribute $541M in net utility benefits to ComEd's CY2025 portfolio. Excluding IE programs, the portfolio cost-effectiveness decreases to 5.56 (with NEIs) and 3.41 (without NEIs).

## 1.1 Illinois Total Resource Cost Equation

Guidehouse used Equation 1 to calculate the Illinois TRC.

**Equation 1. Illinois TRC**

$$BCR_{ILTRC} = B_{ILTRC} / C_{ILTRC}$$

Where:

**$BCR_{ILTRC}$** = Benefit-cost ratio of the Illinois TRC test

**$B_{ILTRC}$** = Present value of benefits of an Illinois program or portfolio

**$C_{ILTRC}$** = Present value of costs of an Illinois program or portfolio

The evaluation team calculated the benefits of the Illinois TRC using Equation 2.

**Equation 2. Illinois TRC Benefits**

$$B_{ILTRC} = \sum_{t=1}^{N} \frac{UAEP_t + UATD_t + UAA_t + EB_t + RC + \text{S NEI}}{(1+d)^{t-1}} + \sum_{t=1}^{N} \frac{UAC_{at}}{(1+d)^{t-1}}$$

Guidehouse calculated the costs of the Illinois TRC using Equation 3.

**Equation 3. Illinois TRC Costs**

$$C_{ILTRC} = \sum_{t=1}^{N} \frac{PNIC_t + IMCN_t + UIC_t}{(1+d)^{t-1}}$$

Where benefits are defined as:

UAEPt = Utility avoided electric and capacity production costs in year t

UATDt = Utility avoided transmission and distribution (T&D) costs in year t

UAAt = Utility avoided ancillary costs in year t

EBt = Environmental benefits in year t

UACat = Utility avoided supply costs for the alternate fuel in year t

RC = Net present value (NPV) of replacement costs of baseline bulbs

S NEI = NPV societal NEI benefit

And costs are defined as:

PNICt = Program non-incentive costs in year t

IMCNt = Net incremental costs in year t

UICt = Utility increased supply costs in year t

And:

d = Societal discount rate

## 1.2 Utility Cost Test Equation

The Utility Cost Test (UCT) approaches cost-effectiveness from the perspective of the utility, in this case ComEd. The UCT determines whether the energy supply and capacity costs avoided by the utility exceed the overhead and cost outlays that the utility incurred to implement energy efficiency programs. The structure of the calculation is similar to the Illinois TRC with a few key changes. As the UCT is primarily focused on utility outlays, incentives paid by the utility to either participants or third-party implementers are included in the calculation in place of incremental or participant costs. Additionally, as non-energy benefits accrue to society rather than to the utility implementing energy efficiency programs, these benefits are not included in the UCT formula. The UCT, however, accounts for water benefits defined in IL TRM v13.0.

Using the equation terms previously defined for the Illinois TRC equation, Equation 4 shows the UCT equation.

**Equation 4. UCT**

$$BCR_{UCT} = B_{UCT} / C_{UCT}$$

Where:

**$BCR_{UCT}$** = Benefit-cost ratio of the UCT

**$B_{UCT}$** = Present value of benefits to a utility of a program or portfolio

**$C_{UCT}$** = Present value of costs to a utility of a program or portfolio

The benefits of the UCT are calculated using Equation 5.

**Equation 5. UCT Benefits**

$$B_{UCT} = \sum_{t=1}^{N} \frac{UAEP_t + UATD_t + UAA_t}{(1+d)^{t-1}} + \sum_{t=1}^{N} \frac{UAC_{at}}{(1+d)^{t-1}}$$

The costs of the UCT are calculated using Equation 6.

**Equation 6. UCT Costs**

$$C_{UCT} = \sum_{t=1}^{N} \frac{PNIC_t + UIC_t + PIN_t}{(1+d)^{t-1}}$$

Where the new term, $PIN_t$, is defined as the program incentives provided by the utility in year t.

## 1.3 Cost-Effectiveness Data Requirements

Table  outlines the data points collected from different stakeholders to conduct cost-effectiveness analysis. The data is categorized into generic and program-specific categories.

**Table 1-2. Data Points Needed to Conduct EEPS Cost-Effectiveness**

| Category | Data Point | Source |
|---|---|---|
| Generic | • Avoided Energy Costs ($/kWh)<br>• Avoided Capacity Costs ($/kW)<br>• Avoided T&D Electric ($/kWh)<br>• Avoided Gas Production ($/therm)[3]<br>• Avoided Water Costs ($/gallon)<br>• Escalation Rates<br>• Environmental Damages (GHG Adders)<br>• Discount Rate | ComEd |
| Program Specific | • Participants/Measure Count<br>• Verified Energy and Demand Savings<br>• Realization Rate<br>• Net-to-Gross Ratio<br>• Measure Life<br>• Incremental Measure Costs[4]<br>• NPV Replacement Costs<br>• Societal NEI Benefit | Guidehouse Evaluation of ComEd Reports |
| | • Non-Incentive Costs<br>• Utility Incentive Costs<br>• Direct Install Costs<br>• Incremental Measure Costs | ComEd |

*Source: Guidehouse analysis*

[3] From Nicor Gas and Peoples and North Shore Gas.
[4] Incremental measure costs come from program tracking data, program contractor invoices, and deemed value sources from IL TRM v12.0.

# 2 Summary of Results and Portfolio-Level Data Inputs

Table 2 summarizes the CY2025 cost-effectiveness analysis results by benefit and cost components relevant to each cost test for the portfolio without the inclusion of income eligible components or voltage optimization. The results indicate that ComEd's CY2025 EEPS portfolio is cost-effective under both the UCT and the TRC tests for the Residential and Business sectors. On the cost side, net participant costs represent the largest component followed by the incentive costs of program implementation. For the UCT, the sum of all incentives provided is used in place of net participant costs.

**Table 2-1. Summary of ComEd CY2025 Residential and Business Sectors' Cost-Effectiveness Test Values ($ Thousands)**

| Data Point | UCT | | Illinois TRC Test | |
|---|---|---|---|---|
| | UCT Benefits | UCT Costs | Illinois TRC Benefits | Illinois TRC Costs |
| Electricity Cost Changes | $688,153 | $68 | $688,153 | $68 |
| Fossil Fuel Cost Changes | $184,122 | $10,472 | $184,122 | $10,472 |
| Water Cost Changes | $19,222 | N/A | $19,222 | $0 |
| Environmental Adder (GHGs) | N/A | N/A | $328,134 | $26 |
| Societal NEI Benefit | N/A | N/A | $787,697 | $38 |
| NPV Replacement Costs | N/A | N/A | $39,830 | $0 |
| Non-Incentive Costs | N/A | $108,212 | N/A | $108,212 |
| Incentive Costs | N/A | $208,633 | N/A | N/A |
| Net Participant Costs | N/A | N/A | $0 | $236,508 |
| Present Value Totals (with Societal NEI) | $891,497 | $327,387 | $2,047,158 | $355,325 |
| Present Value Totals (without Societal NEI) | $891,497 | $327,387 | $1,259,462 | $355,287 |
| **Ratio (with Societal NEI)** | 2.72 | | 5.76 | |
| **Ratio (without Societal NEI)** | 2.72 | | 3.54 | |

*Note: All categories exclude income eligible, voltage optimization, and pilots.*
*Source: Guidehouse analysis*

## 2.1 Avoided Costs

The Illinois TRC test allows utilities to account for the NPV of the avoided cost of purchasing shorter lifetime bulbs, which accrue to program participants because of the significantly longer lifetimes of efficient LED light bulbs. In general, the avoided cost per bulb is determined by comparing the estimated useful life of efficient and baseline bulbs to determine the number of baseline bulb purchases that are avoided. Based on the average purchase price of baseline bulbs, NPV is determined by discounting the value of these avoided purchases over the course of the lifetime of the efficient bulb. Illinois Technical Reference Manual version 13.0 (IL TRM v13.0)[5] provides

[5] IL-TRM-Version-13.0-Volumes-1-4-Compiled-Final.pdf

deemed NPVs per bulb based on efficient bulb type, socket type (commercial or residential), and lumen range. These benefits were included in the program calculations.

Policy Manual Version 3.0[6] asserts that negative avoided costs (accrued through electrification or other impacts) be treated as increases in TRC costs rather than decreases in TRC benefits, as was previously treated. Additionally, electricity avoided cost impacts (energy and demand) are grouped to create a net cost change due to electricity. Net cost change is reported under electric cost changes while changes due to gas savings are incorporated in fossil fuel cost changes. These updates are reflected in the TRC ratios and report tables.

The definitions of each avoided cost data point used in the analysis and their respective sources are as follows:

- **Avoided Energy Costs ($/kWh):** Avoided electric production costs are those associated with purchasing energy from Pennsylvania-New Jersey-Maryland Interconnection (PJM).
- **Avoided Electric Capacity Costs ($/kW):** Avoided electric capacity costs are those associated with the construction of additional electricity generation facilities to meet peak demand. Incremental reductions in the amount of electricity demand during peak hours can delay or eliminate the need to build additional generation. ComEd is a participant in the Reliability Pricing Model, which is PJM's forward capacity market.
- **Avoided T&D Electric ($/kW):** Avoided T&D costs are a benefit associated with not needing to build T&D infrastructure to meet demand at peak times.
- **Avoided Electric Ancillary ($/kWh):** Avoided ancillary is a benefit associated with avoided costs attributable to the Open Access Transmission Tariff that applies to utilities that participate in the PJM market.
- **Avoided Gas Costs ($/therm):** This value is from Nicor Gas, Peoples Gas, and North Shore Gas, and is used to account for gas interactive effects due to lighting.
- **Avoided Water Costs ($/gal):** This value accounts for savings associated with efficient water fixtures and clothes washers. The avoided water costs of $9.97/1,000 gallons (as provided by ComEd) were used for the analysis.

## 2.2 Non-Incentive Costs

Non-incentive costs are program administrator costs (related to energy efficiency) that are not otherwise classified as financial incentives paid to customers or incentives paid to third parties. In other words, non-incentive costs are equal to all program administrator costs minus incentives.

Examples of non-incentive costs include:

- Costs for overhead, labor, and materials required to develop, deliver, and administer functions related to the implementation of energy efficiency programs or portfolios such as

[6] https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf

rebate processing, measurement and verification (M&V), quality assurance, advertising and marketing, and customer relations

- Program administrator payment to a third party whose principal purpose is not to reduce the cost of the efficient measure to the customer
- Program administrator payment to a third party to cover the cost of services that are principally intended to be a form of marketing, as opposed to being truly necessary for any customer implementation of efficient measures
- Sales performance incentive fund formula (SPIFF) paid out to a third party

There are currently some performance-based programs where the third-party program implementer is paid an amount per kilowatt-hour that includes incentives and non-incentives. Guidehouse worked with ComEd to separate out the costs appropriately.

## 2.3 Incentives

Incentives[7] include financial incentives paid to customers plus incentives paid to third parties. Financial incentives paid to customers are payments[8] made by a program administrator directly to an end-use customer to encourage the customer to participate in an efficiency program and offset some or all the customer's costs to purchase and install a qualifying efficient measure, ultimately resulting in a reduction in the net price paid by the customer for the efficient measure. This rebate type of incentive is often referred to as a downstream incentive, which has the result that the net price to the customer of an energy efficiency program-sponsored measure is reduced by the amount of the incentive.

Incentives paid to third parties are payments made by a program administrator to a third party that is principally intended to reduce the net price to the customer of purchasing and installing a qualifying efficient measure. These incentives include payments made by a program administrator to service providers, manufacturers, wholesalers, distributors, contractors, builders, retailers, implementation contractors, or other non-customer stakeholders that are principally intended to defray the incremental cost to the customer of purchasing and installing an efficient measure. They also include payments made by a program administrator to an implementation contractor to cover the full cost of direct installation measures (materials and labor) for the portion not covered by the customer. Incentives paid to third parties also include payment by a program administrator to a third party to cover the full cost of study-based services (e.g., facility energy audits, energy surveys,

[7] Incentive definitions can be found in Section 8.4 TRC Costs of the Illinois Energy Efficiency Policy Manual Version 3.0. The Illinois TRC test requires that "all incremental costs of end use measures (including both utility and participant contributions)" should be reflected as costs in the TRC test calculation. As long as "all incremental costs of end-use measures" are included in the TRC test calculation, there is no need to add program administrator contribution costs (i.e., incentives) and participant contribution costs as separate components to the TRC test. However, program administrator contribution costs (i.e., incentives) are needed to calculate the Program Administrator Cost Test (PACT)/UCT because those are a component of the program administrator expenses. Most TRC modeling software requires users to input the incentives as a separate input in addition to providing all incremental costs such that the PACT/UCT can be calculated. For this reason, the separate incentives input in the TRC model is not used when calculating the TRC test because these costs are already reflected in the incremental cost input, and if the model were to use both the incentives input and the incremental cost input, it would result in double counting of costs in the TRC analysis.

[8] Payments include non-measure items of value that would be treated as transfer payments, e.g., gift cards.

energy assessments, retro-commissioning) that are truly necessary for a customer to implement efficient measures, as opposed to being principally a form of marketing. The portion of the payments covered by the customers are not included in the incentives paid to third parties.

## 2.4 Incremental Costs

Incremental costs are the difference between the cost of the efficient measure and the cost of the most relevant baseline measure that would have been installed (if any) in the absence of the efficiency program. Installation costs (material and labor) and operations and maintenance (O&M) costs are included if there is a difference between the efficient measure and the baseline measure. In cases where the efficient measure has a significantly shorter or longer life than the relevant baseline measure (e.g., LEDs versus halogens), the avoided baseline replacement measure costs are accounted for in the TRC analysis as a benefit. The incremental cost input in the TRC analysis is not reduced by the amount of incentives.

Examples of incremental cost calculations include:

- The incremental cost for an efficient measure that is installed in new construction or is being purchased at the time of natural installation, investment, or replacement is the additional cost incurred to purchase an efficient measure over and above the cost of the baseline or standard (i.e., less efficient) measure (including any incremental installation, replacement, or O&M costs if there is a difference between the efficient measure and baseline measure).

- For a retrofit measure where the efficiency program caused the customer to update their existing equipment, facility, or processes, where the customer would not have otherwise made a purchase, the appropriate baseline is zero expenditure and the incremental cost is the full cost of the new retrofit measure (including installation costs).

- For the early replacement of a functioning measure with a new efficient measure, where the customer would not have otherwise made a purchase for several years, the appropriate baseline is a dual baseline that begins as the existing measure and shifts to the new standard measure after the expected remaining useful life of the existing measure ends. The incremental cost is the full cost of the new efficient measure (including installation costs) being purchased to replace a still-functioning measure less the present value of the assumed deferred replacement cost of replacing the existing measure with a new baseline measure at the end of the existing measure's life.

- For study-based services that are truly necessary for a customer to implement efficient measures, as opposed to being principally intended to be a form of marketing, the incremental cost is the full cost of the study-based service.

## 2.5 Discount Rate

Guidehouse applied the discount rate to determine the present value of the cumulative benefits (e.g., avoided electric production, capacity, T&D, and ancillary) that accrue over the life of the measures included in each program. The discount rate should reflect the societal discount rate as defined in the legislation to

be the actual, long-term treasury bond yields. The societal discount rate of 2.40% is used to calculate the TRC and UCT values.

## 2.6 Line Losses

Line losses were incorporated in the calculation of the benefits. The energy and demand savings calculated by the evaluation are estimated at the customer or meter level. The savings that are accrued to ComEd ratepayers are those at the generator level and so the estimated savings are increased by the line losses within ComEd's T&D network. Guidehouse calculated total benefits using the energy line losses of 9.44% and the peak line losses of 10.57% as provided by ComEd.

## 2.7 Miscellaneous EEPS Portfolio Costs

In addition to costs allocated directly to energy efficiency programs, the cost-effectiveness analysis included portfolio-level costs that are not directly incurred by specific programs. These costs may include administrative, R&D, outreach, advertising, evaluation, M&V, legal, and other expenses. As statutory cost-effectiveness is measured at the portfolio level, ComEd does not allocate these costs to individual programs. Table  outlines the portfolio-level costs included in the analysis.

**Table 2-2. Breakdown of Portfolio-Level Costs**

| Portfolio-Level Cost Component | Value ($) |
|---|---|
| Measurement & Verification (M&V) | $8,323,217 |
| R&D/Emerging Tech | $7,651,731 |
| Market Development | $6,518,514 |
| Legal | $28,386 |
| Tracking System | $811,293 |
| Labor (Non-Program Specific) | $5,364,500 |
| General Program Costs | $5,644,352 |
| General Education & Awareness | $4,054,936 |
| **Total** | **$38,396,929** |

*Source: Guidehouse analysis of ComEd data*

## 2.8 Societal NEIs

Societal NEIs occur when energy efficiency programs reduce electricity generated from fossil fuels, which reduces emissions including $PM_{2.5}$, $SO_2$, $NO_x$, and $CO_2$. This reduction in emissions causes reduced adverse health impacts, which are monetizable. The Societal NEIs were incorporated in the CY2025 analysis for the TRC values only. As discussed in previous sections, this report provides TRC results both with and without NEIs included.

Guidehouse quantified and monetized these Societal NEIs using the U.S. Environmental Protection Agency (EPA) AVoided Emissions and geneRation Tool (AVERT) and CO–Benefits Risk Assessment (COBRA) Health Impacts Screening and Mapping Tool. The EPA updated COBRA in 2024 to estimate changes in annual ambient concentrations of both particulate matter ($PM_{2.5}$) and ozone. In previous years, COBRA only

estimated the health impacts of $PM_{2.5}$. The COBRA update included additional health incidents (Hospital Admissions related to Alzheimer's and Parkinson's Disease, Incidence of Stroke and Lung Cancer, and Hay Fever/Rhinitis).

# 3 Program Specific Data

Table 3-1 and

Table 3-2 summarize the CY2025 cost-effectiveness calculations and results for each program. These tables include the value of each benefit and cost component for each program and EEPS totals for each sector (e.g., residential & income eligible [IE] and business). For programs jointly implemented by ComEd and one or more Illinois gas utility, the table includes only the electric portion of the program savings (unless ComEd claims the gas savings) and cost-benefit calculations.

Table 3-3 summarizes the CY2025 ComEd Electrification Measures' energy consumption, savings, and costs (total cost, total utility cost, average cost, average utility cost).

Table 3-4 and
Table **3-5** provide the TRC and UCT analysis from electrification, and the Table 3-6 and Table 3-7 provide the results from income eligible programs perspective.

**Table 3-1. ComEd Program-Level Benefits, Costs, and Illinois TRC without Gas Data from Joint Programs ($ Thousands)**

| Program* | Benefits | | | | | | | Costs | | | | | | | | | IL Total Resource Cost (TRC) Test (NPV replacement cost as benefit) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes‡ | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL TRC Benefits (w/o NEI) | IL TRC Costs (w/o NEI) | IL TRC Test Net Benefits (w/o NEI) | IL TRC Test (w/NEI) | IL TRC Test (w/o NEI) |
| | a | b | c | d | e | f | g | h | I | j | k | l | m | n | o | p | (q )=a+b+c+d+f+g | (r) = h+i+j+k+m+n+p | (s) = q-r | (t) = (q+e)/(r+I) | (u) = q / r |
| ASI kWh Purchase* | $1,683 | $0 | $0 | $570 | $1,042 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $250 | $0 | $307 | $2,253 | $557 | $1,696 | 5.92 | 4.05 |
| Behavior - Res/IE | $18,558 | $0 | $0 | $7,318 | $21,227 | $0 | $0 | $63 | $0 | $0 | $22 | $33 | $0 | $6,502 | $0 | $0 | $25,876 | $6,587 | $19,289 | 7.11 | 3.93 |
| Contractor/Midstream Rebates | $19,277 | $12,696 | $0 | $10,522 | $48,239 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $8,336 | $9,640 | $42,496 | $12,587 | $29,909 | 7.21 | 3.38 |
| Electric Homes New Construction | $1,227 | $459 | $68 | $753 | $2,255 | $0 | $0 | $5 | $0 | $0 | $4 | $4 | $0 | $534 | $463 | $985 | $2,507 | $1,528 | $979 | 3.11 | 1.64 |
| Multifamily Upgrades | $28,066 | $14,643 | $3,172 | $16,764 | $34,126 | $234 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,686 | $26,354 | $20,486 | $62,879 | $31,171 | $31,707 | 3.11 | 2.02 |
| New Construction - IE | $6,546 | $2,982 | $424 | $4,034 | $11,346 | $2 | $0 | $66 | $11 | $0 | $47 | $51 | $0 | $1,625 | $3,616 | $1,069 | $13,989 | $2,818 | $11,171 | 8.83 | 4.96 |
| Product Distribution | $130,225 | $22,347 | $5,166 | $65,543 | $176,473 | $18,589 | $0 | $0 | $996 | $0 | $0 | $0 | $0 | $5,095 | $12,278 | $12,479 | $241,870 | $18,570 | $223,300 | 22.53 | 13.02 |
| Retail/Online | $228,366 | $250,841 | $18,551 | $131,845 | $299,976 | $35,702 | $0 | $0 | $13,087 | $0 | $0 | $0 | $0 | $12,670 | $30,081 | $77,319 | $665,306 | $103,077 | $562,229 | 9.36 | 6.45 |
| Single-Family Upgrades | $9,668 | $10,449 | $1,607 | $4,315 | $10,056 | $349 | $0 | $0 | $284 | $0 | $0 | $0 | $0 | $8,687 | $19,144 | $22,029 | $26,389 | $31,001 | ($4,612) | 1.18 | 0.85 |
| Whole Home Electric | $5,663 | $2,675 | $4 | $3,555 | $11,051 | $0 | $0 | $267 | $0 | $0 | $29 | $31 | $0 | $3,290 | $13,722 | $11,728 | $11,897 | $15,314 | ($3,417) | 1.50 | 0.78 |
| Res & IE Sector Admin Cost | | | | | | | | | | | | | | $1,197 | | | | $1,197 | | | |
| **Res & IE Total** | **$449,280** | **$317,092** | **$28,993** | **$245,221** | **$615,792** | **$54,876** | **$0** | **$402** | **$14,378** | **$0** | **$101** | **$120** | **$0** | **$53,484** | **$113,995** | **$156,041** | **$1,095,461** | **$224,406** | **$871,054** | **7.62** | **4.88** |
| Behavior Bus/Pub | $12,336 | $0 | $0 | $7,873 | $22,892 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $7,298 | $2,876 | $2,876 | $20,209 | $10,174 | $10,034 | 4.24 | 1.99 |
| Business Energy Analyzer (BEA) | $4,948 | $0 | $0 | $1,772 | $5,065 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $323 | $0 | $1,726 | $6,720 | $2,049 | $4,671 | 5.75 | 3.28 |
| Incentives | $134,164 | $14,168 | $0 | $60,144 | $138,366 | $2,123 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $12,485 | $58,556 | $72,602 | $210,599 | $85,088 | $125,512 | 4.10 | 2.48 |
| Midstream/Upstream | $226,944 | $0 | $155 | $102,413 | $236,879 | $19,741 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $39,506 | $44,386 | $349,252 | $49,411 | $299,841 | 11.86 | 7.07 |
| New Construction - Bus/Pub | $4,867 | $352 | $941 | $2,192 | $4,357 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,902 | $764 | $5,912 | $8,352 | $7,814 | $538 | 1.63 | 1.07 |
| Small Business | $143,467 | $1,212 | $0 | $62,692 | $145,523 | $18,878 | $0 | $0 | $10,443 | $0 | $0 | $0 | $0 | $9,065 | $67,869 | $55,441 | $226,248 | $74,950 | $151,299 | 4.96 | 3.02 |
| Targeted Systems | $38,963 | $1,310 | $0 | $18,936 | $48,958 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,234 | $17,885 | $19,401 | $59,208 | $29,635 | $29,574 | 3.65 | 2.00 |
| Business & Public Sector Admin Costs | | | | | | | | | | | | | | $8,833 | | | | $8,833 | | | |
| **Business & Public Sector Total** | **$565,688** | **$17,041** | **$1,096** | **$256,022** | **$602,040** | **$40,742** | **$0** | **$0** | **$10,443** | **$0** | **$0** | **$0** | **$0** | **$55,166** | **$187,456** | **$202,344** | **$880,588** | **$267,952** | **$612,636** | **5.53** | **3.29** |
| Automated System Optimization | $13 | $0 | $0 | $6 | $19 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $20 | $0 | $18 | $19 | $37 | ($18) | 1.02 | 0.52 |
| Virtual Energy Coach | $38 | $0 | $0 | $18 | $51 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $21 | $0 | $19 | $56 | $40 | $16 | 2.68 | 1.40 |
| **Pilot and Market Transformation Total** | **$51** | **$0** | **$0** | **$24** | **$70** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$40** | **$0** | **$37** | **$75** | **$77** | **($2)** | **1.88** | **0.97** |
| Voltage Optimization | $59,130 | $0 | $0 | $26,557 | $60,077 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $38,837 | $0 | $0 | $85,687 | $38,837 | $46,850 | 3.75 | 2.21 |
| Portfolio Admin Costs | | | | | | | | | | | | | | $38,397 | | | | $38,397 | | | |
| **Portfolio Total without IE & with VO** | **$747,335** | **$184,122** | **$19,222** | **$354,715** | **$847,843** | **$39,830** | **$0** | **$68** | **$10,472** | **$0** | **$26** | **$38** | **$0** | **$147,090** | **$208,633** | **$236,545** | **$1,345,224** | **$394,202** | **$951,022** | **5.56** | **3.41** |
| **Portfolio Total with IE & without VO** | **$1,015,019** | **$334,132** | **$30,088** | **$501,267** | **$1,217,901** | **$95,618** | **$0** | **$402** | **$24,821** | **$0** | **$101** | **$120** | **$0** | **$147,087** | **$301,451** | **$358,422** | **$1,976,124** | **$530,833** | **$1,445,291** | **6.02** | **3.72** |
| **Portfolio Total without IE & VO** | **$688,153** | **$184,122** | **$19,222** | **$328,134** | **$787,697** | **$39,830** | **$0** | **$68** | **$10,472** | **$0** | **$26** | **$38** | **$0** | **$108,212** | **$208,633** | **$236,508** | **$1,259,462** | **$355,287** | **$904,174** | **5.76** | **3.54** |
| **Portfolio Total with IE & VO** | **$1,074,149** | **$334,132** | **$30,088** | **$527,824** | **$1,277,978** | **$95,618** | **$0** | **$402** | **$24,821** | **$0** | **$101** | **$120** | **$0** | **$185,924** | **$301,451** | **$358,422** | **$2,061,811** | **$569,670** | **$1,492,141** | **5.86** | **3.62** |

** The ASI kWh Purchase is not included as a program, but the TRC and UCT analysis for the offering is provided, and the results are counted in this table as part of the residential sector TRC and UCT.*
*‡Gas heating penalties from energy efficiency measures designed to save electricity are being calculated as part of the overall fossil fuel cost changes.*
*Source: Guidehouse analysis*

**Table 3-2. ComEd Program-Level Benefits, Costs, and UCT without Gas Data from Joint Programs ($ Thousands)**

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Utility Cost Test (UCT) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes‡ | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL UCT Benefits | IL UCT Costs | IL UCT Test Net Benefits | IL UCT Test |
| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | (v) = a+b+c | (w) = h+i+n+o | (x) = v-w | (y) = v/w |
| ASI kWh Purchase* | $1,683 | $0 | $0 | $570 | $1,042 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $250 | $0 | $307 | $1,683 | $250 | $1,433 | 6.73 |
| Behavior - Res/IE | $18,558 | $0 | $0 | $7,318 | $21,227 | $0 | $0 | $63 | $0 | $0 | $22 | $33 | $0 | $6,502 | $0 | $0 | $18,558 | $6,565 | $11,993 | 2.83 |
| Contractor/Midstream Rebates | $19,277 | $12,696 | $0 | $10,522 | $48,239 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $8,336 | $9,640 | $31,973 | $11,284 | $20,690 | 2.83 |
| Electric Homes New Construction | $1,227 | $459 | $68 | $753 | $2,255 | $0 | $0 | $5 | $0 | $0 | $4 | $4 | $0 | $534 | $463 | $985 | $1,753 | $1,003 | $750 | 1.75 |
| Multifamily Upgrades | $28,066 | $14,643 | $3,172 | $16,764 | $34,126 | $234 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,686 | $26,354 | $20,486 | $45,881 | $37,040 | $8,841 | 1.24 |
| New Construction - IE | $6,546 | $2,982 | $424 | $4,034 | $11,346 | $2 | $0 | $66 | $11 | $0 | $47 | $51 | $0 | $1,625 | $3,616 | $1,069 | $9,952 | $5,318 | $4,634 | 1.87 |
| Product Distribution | $130,225 | $22,347 | $5,166 | $65,543 | $176,473 | $18,589 | $0 | $0 | $996 | $0 | $0 | $0 | $0 | $5,095 | $12,278 | $12,479 | $157,737 | $18,369 | $139,369 | 8.59 |
| Retail/Online | $228,366 | $250,841 | $18,551 | $131,845 | $299,976 | $35,702 | $0 | $0 | $13,087 | $0 | $0 | $0 | $0 | $12,670 | $30,081 | $77,319 | $497,759 | $55,839 | $441,920 | 8.91 |
| Single-Family Upgrades | $9,668 | $10,449 | $1,607 | $4,315 | $10,056 | $349 | $0 | $0 | $284 | $0 | $0 | $0 | $0 | $8,687 | $19,144 | $22,029 | $21,725 | $28,115 | ($6,390) | 0.77 |
| Whole Home Electric | $5,663 | $2,675 | $4 | $3,555 | $11,051 | $0 | $0 | $267 | $0 | $0 | $29 | $31 | $0 | $3,290 | $13,722 | $11,728 | $8,342 | $17,280 | ($8,938) | 0.48 |
| Res & IE Sector Admin Cost | | | | | | | | | | | | | | $1,197 | | | | $1,197 | | |
| **Res & IE Total** | **$449,280** | **$317,092** | **$28,993** | **$245,221** | **$615,792** | **$54,876** | **$0** | **$402** | **$14,378** | **$0** | **$101** | **$120** | **$0** | **$53,484** | **$113,995** | **$156,041** | **$795,364** | **$182,259** | **$613,105** | **4.36** |

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Utility Cost Test (UCT) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes‡ | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL UCT Benefits | IL UCT Costs | IL UCT Test Net Benefits | IL UCT Test |
| Behavior Bus/Pub | $12,336 | $0 | $0 | $7,873 | $22,892 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $7,298 | $2,876 | $2,876 | $12,336 | $10,174 | $2,161 | 1.21 |
| Business Energy Analyzer (BEA) | $4,948 | $0 | $0 | $1,772 | $5,065 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $323 | $0 | $1,726 | $4,948 | $323 | $4,625 | 15.34 |
| Incentives | $134,164 | $14,168 | $0 | $60,144 | $138,366 | $2,123 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $12,485 | $58,556 | $72,602 | $148,332 | $71,041 | $77,290 | 2.09 |
| Midstream/Upstream | $226,944 | $0 | $155 | $102,413 | $236,879 | $19,741 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $39,506 | $44,386 | $227,098 | $44,531 | $182,567 | 5.10 |
| New Construction - Bus/Pub | $4,867 | $352 | $941 | $2,192 | $4,357 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,902 | $764 | $5,912 | $6,160 | $2,666 | $3,494 | 2.31 |
| Small Business | $143,467 | $1,212 | $0 | $62,692 | $145,523 | $18,878 | $0 | $0 | $10,443 | $0 | $0 | $0 | $0 | $9,065 | $67,869 | $55,441 | $144,679 | $87,377 | $57,301 | 1.66 |
| Targeted Systems | $38,963 | $1,310 | $0 | $18,936 | $48,958 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,234 | $17,885 | $19,401 | $40,273 | $28,119 | $12,153 | 1.43 |
| Business & Public Sector Admin Costs | | | | | | | | | | | | | | $8,833 | | | | $8,833 | | |
| **Business & Public Sector Total** | **$565,688** | **$17,041** | **$1,096** | **$256,022** | **$602,040** | **$40,742** | **$0** | **$0** | **$10,443** | **$0** | **$0** | **$0** | **$0** | **$55,166** | **$187,456** | **$202,344** | **$583,824** | **$253,065** | **$330,760** | **2.31** |
| Automated System Optimization | $13 | $0 | $0 | $6 | $19 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $20 | $0 | $18 | $13 | $20 | ($7) | 0.65 |
| Virtual Energy Coach | $38 | $0 | $0 | $18 | $51 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $21 | $0 | $19 | $38 | $21 | $18 | 1.85 |
| **Pilot and Market Transformation Total** | **$51** | **$0** | **$0** | **$24** | **$70** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$40** | **$0** | **$37** | **$51** | **$40** | **$11** | **1.27** |
| Voltage Optimization | $59,130 | $0 | $0 | $26,557 | $60,077 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $38,837 | $0 | $0 | $59,130 | $38,837 | $20,293 | 1.52 |
| Portfolio Admin Costs | | | | | | | | | | | | | | $38,397 | | | | $38,397 | | |
| **Portfolio Total without IE & with VO** | **$747,335** | **$184,122** | **$19,222** | **$354,715** | **$847,843** | **$39,830** | **$0** | **$68** | **$10,472** | **$0** | **$26** | **$38** | **$0** | **$147,090** | **$208,633** | **$236,545** | **$950,678** | **$366,264** | **$584,414** | **2.60** |
| **Portfolio Total with IE & without VO** | **$1,015,019** | **$334,132** | **$30,088** | **$501,267** | **$1,217,901** | **$95,618** | **$0** | **$402** | **$24,821** | **$0** | **$101** | **$120** | **$0** | **$147,087** | **$301,451** | **$358,422** | **$1,379,240** | **$473,760** | **$905,479** | **2.91** |
| **Portfolio Total without IE & VO** | **$688,153** | **$184,122** | **$19,222** | **$328,134** | **$787,697** | **$39,830** | **$0** | **$68** | **$10,472** | **$0** | **$26** | **$38** | **$0** | **$108,212** | **$208,633** | **$236,508** | **$891,497** | **$327,387** | **$564,110** | **2.72** |
| **Portfolio Total with IE & VO** | **$1,074,149** | **$334,132** | **$30,088** | **$527,824** | **$1,277,978** | **$95,618** | **$0** | **$402** | **$24,821** | **$0** | **$101** | **$120** | **$0** | **$185,924** | **$301,451** | **$358,422** | **$1,438,370** | **$512,598** | **$925,772** | **2.81** |

** The ASI kWh Purchase is not included as a program, but the TRC and UCT analysis for the offering is provided, and the results are counted in this table as part of the residential sector TRC and UCT.*
*‡Gas heating penalties from energy efficiency measures designed to save electricity are being calculated as part of the overall fossil fuel cost changes.*
*Source: Guidehouse analysis*

**Table 3-3. ComEd Electrification Measure Costs**

| Program | Component | IE | End Use Type | Savings Category | Quantity | Increase in Electricity Consumption (kWh) | Average Increase in Electricity Consumption (kWh) | Decrease in Gas Consumption (therms) | Average Decrease in Gas Consumption (therms) | Decrease in Gas Consumption (kWh) | Net Change in Electricity Consumption (kWh) | Ex Ante Gross Savings (kWh) | Program Gross Realization Rate | Verified Gross Savings (kWh) | Program Net-to-Gross Ratio (NTG) | Verified Net Savings (kWh) | EUL | Total Cost | Total Utility Cost | Average Cost | Average Utility Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Ground Source Heat Pump - Electrification (Income Eligible) | 3 | 17,131 | 6,489 | 3,282 | 1,243 | 96,181 | 79,050 | 75,295 | 1.16 | 87,479 | 1.00 | 87,479 | 25 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Ground Source Heat Pump - Electrification - DAC (Income Eligible) | 0 | 2,473 | 7,026 | 402 | 1,141 | 11,777 | 9,304 | 9,912 | 1.00 | 9,912 | 1.00 | 9,912 | 25 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Midstream ASHP - Electrification (Income Eligible) | 237 | 2,562,484 | 10,805 | 197,929 | 835 | 5,801,290 | 3,238,805 | 3,238,805 | 1.00 | 3,238,805 | 1.00 | 3,238,805 | 16 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Midstream ASHP - Electrification - DAC (Income Eligible) | 227 | 2,302,149 | 10,150 | 184,781 | 815 | 5,415,925 | 3,113,776 | 3,113,776 | 1.00 | 3,113,776 | 1.00 | 3,113,776 | 16 | $0 | $0 | $0 | $0 |
| New Construction - IE | Affordable Housing New Construction | TRUE | HVAC | VRF | 45 | 414,341 | 9,208 | 81,754 | 1,817 | 2,396,203 | 1,981,862 | 1,975,789 | 1.00 | 1,981,862 | 1.00 | 1,981,862 | 16 | $22,296 | $371,471 | $495 | $8,255 |
| New Construction - IE | Affordable Housing New Construction | TRUE | Appliances | Electric Dryers | 412 | 173,663 | 422 | 8,200 | 20 | 240,329 | 66,666 | 46,258 | 1.44 | 66,666 | 1.00 | 66,666 | 16 | $62,624 | $1,043,384 | $152 | $2,532 |
| Retail/Online | APR - IE | TRUE | Appliances | Electric Clothes Dryer EEE DAC IE | 4 | (153) | (38) | 3 | 1 | 805 | 958 | 958 | 1.00 | 958 | 1.00 | 958 | 16 | $556 | $217 | $139 | $54 |
| Retail/Online | APR - IE | TRUE | Appliances | Electric Clothes Dryer EEE IE | 29 | (1,113) | (38) | 20 | 1 | 5,841 | 6,954 | 6,954 | 1.00 | 6,954 | 1.00 | 6,954 | 16 | $4,527 | $1,764 | $156 | $61 |
| Retail/Online | APR - IE | TRUE | Appliances | Heat Pump Dryer EEE IE | 3 | (238) | (79) | 4 | 1 | 1,250 | 1,488 | 1,488 | 1.00 | 1,488 | 1.00 | 1,488 | 16 | $1,094 | $426 | $365 | $142 |
| Retail/Online | APR - IE | TRUE | Appliances | Induction Cooktop EEE DAC IE | 6 | 1,524 | 254 | 12 | 2 | 3,494 | 1,785 | 1,242 | 1.44 | 1,785 | 1.00 | 1,785 | 16 | $5,751 | $2,240 | $958 | $373 |
| Retail/Online | APR - IE | TRUE | Appliances | Induction Cooktop EEE IE | 18 | 4,229 | 235 | 34 | 2 | 9,977 | 5,140 | 3,727 | 1.38 | 5,140 | 1.00 | 5,140 | 16 | $18,011 | $7,017 | $1,001 | $390 |
| Whole Home Electric | MFU | TRUE | HVAC | Air Source Heat Pump - WHE - Electrification | 61 | 348,537 | 5,714 | 41,778 | 685 | 1,224,518 | 875,981 | 875,911 | 1.01 | 884,611 | 1.00 | 884,611 | 16 | $773 | $818 | $13 | $13 |
| Whole Home Electric | MFU | TRUE | HVAC | Air Source Heat Pump - WHE - Electrification - DAC | 116 | 730,401 | 6,297 | 73,482 | 633 | 2,153,772 | 1,423,371 | 1,423,247 | 1.01 | 1,431,848 | 1.00 | 1,431,848 | 16 | $1,435,468 | $1,519,592 | $12,375 | $13,100 |
| Whole Home Electric | MFU | TRUE | Appliances | Electric Dryer - Electrification | 32 | 15,342 | 479 | 730 | 23 | 21,399 | 6,056 | 8,510 | 1.00 | 8,510 | 1.00 | 8,510 | 16 | $1,614 | $1,709 | $50 | $53 |
| Whole Home Electric | MFU | TRUE | Appliances | Electric Induction Stove Top - Electrification | 3 | 882 | 294 | 64 | 21 | 1,873 | 991 | 990 | 1.01 | 998 | 1.00 | 998 | 16 | $130 | $137 | $43 | $46 |
| Whole Home Electric | MFU | TRUE | Appliances | Electric Induction Stove Top - Electrification - DAC | 144 | 40,694 | 283 | 3,067 | 21 | 89,900 | 49,205 | 49,200 | 1.01 | 49,572 | 1.00 | 49,572 | 16 | $40,873 | $43,268 | $284 | $300 |
| Whole Home Electric | SFHU | TRUE | HVAC | Ductless Heat Pump - Electrification | 2 | 2,378 | 1,189 | 267 | 133 | 7,822 | 5,445 | 5,444 | 1.01 | 5,517 | 1.00 | 5,517 | 16 | $33,244 | $35,192 | $16,622 | $17,596 |
| Whole Home Electric | SFHU | TRUE | HVAC | Ductless Heat Pump - Electrification - DAC | 3 | 5,323 | 1,774 | 600 | 200 | 17,591 | 12,269 | 12,268 | 1.00 | 12,268 | 1.00 | 12,268 | 16 | $7,062 | $7,476 | $2,354 | $2,492 |
| Whole Home Electric | SFHU | TRUE | Appliances | Electric Dryer - Electrification - DAC | 116 | 64,908 | 560 | 2,647 | 23 | 77,570 | 12,662 | 23,044 | 1.00 | 23,044 | 1.00 | 23,044 | 16 | $96,161 | $101,796 | $829 | $878 |
| Whole Home Electric | SFHU | TRUE | HVAC | Air Source Heat Pump - WHE - Electrification | 64 | 708,934 | 11,077 | 79,250 | 1,238 | 2,322,821 | 1,613,888 | 1,613,755 | 1.01 | 1,632,631 | 1.00 | 1,632,631 | 16 | $208 | $220 | $3 | $3 |
| Whole Home Electric | SFHU | TRUE | HVAC | Air Source Heat Pump - WHE - Electrification - DAC | 155 | 1,748,190 | 11,279 | 195,425 | 1,261 | 5,727,892 | 3,979,702 | 3,979,375 | 1.01 | 4,012,898 | 1.00 | 4,012,898 | 16 | $3,374,062 | $3,571,796 | $21,768 | $23,044 |
| Whole Home Electric | SFHU | TRUE | Appliances | Electric Dryer - Electrification | 40 | 21,682 | 542 | 913 | 23 | 26,748 | 5,066 | 8,534 | 1.00 | 8,534 | 1.00 | 8,534 | 16 | $855 | $905 | $21 | $23 |
| Whole Home Electric | SFHU | TRUE | Appliances | Electric Induction Stove Top - Electrification | 44 | 12,274 | 279 | 929 | 21 | 27,217 | 14,943 | 14,941 | 1.00 | 14,941 | 1.00 | 14,941 | 16 | $1,526 | $1,615 | $35 | $37 |
| Whole Home Electric | SFHU | TRUE | Appliances | Electric Induction Stove Top - Electrification - DAC | 132 | 37,315 | 283 | 2,812 | 21 | 82,408 | 45,093 | 45,089 | 1.00 | 45,108 | 1.00 | 45,108 | 16 | $38,249 | $40,491 | $290 | $307 |

| Program | Component | IE | End Use Type | Savings Category | Quantity | Increase in Electricity Consumption (kWh) | Average Increase in Electricity Consumption (kWh) | Decrease in Gas Consumption (therms) | Average Decrease in Gas Consumption (therms) | Decrease in Gas Consumption (kWh) | Net Change in Electricity Consumption (kWh) | Ex Ante Gross Savings (kWh) | Program Gross Realization Rate | Verified Gross Savings (kWh) | Program Net-to-Gross Ratio (NTG) | Verified Net Savings (kWh) | EUL | Total Cost | Total Utility Cost | Average Cost | Average Utility Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Construction - IE | Affordable Housing New Construction | TRUE | HVAC | Ducted Heat Pump | 339 | 1,350,187 | 3,983 | 130,095 | 384 | 3,813,079 | 2,462,892 | 2,455,345 | 1.00 | 2,462,892 | 1.00 | 2,462,892 | 16 | $167,961 | $2,798,412 | $495 | $8,255 |
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Midstream DMSHP - Electrification (Income Eligible) | 80 | 277,964 | 3,460 | 35,897 | 447 | 1,052,147 | 774,182 | 774,182 | 1.00 | 774,182 | 1.00 | 774,182 | 15 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | TRUE | HVAC | Midstream DMSHP - Electrification - DAC (Income Eligible) | 49 | 201,304 | 4,110 | 25,259 | 516 | 740,331 | 539,027 | 539,027 | 1.00 | 539,027 | 1.00 | 539,027 | 15 | $0 | $0 | $0 | $0 |
| Midstream/Upstream | Instant Discounts | TRUE | Other | Fork Truck EEE IE | 26 | 1,331,028 | 51,447 | 16,251 | 628 | 4,762,994 | 3,431,965 | 3,432,058 | 1.00 | 3,431,965 | 1.00 | 3,431,965 | 15 | $602,901 | $458,122 | $23,303 | $17,707 |
| Midstream/Upstream | Instant Discounts | TRUE | Other | Fork Truck DAC EEE IE | 0 | 6,939 | 39,426 | 85 | 481 | 24,830 | 17,892 | 17,892 | 1.00 | 17,892 | 1.00 | 17,892 | 15 | $3,051 | $2,318 | $17,333 | $13,171 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | ASHP HVAC EEE IE | 1 | 3,409 | 5,031 | 37 | 54 | 10,734 | 7,325 | 7,812 | 0.94 | 7,325 | 1.00 | 7,325 | 15 | $7,942 | $6,035 | $11,721 | $8,907 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | ASHP HVAC DAC EEE IE | 1 | 3,032 | 5,221 | 34 | 58 | 9,895 | 6,863 | 7,415 | 0.93 | 6,863 | 1.00 | 6,863 | 15 | $3,642 | $2,767 | $6,271 | $4,765 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | MSHP HVAC EEE IE | 3 | 9,173 | 2,632 | 165 | 47 | 48,293 | 39,120 | 41,707 | 0.94 | 39,120 | 1.00 | 39,120 | 15 | $32,862 | $24,971 | $9,430 | $7,166 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | MSHP HVAC DAC EEE IE | 3 | 6,447 | 1,903 | 123 | 36 | 36,048 | 29,601 | 32,818 | 0.90 | 29,601 | 1.00 | 29,601 | 15 | $29,543 | $22,449 | $8,720 | $6,626 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | VRF HVAC EEE IE | 1 | 23,630 | 18,778 | 352 | 280 | 103,187 | 79,557 | 78,464 | 1.01 | 79,557 | 1.00 | 79,557 | 15 | $13,565 | $10,308 | $10,780 | $8,191 |
| Midstream/Upstream | Instant Discounts | TRUE | HVAC | VRF HVAC DAC EEE IE | 1 | 14,845 | 10,224 | 232 | 160 | 68,069 | 53,224 | 53,216 | 1.00 | 53,224 | 1.00 | 53,224 | 15 | $9,075 | $6,896 | $6,250 | $4,749 |
| New Construction - IE | Affordable Housing New Construction | TRUE | HVAC | Ductless Heat Pump | 148 | 609,362 | 4,117 | 59,412 | 401 | 1,741,367 | 1,132,004 | 1,128,535 | 1.00 | 1,132,004 | 1.00 | 1,132,004 | 15 | $73,328 | $1,221,726 | $495 | $8,255 |
| New Construction - IE | Affordable Housing New Construction | TRUE | Hot Water | Heat Pump Water Heaters | 138 | 132,516 | 960 | 32,600 | 236 | 955,508 | 822,991 | 823,010 | 1.00 | 822,991 | 1.00 | 822,991 | 15 | $27,793 | $463,065 | $201 | $3,356 |
| Whole Home Electric | MFU | TRUE | Hot Water | Heat Pump Water Heater - Electrification | 34 | 22,594 | 665 | 4,792 | 141 | 140,443 | 117,850 | 122,535 | 1.00 | 122,535 | 1.00 | 122,535 | 15 | $117,273 | $124,145 | $3,449 | $3,651 |
| Whole Home Electric | MFU | TRUE | Hot Water | Heat Pump Water Heater - Electrification - DAC | 7 | 4,418 | 631 | 1,012 | 145 | 29,676 | 25,258 | 26,192 | 1.00 | 26,192 | 1.00 | 26,192 | 15 | $21,528 | $22,789 | $3,075 | $3,256 |
| Whole Home Electric | SFHU | TRUE | Hot Water | Heat Pump Water Heater - Electrification | 61 | 53,232 | 873 | 11,536 | 189 | 338,108 | 284,877 | 294,798 | 0.98 | 289,417 | 1.00 | 289,417 | 15 | $316,511 | $335,059 | $5,189 | $5,493 |
| Whole Home Electric | SFHU | TRUE | Hot Water | Heat Pump Water Heater - Electrification - DAC | 148 | 125,311 | 847 | 26,710 | 180 | 782,883 | 657,573 | 678,432 | 0.94 | 639,359 | 1.00 | 639,359 | 15 | $599,197 | $634,312 | $4,049 | $4,286 |
| Retail/Online | APR - IE | TRUE | Appliances | All-in-One Washer Elec Dryer EEE DAC IE | 4 | (298) | (75) | 4 | 1 | 1,094 | 1,392 | 1,632 | 0.85 | 1,392 | 1.00 | 1,392 | 14 | $168 | $66 | $42 | $16 |
| Retail/Online | APR - IE | TRUE | Appliances | All-in-One Washer Elec Dryer EEE IE | 2 | (109) | (55) | 1 | 1 | 428 | 538 | 663 | 0.81 | 538 | 1.00 | 538 | 14 | $142 | $55 | $71 | $28 |
| Retail/Online | APR - IE | TRUE | Appliances | All-in-One Washer HP Dryer EEE DAC IE | 11 | (629) | (57) | 16 | 1 | 4,604 | 5,233 | 5,879 | 0.89 | 5,233 | 1.00 | 5,233 | 14 | $982 | $383 | $89 | $35 |
| Retail/Online | APR - IE | TRUE | Appliances | All-in-One Washer HP Dryer EEE IE | 45 | (3,766) | (84) | 64 | 1 | 18,673 | 22,438 | 25,047 | 0.90 | 22,438 | 1.00 | 22,438 | 14 | $4,673 | $1,821 | $104 | $40 |
| Whole Home Electric | SFHU | TRUE | Appliances | All in One Clothes Washer Dryer WHE - Electrification | 1 | 284 | 284 | 24 | 24 | 713 | 429 | 420 | 1.02 | 429 | 1.00 | 429 | 14 | $4,031 | $4,267 | $4,031 | $4,267 |
| Whole Home Electric | SFHU | TRUE | Appliances | All in One Clothes Washer Dryer WHE - Electrification - DAC | 11 | 4,559 | 414 | 267 | 24 | 7,839 | 3,280 | 3,181 | 1.03 | 3,280 | 1.00 | 3,280 | 14 | $4,024 | $4,259 | $366 | $387 |
| New Construction - IE | Affordable Housing New Construction | TRUE | HVAC | PTHP | 315 | 473,931 | 1,505 | 68,551 | 218 | 2,009,224 | 1,535,293 | 1,530,588 | 1.00 | 1,535,293 | 1.00 | 1,535,293 | 8 | $156,070 | $2,600,295 | $495 | $8,255 |
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Ground Source Heat Pump - Electrification (Non - Income Eligible) | 12 | 80,205 | 6,489 | 15,363 | 1,243 | 450,302 | 370,097 | 352,519 | 1.16 | 409,562 | 0.93 | 380,893 | 25 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Ground Source Heat Pump - Electrification - DAC (Non - Income Eligible) | 2 | 11,579 | 7,026 | 1,881 | 1,141 | 55,136 | 43,557 | 46,408 | 1.00 | 46,408 | 1.00 | 46,408 | 25 | $0 | $0 | $0 | $0 |
| New Construction - Bus/Pub | Non-Residential New Construction | FALSE | Other | DAC Ineligible Projects - Electrification | 1 | 92,519 | 92,519 | 10,909 | 10,909 | 319,743 | 227,224 | - | | 227,224 | 0.48 | 109,067 | 17 | $263,222 | $17,069 | $263,222 | $17,069 |
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Midstream ASHP - Electrification (Non - Income Eligible) | 1,110 | 11,997,086 | 10,805 | 926,666 | 835 | 27,160,583 | 15,163,497 | 15,163,497 | 1.00 | 15,163,497 | 0.93 | 14,102,052 | 16 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Midstream ASHP - Electrification - DAC (Non - Income Eligible) | 1,062 | 10,778,241 | 10,150 | 865,110 | 815 | 25,356,374 | 14,578,133 | 14,578,133 | 1.00 | 14,578,133 | 1.00 | 14,578,133 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | HVAC | Ductless Mini Split Heat Pumps (DAC) | 11 | 32,880 | 2,989 | 3,654 | 332 | 107,088 | 74,208 | 97,642 | 0.76 | 74,208 | 1.00 | 74,208 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | HVAC | Ductless Mini Split Heat Pumps | 12 | 44,986 | 3,749 | 5,285 | 440 | 154,895 | 109,909 | 144,617 | 0.76 | 109,909 | 0.80 | 87,927 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | HVAC | Central Air Source Heat Pumps (DAC) | 91 | 446,985 | 4,912 | 37,270 | 410 | 1,092,395 | 645,410 | 849,223 | 0.76 | 645,410 | 1.00 | 645,410 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | HVAC | Central Air Source Heat Pumps | 17 | 97,344 | 5,726 | 9,069 | 533 | 265,802 | 168,458 | 221,656 | 0.76 | 168,458 | 0.80 | 134,766 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Appliances | Efficient Appliances-Dryer-Electrification (DAC) | 49 | 12,181 | 249 | 575 | 12 | 16,857 | 4,676 | 4,676 | 1.00 | 4,676 | 1.00 | 4,676 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Appliances | Efficient Appliances-Dryer-Electrification | 17 | 3,698 | 218 | 175 | 10 | 5,117 | 1,419 | 1,419 | 1.00 | 1,419 | 0.80 | 1,136 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Appliances | Efficient Appliances-Residential Induction Stoves-Electrification (DAC) | 23 | 3,770 | 164 | 284 | 12 | 8,328 | 4,559 | 4,558 | 1.00 | 4,559 | 1.00 | 4,559 | 16 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Appliances | Efficient Appliances-Residential Induction Stoves-Electrification | 6 | 983 | 164 | 74 | 12 | 2,172 | 1,188 | 1,189 | 1.00 | 1,188 | 0.80 | 951 | 16 | $0 | $0 | $0 | $0 |
| Retail/Online | APR - MR | FALSE | Appliances | Electric Clothes Dryer EEE DAC MR | 17 | (583) | (34) | 10 | 1 | 3,063 | 3,646 | 3,646 | 1.00 | 3,646 | 1.00 | 3,646 | 16 | $2,365 | $921 | $139 | $54 |
| Retail/Online | APR - MR | FALSE | Appliances | Electric Clothes Dryer EEE MR | 136 | (4,622) | (34) | 83 | 1 | 24,265 | 28,887 | 28,894 | 1.00 | 28,887 | 0.80 | 23,110 | 16 | $21,230 | $8,271 | $156 | $61 |
| Retail/Online | APR - MR | FALSE | Appliances | Heat Pump Dryer EEE DAC MR | 16 | (1,161) | (73) | 21 | 1 | 6,094 | 7,255 | 7,255 | 1.00 | 7,255 | 1.00 | 7,255 | 16 | $2,432 | $947 | $152 | $59 |
| Retail/Online | APR - MR | FALSE | Appliances | Heat Pump Dryer EEE MR | 96 | (7,328) | (76) | 131 | 1 | 38,474 | 45,802 | 45,802 | 1.00 | 45,802 | 0.80 | 36,642 | 16 | $35,021 | $13,643 | $365 | $142 |
| Retail/Online | APR - MR | FALSE | Appliances | Induction Cooktop EEE DAC MR | 37 | 8,225 | 222 | 68 | 2 | 19,821 | 10,274 | 7,661 | 1.34 | 10,274 | 1.00 | 10,274 | 16 | $35,463 | $13,815 | $958 | $373 |
| Retail/Online | APR - MR | FALSE | Appliances | Induction Cooktop EEE MR | 354 | 78,934 | 223 | 648 | 2 | 189,988 | 98,448 | 73,296 | 1.34 | 98,448 | 0.80 | 78,759 | 16 | $354,216 | $137,994 | $1,001 | $390 |
| Retail/Online | ESRPP | FALSE | Appliances | Induction Cooktops-Gas Fuel Switch | 42 | 4,690 | 111 | 300 | 7 | 8,800 | 4,111 | 4,111 | 1.00 | 4,111 | 1.00 | 4,111 | 16 | $453 | $176 | $11 | $4 |

| Program | Component | IE | End Use Type | Savings Category | Quantity | Increase in Electricity Consumption (kWh) | Average Increase in Electricity Consumption (kWh) | Decrease in Gas Consumption (therms) | Average Decrease in Gas Consumption (therms) | Decrease in Gas Consumption (kWh) | Net Change in Electricity Consumption (kWh) | Ex Ante Gross Savings (kWh) | Program Gross Realization Rate | Verified Gross Savings (kWh) | Program Net-to-Gross Ratio (NTG) | Verified Net Savings (kWh) | EUL | Total Cost | Total Utility Cost | Average Cost | Average Utility Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Midstream DMSHP - Electrification (Non - Income Eligible) | 376 | 1,301,377 | 3,460 | 168,064 | 447 | 4,925,959 | 3,624,581 | 3,624,581 | 1.00 | 3,624,581 | 0.93 | 3,370,861 | 15 | $0 | $0 | $0 | $0 |
| Contractor/Midstream Rebates | Midstream | FALSE | HVAC | Midstream DMSHP - Electrification - DAC (Non - Income Eligible) | 229 | 942,469 | 4,110 | 118,256 | 516 | 3,466,096 | 2,523,627 | 2,523,627 | 1.00 | 2,523,627 | 1.00 | 2,523,627 | 15 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Hot Water | High-Performance Water Heating Equipment-Electrification (DAC) | 54 | 47,448 | 879 | 9,906 | 183 | 290,333 | 242,885 | 238,123 | 1.02 | 242,885 | 1.00 | 242,885 | 15 | $0 | $0 | $0 | $0 |
| Electric Homes New Construction | EHNC | FALSE | Hot Water | High-Performance Water Heating Equipment-Electrification | 16 | 14,343 | 896 | 2,620 | 164 | 76,780 | 62,437 | 61,212 | 1.02 | 62,437 | 0.80 | 49,950 | 15 | $0 | $0 | $0 | $0 |
| Midstream/Upstream | Instant Discounts | FALSE | Other | Fork Truck EEE | 121 | 6,231,633 | 51,447 | 76,086 | 628 | 22,299,470 | 16,067,838 | 16,068,272 | 1.00 | 16,067,838 | 0.80 | 12,854,270 | 15 | $3,001,657 | $2,280,848 | $24,781 | $18,830 |
| Midstream/Upstream | Instant Discounts | FALSE | Other | Fork Truck DAC EEE | 1 | 32,487 | 39,426 | 397 | 481 | 116,252 | 83,765 | 83,765 | 1.00 | 83,765 | 1.00 | 83,765 | 15 | $18,637 | $14,162 | $22,618 | $17,187 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | ASHP HVAC EEE | 3 | 15,959 | 5,031 | 171 | 54 | 50,255 | 34,296 | 36,573 | 0.94 | 34,296 | 0.80 | 27,437 | 15 | $37,185 | $28,255 | $11,721 | $8,907 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | ASHP HVAC DAC EEE | 3 | 14,197 | 5,221 | 158 | 58 | 46,327 | 32,130 | 34,715 | 0.93 | 32,130 | 1.00 | 32,130 | 15 | $17,052 | $12,957 | $6,271 | $4,765 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | MSHP HVAC EEE | 16 | 42,948 | 2,632 | 771 | 47 | 226,100 | 183,153 | 195,265 | 0.94 | 183,153 | 0.80 | 146,522 | 15 | $153,854 | $116,908 | $9,430 | $7,166 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | MSHP HVAC DAC EEE | 16 | 30,183 | 1,903 | 576 | 36 | 168,769 | 138,586 | 153,649 | 0.90 | 138,586 | 1.00 | 138,586 | 15 | $138,316 | $105,101 | $8,720 | $6,626 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | VRF HVAC EEE | 6 | 110,630 | 18,778 | 1,648 | 280 | 483,104 | 372,474 | 367,355 | 1.01 | 372,474 | 0.80 | 297,979 | 15 | $63,509 | $48,258 | $10,780 | $8,191 |
| Midstream/Upstream | Instant Discounts | FALSE | HVAC | VRF HVAC DAC EEE | 7 | 69,501 | 10,224 | 1,087 | 160 | 318,685 | 249,184 | 249,149 | 1.00 | 249,184 | 1.00 | 249,184 | 15 | $42,488 | $32,285 | $6,250 | $4,749 |
| Retail/Online | ESRPP | FALSE | Water Heating | Heat Pump Water Heaters-Gas Fuel Switch | 7 | 5,094 | 761 | 571 | 85 | 16,735 | 11,640 | 11,640 | 1.00 | 11,640 | 1.00 | 11,640 | 15 | $28,757 | $11,203 | $1,432 | $558 |
| Retail/Online | APR - MR | FALSE | Appliances | All-in-One Washer Elec Dryer EEE DAC MR | 5 | (322) | (64) | 3 | 1 | 957 | 1,279 | 1,560 | 0.82 | 1,279 | 1.00 | 1,279 | 14 | $204 | $79 | $41 | $16 |
| Retail/Online | APR - MR | FALSE | Appliances | All-in-One Washer Elec Dryer EEE MR | 9 | (102) | (11) | 7 | 1 | 1,909 | 2,012 | 1,937 | 1.04 | 2,012 | 0.80 | 1,609 | 14 | $467 | $182 | $52 | $20 |
| Retail/Online | APR - MR | FALSE | Appliances | All-in-One Washer HP Dryer EEE DAC MR | 36 | (2,595) | (72) | 47 | 1 | 13,856 | 16,451 | 18,416 | 0.89 | 16,451 | 1.00 | 16,451 | 14 | $2,949 | $1,149 | $82 | $32 |
| Retail/Online | APR - MR | FALSE | Appliances | All-in-One Washer HP Dryer EEE MR | 224 | (16,815) | (75) | 295 | 1 | 86,488 | 103,303 | 114,553 | 0.90 | 103,303 | 0.80 | 82,642 | 14 | $21,401 | $8,337 | $96 | $37 |
| **Total** | | | | | **7,569** | **46,381,760** | **530,761** | **3,550,141** | **34,700** | **130,338,142** | **83,941,663** | **84,035,956** | **1.00** | **84,070,774** | **0.94** | **79,152,858** | **16** | **$11,582,224** | **$18,348,614** | **$542,190** | **$285,797** |

*Source: Guidehouse analysis*

**Table 3-4. ComEd Program-Level Electrification Benefits, Costs, and Illinois TRC without Gas Data from Joint Programs ($ Thousands)**

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Total Resource Cost (TRC) Test (NPV replacement cost as benefit) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL TRC Benefits (w/o NEI) | IL TRC Costs (w/o NEI) | IL TRC Test Net Benefits (w/o NEI) | IL TRC Test (w/NEI) | IL TRC Test (w/o NEI) |
| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | (q)=a+b+c+d+f+g | (r) = h+i+j+k+m+n+p | (s) = q-r | (t) = (q+e)/(r+l) | (u) = q / r |
| Contractor/Midstream Rebates | $8,356 | $12,696 | $0 | $4,299 | $33,387 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $0 | $0 | $25,351 | $2,947 | $22,404 | 19.93 | 8.60 |
| Electric Homes New Construction | $353 | $459 | $0 | $247 | $1,158 | $0 | $0 | $5 | $0 | $0 | $4 | $4 | $0 | $534 | $0 | $0 | $1,059 | $543 | $515 | 4.05 | 1.95 |
| Midstream/Upstream | $6,380 | $0 | $0 | $4,405 | $16,041 | $4,760 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $3,174 | $3,524 | $15,545 | $8,549 | $6,996 | 3.69 | 1.82 |
| New Construction - Bus/Pub | $43 | $37 | $0 | $31 | $108 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,902 | $17 | $126 | $111 | $2,028 | ($1,917) | 0.11 | 0.05 |
| New Construction - IE | $2,830 | $2,107 | $0 | $1,947 | $6,849 | $0 | $0 | $66 | $0 | $0 | $47 | $51 | $0 | $1,625 | $439 | $130 | $6,883 | $1,868 | $5,016 | 7.16 | 3.69 |
| Retail/Online | $170 | $14 | $0 | $109 | $301 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $216 | $499 | $294 | $499 | ($205) | 1.19 | 0.59 |
| Whole Home Electric | $2,924 | $2,675 | $0 | $2,007 | $7,660 | $0 | $0 | $39 | $0 | $0 | $27 | $30 | $0 | $3,290 | $7,129 | $6,093 | $7,605 | $9,449 | ($1,844) | 1.61 | 0.80 |
| **Portfolio Total** | **$21,055** | **$17,988** | **$0** | **$13,045** | **$65,504** | **$4,760** | **$0** | **$111** | **$0** | **$0** | **$78** | **$85** | **$0** | **$15,324** | **$10,975** | **$10,371** | **$56,848** | **$25,884** | **$30,964** | **4.71** | **2.20** |

*Source: Guidehouse analysis*

**Table 3-5. ComEd Program-Level Electrification Benefits, Costs, and UCT without Gas Data from Joint Programs ($ Thousands)**

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Utility Cost Test (UCT) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL UCT Benefits | IL UCT Costs | IL UCT Test Net Benefits | IL UCT Test |
| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | (v) = a+b+c | (w) = h+i+n+o | (x) = v-w | (y) = v/w |
| Contractor/Midstream Rebates | $8,356 | $12,696 | $0 | $4,299 | $33,387 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $0 | $0 | $21,052 | $2,947 | $18,105 | 7.14 |
| Electric Homes New Construction | $353 | $459 | $0 | $247 | $1,158 | $0 | $0 | $5 | $0 | $0 | $4 | $4 | $0 | $534 | $0 | $0 | $812 | $540 | $272 | 1.50 |
| Midstream/Upstream | $6,380 | $0 | $0 | $4,405 | $16,041 | $4760 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $3,174 | $3,524 | $6,380 | $8,199 | ($1,820) | 0.78 |
| New Construction - Bus/Pub | $43 | $37 | $0 | $31 | $108 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,902 | $17 | $126 | $80 | $1,919 | ($1,839) | 0.04 |
| New Construction - IE | $2,830 | $2,107 | $0 | $1,947 | $6,849 | $0 | $0 | $66 | $0 | $0 | $47 | $51 | $0 | $1,625 | $439 | $130 | $4,937 | $2,130 | $2,807 | 2.32 |
| Retail/Online | $170 | $14 | $0 | $109 | $301 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $216 | $499 | $185 | $217 | ($32) | 0.85 |
| Whole Home Electric | $2,924 | $2,675 | $0 | $2,007 | $7,660 | $0 | $0 | $39 | $0 | $0 | $27 | $30 | $0 | $3,290 | $7,129 | $6,093 | $5,598 | $10,458 | ($4,860) | 0.54 |
| **Portfolio Total** | **$21,055** | **$17,988** | **$0** | **$13,045** | **$65,504** | **$4,760** | **$0** | **$111** | **$0** | **$0** | **$78** | **$85** | **$0** | **$15,324** | **$10,975** | **$10,371** | **$39,043** | **$26,410** | **$12,633** | **1.48** |

*Source: Guidehouse analysis*

**Table 3-6. ComEd Program-Level Income Eligible Benefits, Costs, and Illinois TRC without Gas Data from Joint Programs ($ Thousands)**

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Total Resource Cost (TRC) Test (NPV replacement cost as benefit) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL TRC Benefits (w/o NEI) | IL TRC Costs (w/o NEI) | IL TRC Test Net Benefits (w/o NEI) | IL TRC Test (w/NEI) | IL TRC Test (w/o NEI) |
| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | (q )=a+b+c+d+f+g | (r) = h+i+j+k+m+n+p | (s) = q-r | (t) = (q+e)/(r+l) | (u) = q / r |
| Contractor/Midstream Rebates | $1,498 | $2,262 | $0 | $770 | $5,972 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $0 | $0 | $4,530 | $2,947 | $1,583 | 3.56 | 1.54 |
| Midstream/Upstream | $1,327 | $0 | $0 | $922 | $3,361 | $912 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $534 | $703 | $3,160 | $5,728 | ($2,567) | 1.14 | 0.55 |
| Multifamily Upgrades | $26,846 | $14,626 | $3,104 | $16,145 | $32,806 | $234 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,686 | $24,709 | $19,323 | $60,955 | $30,008 | $30,947 | 3.12 | 2.03 |
| New Construction - IE | $6,546 | $2,982 | $424 | $4,034 | $11,346 | $2 | $0 | $66 | $11 | $0 | $47 | $51 | $0 | $1,625 | $3,616 | $1,069 | $13,989 | $2,818 | $11,171 | 8.83 | 4.96 |
| Product Distribution | $129,346 | $22,347 | $3,337 | $65,045 | $175,154 | $18,589 | $0 | $0 | $966 | $0 | $0 | $0 | $0 | $5,095 | $11,809 | $12,013 | $238,663 | $18,075 | $220,589 | 22.89 | 13.20 |
| Retail/Online | $146,293 | $95,173 | $3,197 | $78,463 | $180,730 | $35,702 | $0 | $0 | $13,087 | $0 | $0 | $0 | $0 | $353 | $21,007 | $56,794 | $358,827 | $70,234 | $288,593 | 7.68 | 5.11 |
| Single-Family Upgrades | $9,297 | $9,946 | $800 | $4,173 | $9,714 | $349 | $0 | $0 | $284 | $0 | $0 | $0 | $0 | $8,687 | $17,420 | $20,248 | $24,565 | $29,219 | ($4,653) | 1.17 | 0.84 |
| Whole Home Electric | $5,663 | $2,675 | $4 | $3,555 | $11,051 | $0 | $0 | $267 | $0 | $0 | $29 | 31 | $0 | $3,290 | $13,722 | $11,728 | $11,897 | $15,314 | ($3,417) | 1.50 | 0.78 |
| IE Sector Admin Cost | | | | | | | | | | | | | | $1,126 | | | | $1,126 | | | |
| **Portfolio Total** | **$326,815** | **$150,011** | **$10,866** | **$173,109** | **$430,135** | **$55,787** | **$0** | **$333** | **$14,349** | **$0** | **$75** | **$82** | **$0** | **$38,834** | **$92,817** | **$121,877** | **$716,587** | **$175,468** | **$541,119** | **6.53** | **4.08** |

*Source: Guidehouse analysis*

**Table 3-7. ComEd Program-Level Income Eligible Benefits, Costs, and UCT without Gas Data from Joint Programs ($ Thousands)**

| Program | Benefits | | | | | | | Costs | | | | | | | | | IL Utility Cost Test (UCT) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Incremental Costs (Net) | Electricity Cost Changes | Fossil Fuel Cost Changes | Water Cost Changes | Environmental Adder (GHGs) | Societal NEI | NPV Replacement costs | Non-Incentive Costs | Incentive Costs | Incremental Costs (Net) | IL UCT Benefits | IL UCT Costs | IL UCT Test Net Benefits | IL UCT Test |
| | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | (v) = a+b+c | (w) = h+i+n+o | (x) = v-w | (y) = v/w |
| Contractor/Midstream Rebates | $1,498 | $2,262 | $0 | $770 | $5,972 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,947 | $0 | $0 | $3,760 | $2,947 | $813 | 1.28 |
| Midstream/Upstream | $1,327 | $0 | $0 | $922 | $3,361 | $912 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,025 | $534 | $703 | $1,327 | $5,559 | ($4,233) | 0.24 |
| Multifamily Upgrades | $26,846 | $14,626 | $3,104 | $16,145 | $32,806 | $234 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $10,686 | $24,709 | $19,323 | $44,576 | $35,394 | $9,182 | 1.26 |
| New Construction - IE | $6,546 | $2,982 | $424 | $4,034 | $11,346 | $2 | $0 | $66 | $11 | $0 | $47 | $51 | $0 | $1,625 | $3,616 | $1,069 | $9,952 | $5,318 | $4,634 | 1.87 |
| Product Distribution | $129,346 | $22,347 | $3,337 | $65,045 | $175,154 | $18,589 | $0 | $0 | $966 | $0 | $0 | $0 | $0 | $5,095 | $11,809 | $12,013 | $155,029 | $17,870 | $137,159 | 8.68 |
| Retail/Online | $146,293 | $95,173 | $3,197 | $78,463 | $180,730 | $35,702 | $0 | $0 | $13,087 | $0 | $0 | $0 | $0 | $353 | $21,007 | $56,794 | $244,662 | $34,447 | $210,215 | 7.10 |
| Single-Family Upgrades | $9,297 | $9,946 | $800 | $4,173 | $9,714 | $349 | $0 | $0 | $284 | $0 | $0 | $0 | $0 | $8,687 | $17,420 | $20,248 | $20,043 | $26,391 | ($6,348) | 0.76 |
| Whole Home Electric | $5,663 | $2,675 | $4 | $3,555 | $11,051 | $0 | $0 | $267 | $0 | $0 | $29 | $31 | $0 | $3,290 | $13,722 | $11,728 | $8,342 | $17,280 | ($8,938) | 0.48 |
| IE Sector Admin Cost | | | | | | | | | | | | | | $1,126 | | | | $1,126 | | |
| **Portfolio Total** | **$326,815** | **$150,011** | **$10,866** | **$173,109** | **$430,135** | **$55,787** | **$0** | **$333** | **$14,349** | **$0** | **$75** | **$82** | **$0** | **$38,834** | **$92,817** | **$121,877** | **$487,692** | **$146,333** | **$341,358** | **3.33** |

*Source: Guidehouse analysis*

## 3.1 Incremental and Actual Measure Costs

The guidance from the IL TRM and Policy Manual 3.0 indicates that it is appropriate to use actual measure-specific costs in the analysis. As a result, Guidehouse compiled the actual cost information from implementer invoices and the program tracking data provided by ComEd and identified any missing information. The team sourced incremental measure costs from IL TRM v13.0 and workpapers provided by the implementation contractor.

While conducting the cost review, Guidehouse found instances where the program tracking data and the incremental cost value from the reference sources do not align due to differing definitions of program unit. Guidehouse made appropriate assumptions to account for these differences. Guidehouse also included O&M costs when there was a difference between the efficient measure and the baseline measure based on the guidance provided in IL TRM v13.0. Where the efficient measure has a significantly shorter or longer life than the relevant baseline measure (e.g., LEDs versus halogens), Guidehouse used the avoided baseline replacement measure costs in the TRC analysis. The incremental cost input in the TRC analysis was not reduced by the amount of incentives. Some of the methodologies used to estimate the measure costs for different programs are listed below:

- **Custom, Industrial Systems, and Retro-Commissioning:** Guidehouse analyzed a sample of all the projects to determine if the actual measure cost or an incremental cost should be used for each project. Based on this analysis, the team developed a $/kWh value that was applied to the entire population of measures installed as a part of this program.
- **Prescriptive Programs (Small Business, Standard, Single Family Upgrades, etc.):** Guidehouse researched the incremental measure cost data from IL TRM v13.0, tracking data, and program invoices. For joint programs, only the ComEd portion of the costs were included.
- **Contractor/Midstream Rebates:** The early replacement HVAC measures installed as a part of this program were treated based on the guidance provided in IL TRM v13.0. The full installation cost subtracted by the NPV deferred future replacement costs was calculated for the analysis.
- **Product Distribution Program (and other similar programs):** Guidehouse used the per measure cost in each kit to perform the analysis.
- **New Construction – IE:** Guidehouse researched the incremental measure cost data from IL TRM v13.0 and cost data from TRMs in surrounding jurisdictions.
- **Non-Residential New Construction:** Guidehouse calculated the measure cost based on ASHRAE Standard 90.1 2019-Illinois[9] assuming similar cost to one code cycle improvement.

[9] https://www.energycodes.gov/sites/default/files/2021-07/Cost-effectiveness_of_ASHRAE_Standard_90-1-2019-Illinois.pdf

## 3.2 Data Sources and Assumptions

The analysis used the following sources to compile the relevant data:

- **Program tracking data and evaluation reports** to compile program-level savings, quantity, and realization rate values
- **IL TRM v13.0** to compile measure life and incremental cost data
- **Project invoices** to compile actual cost data (if available)
- **Project-level costs**, including utility incentives and non-incentive costs provided by ComEd

**Error! Reference source not found.** provides the sources and assumptions for the measure costs by program.

**Table 3-8. CY2025 Program Cost Data Sources and Assumptions**

| Program | Component | Data Source | Note |
|---|---|---|---|
| ASI kWh Purchase | ASI kWh Purchase | ComEd Electrification Cost Data | Used total IMC $/kWh of ASI from ComEd Electrification Cost data sheet |
| Automated System Optimization | Automated System Optimization Project | ComEd Pilot Data | Guidehouse assumed measure cost equals incentives. |
| Behavior - Res/IE | Behavior - Res-IE | Tracking Data | Guidehouse assumes no measure incremental costs. |
| Behavior Bus/Pub | Strategic Energy Management | Tracking Data | Guidehouse assumed measure cost equals incentives. |
| Business Energy Analyzer (BEA) | Business Energy Analyzer (BEA) | ComEd Project Data | Guidehouse assumed the same $/kwh measure costs as RCx pathways in the Targeted Systems Program |
| Contractor/Midstream Rebates | Midstream | IL TRM v13.0 & ComEd Electrification Cost Data | IL TRM v13.0 deemed values and cost from ComEd Electrification Cost data were used for the analysis. |
| Electric Homes New Construction | EHNC | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Incentives | Custom | ComEd Project Files | Sample of project files, total $/kWh |
| Incentives | Standard | IL TRM v13.0, RI resource workpapers | IL TRM v13.0 deemed measure costs were used for TRM measures with consistent units as ComEd tracking data. The workpapers provided reference for incremental measure cost. Guidehouse made assumptions regarding unit definition based on program data. |
| Midstream/Upstream | CFS | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Midstream/Upstream | Instant Discounts | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Multifamily Upgrades | IHWAP | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Multifamily Upgrades | MCA | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. |

| Program | Component | Data Source | Note |
|---|---|---|---|
| | | | Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Multifamily Upgrades | MFLI | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Multifamily Upgrades | PHA | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. |
| New Construction - Bus/Pub | Non-Residential New Construction | CY2025 Data | IL TRM v13.0 deemed values were used for individual measures, which were aggregated to the project level for sampled projects. |
| New Construction - IE | Affordable Housing New Construction | ComEd | Guidehouse used an average of the Incremental Capital Cost per project derived from TRM v13.0 costs. |
| Product Distribution | Elementary Ed | Tracking Data and Project Invoices | Implementer invoices were used to obtain the ComEd allocated costs of joint measures, which were then applied to the incremental costs for each measure within the kits. |
| Product Distribution | Food Bank | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. |
| Product Distribution | IE Kits | Tracking Data and Project Invoices | Implementer invoices were used to obtain the ComEd allocated costs of joint measures, which were then applied to the incremental costs for each measure within the kits. |
| Retail/Online | APR - IE | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Retail/Online | APR - MR | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Retail/Online | ESRPP | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Retail/Online | Lighting Discounts | IL TRM v13.0 | IL TRM v13.0 deemed values were used for the analysis. |
| Single-Family Upgrades | HEA | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Single-Family Upgrades | IHWAP-SF | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Single-Family Upgrades | SAP IE | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Single-Family Upgrades | SAP MR | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Single-Family Upgrades | SFLI | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. |

| Program | Component | Data Source | Note |
|---|---|---|---|
| | | | Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Small Business | Small Business | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. |
| Targeted Systems | Industrial Systems | Tracking Data | Sample of project files, total $/kWh |
| Targeted Systems | RetroCommissioning (RCx) | ComEd Project Files | Sample of project files, total $/kWh |
| Targeted Systems | Virtual Commissioning (VCx) | ComEd Project Files | Sample of project files, total $/kWh |
| Virtual Energy Coach | Virtual Energy Coach | ComEd Project Data | Guidehouse assumed the same $/kwh measure costs as RCx pathways in the Targeted Systems Program |
| Voltage Optimization | VO | Project Files | Total costs obtained from ComEd provided documentation. |
| Whole Home Electric | MFU | Tracking Data | Guidehouse assumed the program tracking data incentive amounts should equal measure costs. Guidehouse found these incentive amounts accounted for the ComEd allocated costs of joint measures. |
| Whole Home Electric | SFHU | ComEd Provided Data Files | Guidehouse assumed the Total EEE Incentive Cost should equal the measure costs. Guidehouse brought out specific costs of measures grouped together using a percentage of savings. |

*Source: Guidehouse analysis*

## 3.3 Findings

Guidehouse performed a bottom-up analysis for each program in ComEd's CY2025 portfolio and offers the following findings:

- **Finding 1.** The portfolio TRC (excluding NEIs) increased substantially from 2.83 in CY2024 to 3.62 in CY2025. With NEIs included, the TRC improved from 4.88 in CY2024 to 5.86 in CY2025. This improvement was primarily driven by higher avoided costs, resulting in increased electric benefits, alongside increased fossil fuel, societal benefits, and greater lifetime energy savings.

- **Finding 2:** With NEIs included, all programs achieved TRC cost-effectiveness in CY2025. Excluding NEIs, both Single Family Upgrades and Whole Home Electric did not achieve TRC cost-effectiveness, with TRC ratios of 0.85 and 0.78, respectively. These same programs also did not meet UCT cost-effectiveness, with UCT ratios of 0.77 for Single Family Upgrades and 0.48 for Whole Home Electric primarily due to high incentive and incremental costs, and the exclusion of substantial NEI benefits. Both programs, however, have shown improved cost-effectiveness ratios as compared to CY2024 due to increased electric benefits.

- **Finding 3:** Within the Residential and Income-Eligible (Res & IE) sector, Product Distribution and Retail Online programs continued to have the highest TRC values in CY2025, consistent with CY2024.

- **Finding 4:** Within the Business and Public Sector, Midstream/Upstream program continued to have the highest TRC values in CY2025, consistent with CY2024 performance, and demonstrated improvement in cost-effectiveness. Specifically, the TRC (with NEIs) increased from 10.11 in CY2024 to 11.86 in CY2025. Other Business and Public Sector programs exhibited relatively stable cost-effectiveness ratios compared to CY2024.

- **Finding 5.** Total TRC costs decreased from $643M in CY2024 to $569M in CY2025, while TRC benefits increased significantly from $1,818M to $2,062M. Both these factors contributed to higher TRC and UCT scores across both the residential and business sectors. The largest increase in benefits is attributable to electricity avoided costs, which rose from $757M in CY2024 to $1,074M in CY2025, primarily due to higher kWh and kW level nominal avoided cost values.

- **Finding 6:** The significant increase in benefits was driven primarily by the residential sector, particularly Product Distribution. This program experienced the largest growth in total benefits (excluding NEIs), increasing from $167M in CY2024 to $241M in CY2025, primarily driven by higher electricity cost savings. At the same time, total costs declined from $24M in CY2024 to $18M in CY2025, driven by lower incremental costs. Similarly, New Construction–IE programs saw a substantial improvement in cost-effectiveness, increasing from 2.11 in CY2024 to 8.83 in CY2025. This was driven by higher benefits (rising from $8.7M to $13M) and reduced costs due to lower incremental expenditures.

- **Finding 7.** Cost effectiveness for many programs including Product Distribution and Retail/Online continues to be driven largely by lighting measures which can accumulate significant energy savings at low cost. Additionally, shell measures such as spray foam and insulation and water-saving measures such as showerheads were able to take advantage of additional TRC benefit streams such as societal and water, and low customer incremental costs to achieve high TRC outcomes.

- **Finding 8:** IE components of applicable programs contribute $541M in net utility benefits to ComEd's CY2025 portfolio. Excluding IE programs, the portfolio cost-effectiveness drops to 5.56 (with NEIs) and 3.41 (without NEIs).

- **Finding 9.** The electric cost change benefit stream increased relatively in CY2025, growing from 24% to 34% of total TRC benefits. This benefit stream is the primary driver of overall improved cost effectiveness. However, societal benefits declined from $1,322M to $1,278M, with their share of total TRC benefits decreasing from 42% to 39% percent.

- **Finding 10:** Electrification measures achieved a TRC (with NEIs) of 4.71, up from 2.84 in CY2024 and met UCT cost-effectiveness (UCT = 1.48). Despite most electrification measures having a TRC above 1.0, electrification measures generally had lower TRC values than non-electrification measures causing a downward impact on the overall TRC value.

- **Finding 11:** Voltage Optimization (VO) costs declined substantially in CY2025 compared to prior years while continuing to deliver strong benefits. ComEd attributed the reduction in VO costs primarily to lower software expenses and a more efficient implementation approach in CY2025. As a result, VO cost effectiveness improved markedly, with TRC ratios

increasing to 3.75 with NEIs and 2.21 without NEIs in CY2025, compared to 1.94 with NEIs and 0.95 without NEIs in CY2024.