



CY2023 FOURTH QUARTER REPORT



ComEd has received the ENERGY STAR Partner of the Year Award for Sustained Excellence for the 11th consecutive year. ComEd customers have saved more than \$9.0 billion on energy bills and avoided over 70 billion pounds of carbon through its energy efficiency programs.

Table of Contents

Residential Direct to Consumer Program	4
Residential Channels Program	6
Business Program.....	9
Technical Program	10
Engineering Program	12
Voltage Optimization.....	13
Customer Innovation	14
Marketing Education & Awareness s.....	15
Plan 6 Stipulations	17
CY2023 New Measures	28
Appendix	
Program Descriptions.....	29
Customer Innovation Summary	32
Corrections	37

Portfolio Summary

1,569,223

Actual Net MWh YTD

1,599,866

2023 MWh Forecast

\$415,623,217

Actual Spend YTD

\$439,746,496

2023 Budget

PORTFOLIO

- Through Q4, the portfolio has achieved approximately 1023% of its statutory applicable incremental goal (AAIG) of 970,543 MWh.
- Since its inception in 2008, the ComEd Energy Efficiency Program has saved ComEd customers over \$9 billion on their electric bills.

RESIDENTIAL IMPLEMENTATION

- Through Q4, market rate residential programs have achieved 114% of their combined 2023 savings forecast of 137,070 MWh, not including converted therms.
- Through Q4, income eligible residential programs have achieved 100% of their combined 2023 savings forecast of 432,009 MWh, not including converted therms.
- Customers have received over 2,688,000 incentives through Q4.
- Over 23,600 homeowners & tenants – consisting of over 16,000 income eligible participants – have received direct install products from assessments through Q4.

C&I IMPLEMENTATION

- Through Q4, private sector programs have achieved 101% of their combined 2023 savings forecast of 551,173 MWh.
- Public sector programs have achieved 99% of their combined 2023 savings forecast of 109,539 MWh.
- Through Q4 over 8,200 private sector projects and over 1,200 public sector projects have been completed.

Residential Implementation Programs

Residential Direct to Consumer Program Highlights

- **Home Energy Savings (HES) - Home Energy Assessment (Market Rate and Income Eligible)** – Self-guided assessments were launched November 2, 2023 for market rate customers which will shift the existing in-home and virtual assessment services to only service income eligible customers. Through this new offering, customers are asked questions about their home and offered free or discounted products based on their responses. This was initially marketed to 1,205 customers across ComEd territory, with 392 completing the assessment so far. Q4 was the strongest quarter for the Home Energy Assessment (HEA) offering with over 3,200 assessments completed in-home, virtually, and via the new self-guided assessment tool. In total in 2023, the program completed 12,792 home assessments and of those 6,580 were income eligible customers. In Q4, the program conducted customer research to determine pain points, barriers and identify the most effective messaging strategies. The learnings are being incorporated into the 2024 marketing and outreach plan.
- **Home Energy Savings (HES) - Income Eligible Retrofits** – Q4 was the strongest quarter of the year for braided Illinois Home Weatherization Assistance Program (IHWAP) production, with over 174 projects completed. In total in 2023, over 2,800 income eligible customers were served with a weatherization retrofit through the Home Energy Savings offering with nearly 400 of those projects being braided with IHWAP. In Q4, program Energy Advisors were trained in a new procedure to be fully launched in 2024. Beginning in 2024, all income eligible customers will first be served with a Home Energy Assessment. During the assessment, energy advisors will conduct a visual assessment of the home, install free products, and will review energy efficiency opportunities to identify customers that can most benefit from more comprehensive measures such as air sealing and insulation. Those customers will be referred to a participating energy efficiency service provider for service. This is an enhancement from the 2023 approach which prioritized income-eligible customers for comprehensive services based on qualitative data provided by the customer upon intake. The intent is to provide a more consistent and equitable distribution of retrofit projects.
- **Multi-Family Energy Savings (MFES) - (Market Rate, Income-Eligible, and Public Housing)** – In Q4, 278 projects were completed in income eligible properties, resulting in over 7,000 MWhs of savings, and over \$5.7M in incentives distributed. The offering also completed additional projects benefitting Public Housing Authorities. In 2023, ComEd served Public Housing Authorities in the City of Chicago and Aurora, as well as DeKalb and Lee counties, representing over 4,400 residential units. The program completed 66 Public Housing projects resulting in the distribution of \$2.9M in total incentives and 1,691 MWhs of savings. The MFES offering also saw great success with the strategic electric resistance to heat pump conversion initiative, with 669 heat pumps installed in income eligible and public housing properties throughout 2023, resulting in over 9,500 MWhs of savings and over \$4M in incentives distributed.
- **Whole Home Electric (Single and Multi-Family Upgrades Electrification - IE)** – In Q4, the Whole Home Electric offering converted an additional 40 single family income eligible homes to all electric and completed several multi-family projects. Overall in 2023, the offering has served 99 income eligible

Residential Implementation Programs

single-family homes and 4 multi-family buildings spanning 163 tenant units throughout the service territory. All participants (single family customers and multi-family tenant residents) were modeled to have energy bill savings before proceeding with the project.

- **Home Energy Reports (HER)** – Q4 saw a slight reduction in anticipated savings, likely driven by mild weather. The offering introduced the Know It, Show It (KISI) Campaign as a new home energy report module for both print and email. The KISI module informs customers of how they engaged with the home energy assessment (HEA) survey on MyAccount to help ensure completion and up to date responses to improve the accuracy of their Home Energy Report. Through this module, customers that have an incomplete survey, outdated responses or those that have not started the survey are easily able to click through for completion. Customers that have completed the entirety of the survey within the last year are thanked for doing so. The team is excited to utilize the results of this module once available.

Program	Net MWh YTD	% Savings Achieved of YE Forecast	Program Participation YTD	Unit Definition
Home Energy Savings – Market Rate Assessment	411	69%	6,212	Homes
Home Energy Savings – Income Eligible Assessment	5,326	101%	6,580	Homes
Home Energy Savings – Income Eligible Retrofits	5,939	82%	2,825	Homes
Multi-Family Energy Savings – Income Eligible	23,229	109%	Tenant Unit Direct Installation: 9,473 Building Upgrades: 2,115	Projects
Multi-Family Energy Savings – Public Housing	1,691	104%	Tenant Unit Direct Installation: 0 Building Upgrades: 48	Projects
Multi-Family Energy Savings – Market Rate	5,294	99%	Tenant Unit Direct Installation: 1,361 Building Upgrades: 347	Projects
Whole-Home Electric	3,895	81%	Single Family Homes: 99 Multi-Family Buildings: 4 Tenant Unit Conversions: 163	Projects
Home Energy Reports	60,196	95%	Home Energy Reports (print): 5,533,409 Home Energy Reports (email): 9,387,006 High Usage Alerts: 2,471,725 Weekly Usage Reports: 8,234,615	Reports and Alerts

Residential Implementation Programs

Residential Channels Program Highlights

- **Retail (Market Rate and Income Eligible)** – In Q4, the program processed 1,212 rebate applications for qualifying income eligible customers. The program added the income-qualifying functionality to the online rebate application portal in Q3 to allow customers to voluntarily submit income and household data to qualify income-eligible customers for higher rebate amounts ranging from \$35 to \$300 for various ENERGY STAR certified products including: water dispensers, air purifiers, dehumidifiers, refrigerators, induction cooktops, clothes washers, electric clothes dryers, and heat pump clothes dryers. In Q4, the top 3 products among these income eligible rebate applications were refrigerators, clothes washers, and air purifiers. As a comparison, the program averaged 13,222 online rebate applications (52,890 annually), so the income eligible applications made up just under 10% with expectations to see that grow in 2024. The program hosted 24 Retail In-Store engagements in Q4 and concluded the year with a total of 179 Retail In-Store Engagement events and engaged over 10,000 customers.
- **Product Distribution (Market Rate and Income Eligible)**
 - **Food Bank Distribution** – The program distributed more than 3,380,000 products throughout 2023, including over 3,260,000 ENERGY STAR certified lighting products plus over 58,000 water-saving products, 18,992 advanced power strips, and over 35,500 weatherization measures. This activity occurred through more than 800 participating food pantries associated with 4 major food bank partners (Greater Chicago Food Depository; Northern Illinois Food Bank; River Bend Food Bank; Illinois Partners In Hope) plus an independent partner network. The program hosted 55 in-person events throughout 2023 where outreach staff interacted directly with customers about ways to save energy, and an additional 27 events were supported as “grab-and-go” due to pantry space constraints. The final food distribution event occurred in early December at the Winterfest Community Resource Fair in the Englewood area of Chicago and provided an opportunity to distribute energy saving products and informational material to an estimated 200 income eligible customers who attended.
 - **Income Eligible Kits** – There were more than 17,500 kits shipped to eligible customers in Q4, which represents approximately 30% of the total of 58,453 that were shipped throughout 2023. Community Action Agencies (CAAs) continue to be the primary providers of customer outreach, recruitment, and enrollment leads for kit distribution efforts, with the Community and Economic Development Association of Cook County (CEDA), Community Action Partnership of Lake County, and Tri-County Opportunities Council organizations accounting for much of this activity.
 - **School Kits** – There were 20,931 joint income eligible school kits and 28,666 joint market rate school kits delivered throughout 2023. School kits continued to be well-received by teachers who participated in the program, with a composite impact and satisfaction score of 9.17/10.00 for the year. Representatives of the program hosted a booth at the Illinois Association of School Boards (IASB) conference in November to boost awareness and future enrollment.

Residential Implementation Programs

- **Residential New Construction (Affordable Housing and Electric Homes)** – In Q4, the Affordable Housing New Construction (AHNC) offering completed 2 projects that included 87 income eligible housing units. Overall in 2023, the AHNC offering completed 6 multifamily projects that included 269 housing units for income eligible customers. The Electric Homes New Construction (EHNC) offering completed 23 all electric homes in Q4. The program also completed its first multifamily project in December. In all, the EHNC offering completed a total of 68 all-electric homes that also included EV and Solar ready technologies. The program has also grown the number of participating builders. In 2023 there were 14 first-time and 56 repeat builders. 2023 has the highest number of “new builders” since EHNC launched. During Q4, the program also implemented the use of marketing yard signs and banners to highlight completed projects. A banner highlighted the completion of the 15-unit multifamily project (EHNC) in December.
- **Heating and Cooling** – In Q4, the program processed 1,825 incentives which included 959 Air Source and 373 Mini Split heat pumps. This brings the total through the end of the year to 8,838 incentives. This included 3,296 Air Source Heat Pumps and 1,516 Mini-split Heat Pumps incentives. Overall, the number of heat pump incentives increased by 400% year-over-year (4,812 in 2024; 1,160 in 2023). During Q4, the program launched heat pump trainings for contractors. A total of 100 companies completed the new training requirements by the end of 2023. Beginning in 2024, a participating contractor company is required to have at least 30% of its field staff complete the training which will give them access to program incentives for qualifying air source heat pumps. By the end of Q4, nearly 500 individuals completed at least one element of the required training, demonstrating contractors’ growing interest in heat pump technologies. Also during Q4, the program held several webinars to communicate these new training requirements and to highlight program changes for 2024, which includes sunsetting most downstream incentives including smart thermostats, tune ups for central air conditioner and heat pumps, ECM retrofits, and duct sealing. The program will continue the downstream offering of geothermal heat pump incentives. Customers will still have access to incentives on qualifying smart thermostats incentives through the Retail, Home Energy Savings, and Multi-Family Energy Savings program offerings.

Residential Implementation Programs

Program	Net MWh YTD	% Savings Achieved of YE Forecast	Program Participation YTD	Unit Definition
Retail – Market Rate	57,356	152%	Home Products: 531,691	Appliances
Retail – Income Eligible	120,224	99%	Home Products: 260,496 Lighting: 1,887,201	Appliances; Light Bulbs
Product Distribution – Market Rate	4,835	89%	28,666	School Kits
Product Distribution – Income Eligible	268,736	100%	3,459,891	Kits and Food Bank Measures
Residential New Construction – Affordable Housing	1,038	119%	6	Projects
Residential New Construction – All Electric	161	74%	68	Homes
Heating and Cooling - Midstream/ Rebates	13,117	137%	8,839	Units

C&I Implementation Programs

Business Program Highlights

- **Small Business (Private and Public)** – Small Business achieved 226 Net GWh and over \$79M in incentives paid through year-end, exceeding 2023 goal for over 5,800 projects. Small Business ended the year with over 66 Net GWh completed projects (29% of total program savings) in disadvantaged communities, totaling \$22.1M in incentives. Annual training and 2024 launch for closed network of 77 service providers was held in November.
- **Standard (Private and Public)** – The offering achieved 192 GWh in energy savings and over \$55M in incentives paid through the end of year. Service Provider roundtables and webinars were hosted with strong participation and valuable feedback shared. An awareness campaign targeting energy efficiency upgrades within disadvantaged communities was launched.

Program	Net MWh YTD	% Savings Achieved of YE Forecast	Program Participation YTD	Unit Definition
Small Business - Private	190,731	107%	5,282	Projects
Small Business – Public	35,321	102%	545	Projects
Incentives – Standard - Private	162,348	96%	2,087	Projects
Incentives – Standard – Public	29,860	87%	516	Projects

C&I Implementation Programs

Technical Program Highlights

- **Custom** – The team rolled out a more streamlined incentive application process to improve timeliness and reduce duplicate data entries. A new collateral piece was created to describe the updated process for customers and EESPs. Additionally, the team has been to several events in Q4, including the Private Label Manufacturer’s Association Tradeshow, Chicago Build, and Best Practices/Process Expo. These three events were excellent networking opportunities and the Custom team started building relationships with local contacts and potential program participants. In total, 50 contacts were logged for these events as campaigns in Salesforce.
- **Retro-Commissioning (RCx)** – The program finished 2023 strong by achieving a total verified savings of 45.9 GWh. Q4 was the highest performing quarter with total project savings of 24.8 GWh, which accounted for 54% of total YE savings. An Energy Efficiency Service Providers (EESPs) promotion was in place for RCx Flex and MBCx to help drive the completion of 47 projects in Q4. Q4 project achievements are program records dating back to the program’s inception in 2008.
- **Industrial Systems (IS)** – The program completed a large number of comprehensive and Fix-It-Now (FIN) projects in December for a savings of 12.6 GWh. Two new EESPs were also added in Q4, with one kicking off a study with a waste water facility jointly with the Strategic Energy Management (SEM) offering. The Industrial Systems team also exhibited at Water Environment Federation's Technical Exhibition and Conference (WEFTEC) in conjunction with SEM, exhibited at the Process Expo and Compressed Air Best Practices Expo in conjunction with the Custom team.
- **Strategic Energy Management (SEM)** – The majority of energy savings for the program were realized in Q4. The SEM team has designs in place to stagger cohort recruiting to better distribute savings across the year. Two customer SEM workshops were held in Q4. In October, the SEM team held the “Bringing Value to Your Computerized Maintenance Management System (CMMS)” workshop, with the help of two guest speakers from Building Maintenance Optimization Consultants (BMOC). In November, the SEM team held an Energy Modeling workshop for its first-year participants, as well as any alumni participants that were interested in a refresher. Four SEM treasure hunts were completed in Q4.
- **C&I New Construction (CINC)** – There are 10 projects enrolled under the High Performance Design incentive for meeting a green rating system. Eligible green rating systems include LEED, WELL, Living Building Challenge, Green Globes, Passive House. The CINC team also performed an outreach blitz for the Retail and Grocery segment which involved direct emails to past participants, emails to contacts that have not participated in the program before, and broader outreach to contacts matching the specific SIC codes for retail and grocery. This included 61 direct emails sent to past participants, 630 direct emails sent to known contacts who have not participated, and 3,315 emails sent via email blast. The email blast had an 18% unique open rate, and so far 5-10 potential future projects have been identified from past participants.

C&I Implementation Programs

- **Midstream/Upstream (Instant Discounts)** – Instant Discounts had a successful year and achieved over 100% of its savings goals in both the public and private segments. The lighting category had strong performance throughout 2023 and continued to deliver savings in Q4 even with changes implemented in Q3 2023 that limited the available products able to receive an incentive to TLEDs only. Instant Discounts held two webinars in Q4 2023 for their distributor network that reviewed Energy Efficiency Electrification (EEE) fork truck measure incentive changes and an HVAC webinar that introduced a new EEE incentive that will be available for heat pumps in 2024.
- **Commercial Food Services (CFS)** – In Q4, CFS focused on continuing to grow their distributor network and on-boarded four new distributors that have already begun processing claims. Denny’s Restaurant agreed to participate in a case study to highlight their experience in the offering as a multi-site customer.

Program	Net MWh YTD	% Savings Achieved of YE Forecast	Program Participation YTD	Unit Definition
Incentives – Custom – Private	11,271	90%	85	Projects
Incentives – Custom – Public	1,083	99%	15	Projects
Retro-commissioning – Private	27,158	90%	191	Projects
Retro-commissioning – Public	19,427	110%	116	Projects
Industrial Systems	39,139	88%	382	Projects
Strategic Energy Management – Private	35,816	107%	113	Participating Customers
Strategic Energy Management – Public	6,729	101%	37	Participating Customers
C&I New Construction – Private	7,966	104%	63	Projects
C&I New Construction – Public	1,520	107%	24	Projects
Midstream/Upstream – Private	78,777	116%	959,373	Lighting products; battery chargers; HVAC, Fork Trucks
Midstream/Upstream – Public	14,503	121%	281,387	Lighting products; battery chargers; HVAC, Fork Trucks
Commercial Food Services - Private	1,286	108%	468	Units
Commercial Food Services - Public	40	70%	27	Units

C&I Implementation Programs

Engineering Program Highlights

- **Facility Assessments/Operational Measures** – In Q4, 35 operational savings projects have been verified, for a total savings of 1,868 MWh. Savings were driven primarily by private customer participation. Program participants completed projects mainly related to HVAC controls adjustments and production equipment scheduling changes.

Program	Net MWh YTD	% Savings Achieved of LRP YE	Program Participation YTD	Unit Definition
Assessments – Private	2,085	73%	47	Verified Wins
Assessments – Public	172	14%	15	Verified Wins

Voltage Optimization

Voltage Optimization Highlights

- Savings below are equivalent to 55.8 million pounds of carbon dioxide reduction or removing 7,493 passenger vehicles driven each year.

Program	Net MWh YTD	% Savings Achieved of YE Forecast	Program Participation YTD	Unit Definition
Voltage Optimization	65,730	57%	30 stations; 192 feeders	Stations Activated; Feeders Activated

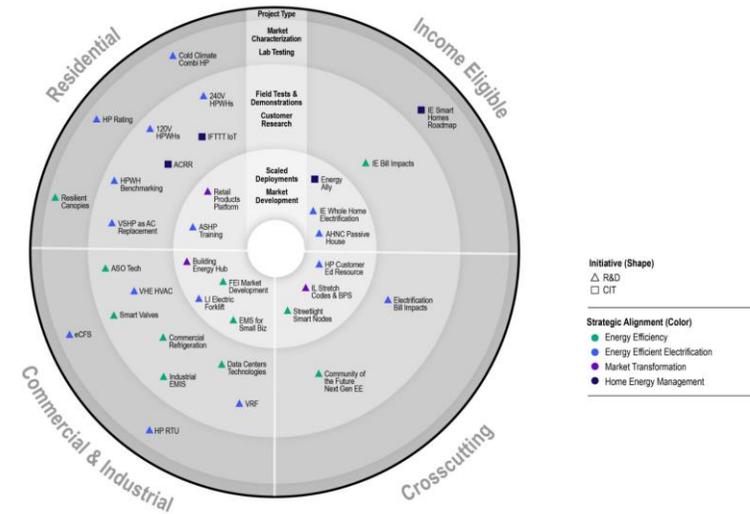
Emerging Technologies and Market Transformation (“R&D”)

R&D Highlights

The mission of the R&D team is to identify, test, validate, and integrate new energy-saving technologies and program delivery strategies into the ComEd Energy Efficiency Program so that it continues to meet customers’ needs and its energy savings goals cost-effectively. For the first time, this quarterly report also includes projects active with Customer Innovation Technologies, a parallel team within ComEd Customer Solutions focused on the non-EE range of demand side management innovation concepts, such as peak load reduction, distributed energy resources, and home energy management systems. The report is renamed “Customer Innovation” to reflect this broader team, but energy efficiency R&D projects are still identified throughout.

- Please refer to the *Customer Innovation* section in the Appendix for a summary of active Energy Efficiency Emerging Technologies and Market Transformation projects.

ComEd Customer Innovation Portfolio Summary 2023 Q4



This visualization provides an overview of the Customer Innovation Team’s selected research concepts and projects for 2023, organized by stage of research and relevant customer segments. Further information about each project may be found in the following table. Project descriptions are available on the ComEd Customer Innovation website at [Innovate.ComEd.com](https://innovate.comed.com).

Marketing Education & Awareness

Marketing Education & Awareness Q4 Highlights

Energy Efficiency Business Campaign 2023 (Education & Awareness/Private Sector/Public Sector)

Overview: The campaign promotes awareness of energy efficiency offerings for business customers. Customers were driven to ComEd.com/PoweringBiz.

- In-market: 1/2/23 - 12/31/23
- 2023 Q4 paid media consisted of:
 - Radio :30s and in-game units during Bulls and Bears WMVP radio broadcasts
 - Facebook paid social (display units)
 - Basis digital display
 - StackAdapt digital display
 - Spanish Print
- The campaign generated 9,954,455 total digital impressions as of December 31, 2023
 - Facebook paid social = 3,375,719 impressions
 - Basis digital display = 3,847,820 impressions
 - StackAdapt digital display = 2,730,916 impressions

Energy Efficiency Education & Awareness Campaign, Residential 2023

Overview: This campaign drives customer (market rate & LMI) education and awareness of residential offerings of the ComEd Energy Efficiency Program. Customers were driven to ComEd.com/HomeSavings.

- In-market: 4/24/23-12/30/23
 - 2023 Q4 paid media consisted of:
 - TV & Cable :30s (English and Spanish)
 - Radio :30s (English & Spanish)
 - Amobee digital display
 - Facebook paid social (English and Spanish, display units)
 - Defender.com digital
 - Truth Be Told (TBT) digital
 - Print
 - CTA and Metra (OOH/Transit)
 - OOH (digital and print)
 - Chicago Parent Magazine Program (print & digital)
- The campaign generated 12,216,848 total digital impressions as of December 31, 2023
 - Facebook paid social = 6,742,939 impressions
 - Amobee digital display = 4,470,035 impressions
 - Premion CTV = 1,003,874 impressions
 - Basis digital display = 1,777,572 impressions
 - Chicago Parent Magazine digital = 2,051,252 impressions

Energy Efficiency (EE) Retail Campaign, 2023

Overview: This campaign drives market rate and LMI customer awareness of energy efficiency rebates and discounts on ENERGY STAR® certified appliances and home products being offered by the ComEd Energy Efficiency Program. Customers were driven to ComEd.com/HomeSavings.

- In-market: 4/3/23 -12/30/23
- 2023 Q4 paid media consisted of:

Marketing Education & Awareness

- TV & Cable :30s (English & Spanish)
- Radio :30s (English & Spanish, Chicago & Rockford)
- Cinema
- No social or digital running in Q4 for Retail, therefore no digital impressions to report.

Income Eligible (IE) Single Family Campaign, 2023

Overview: This campaign drives primarily LMI customer awareness and encourages participation in the FREE Home Energy Savings assessment being offered by the ComEd Energy Efficiency Program. Customers were driven to ComEd.com/Assessment.

- In-market: 5/1/23 - 10/29/23
- 2023 Q4 paid media consisted of:
 - Basis digital display
 - iOne digital display
 - Amobee digital display (Spanish)
 - Facebook Paid Social (English and Spanish, display units)
- The campaign generated 13,663,802 total digital impressions as of December 31, 2023
 - Facebook paid social = 3,445,837 impressions
 - Basis digital display = 5,562,728 impressions
 - iOne digital display = 249,084 impressions
 - Amobee digital display = 4,406,153 impressions

Energy Efficiency Electrification (EEE) Residential & Business Campaign, 2023

Overview: This campaign builds residential and business customer awareness of the benefits of making the switch to electric products and equipment. Customers were driven to ComEd.com/CleanEnergy.

- In-market: 9/25/23 - 12/31/31
- 2023 Q4 paid media consisted of:
 - TV & Cable :30 (English)
 - Cinema
 - :30s Radio (English and Spanish)
 - :5s, :10s and :15s Radio live reads (English)
 - Volta EV Charging Stations (OOH)
 - Hybrid Bus Wrap (OOH/Transit)
- Note: No digital in media plan

Stipulations

Plan 6 Stipulations

As part of the Revised 2022-2025 Energy Efficiency & Demand Response Plan 6 Stipulation Agreement (“RSA”), and in compliance with the Clean Energy Jobs Act (“CEJA”), ComEd has agreed to report out on the following stipulations:

RSA § IV (A-6a) ComEd commits to work with stakeholders to develop progress metrics for ICC-filed Quarterly Reports in the second quarter of 2022 and present progress on energy efficiency and financial assistance efforts described above at a joint Committee and SAG meeting.

Metric 1 Number and percentage of customers receiving utility bill assistance that were referred to EE measures/programs, broken down by:

- Number of customers, in total, referred to EE programs, broken down by program and SF/MF designation
- Number of customers referred to EE programs, broken down by program and SF/MF designation for the population of bill assistance customers as a whole
- Number of customers referred to EE programs, broken down by program and SF/MF designation for the top 20 zip codes (and/or census tracts) with the highest disconnection rate

Metric 2 The number and percentage of IQ EE applicants/participants that were referred to energy assistance programs or other financial assistance support (including, the Low Income Home Energy Assistance Program (LIHEAP), the Percentage of Income Payment Plan Program (PIPP), any utility-sponsored assistance program, and the ability to wave customer deposits & late fees, per CEJA provisions) broken down by:

- SF and MF, total and tracked separately
- By zip code and/or census tract

Metric 3 Details on which programs and measures were recommended including:

- The implementer they were recommended by
- Type of referral/recommendation (e-mail, flyer, direct assistance/hand-holding)

Metric 6 Narrative updates on current efforts and future planned efforts to coordinate utility bill assistance and credit and collections with energy efficiency programs

Metric 8 Description of how the company intends to increase outreach in top 20 communities with disconnections (i.e., presentations, materials

distributed, which community organizations, information on how to apply, streamlined application process, etc.)

Q4 Updates

- **Metric 1:** During Q4 of 2023, over 83,000 customers receiving utility bill assistance also received information about Energy Efficiency programs.
 - Local Administering Agencies, by process, offer Energy Efficiency kits to LIHEAP and PIPP recipients and review the weatherization program with them.
 - There were 38,000 LIHEAP customers and 17,000 PIPP customers in Q4
 - Supplemental Arrearage Reduction Program (SARP) customers receive Energy Efficiency information from ComEd packaged as Ways to Save
 - There were 24,000 SARP customers in Q4

ComEd’s customer-facing digital tool, the Smart Assistance Manager (or SAM), serves as a way for customers seeking assistance to receive tailored recommendations for ways to assist with managing their electric bills. During Q4, customers who leveraged the ‘assistance finder’ functionality within SAM received referrals to/information about the following programs:

Program	Sessions*
Budget Billing	342
Due Date Extensions	590
Free Energy Savings Products	428
Give A Ray	756
Home Energy Savings	921
Multi Family Energy Savings	643
Payment Arrangements	275
Retail Discounts	503
SARP	119

*Sessions include authenticated and unauthenticated users and can include duplicate visits from the same customer/user.

Stipulations

The following list represents a breakdown of customers referred to Energy Efficiency programs broken down by program for the top 20 zip codes with the highest disconnection rates (zip codes 60958, 61057, 60472, 60944, 60428, and 60484 did not have any customer participation):

Zip Code / Program	Number of Customers		
60409	60	60624	63
Free Energy Savings Products	12	Free Energy Savings Products	15
Give A Ray	8	Give A Ray	6
Home Energy Savings	6	LIHEAP	8
LIHEAP	7	Multi Family Energy Savings	8
Payment Arrangements	4	Payment Arrangements	15
Retail Discounts	17	Retail Discounts	6
SARP	6	SARP	5
60419	72	60628	67
Free Energy Savings Products	7	Free Energy Savings Products	11
Give A Ray	19	Give A Ray	16
Home Energy Savings	3	Home Energy Savings	4
LIHEAP	31	LIHEAP	9
Retail Discounts	10	Multi Family Energy Savings	5
SARP	2	Payment Arrangements	3
60426	68	Retail Discounts	12
Free Energy Savings Products	13	SARP	7
Give A Ray	8	60636	58
Home Energy Savings	16	Free Energy Savings Products	12
LIHEAP	7	Give A Ray	7
Payment Arrangements	9	Home Energy Savings	13
Retail Discounts	4	LIHEAP	2
SARP	11	Retail Discounts	14
60619	65	SARP	10
Free Energy Savings Products	11	60637	56
Give A Ray	12	Free Energy Savings Products	5
Home Energy Savings	17	Give A Ray	10
LIHEAP	5	LIHEAP	9
Payment Arrangements	10	Multi Family Energy Savings	6
Retail Discounts	6	Payment Arrangements	3
SARP	4	Retail Discounts	15
60620	99	SARP	8
Budget Billing	10	60644	49
Due Date Extensions	7	Free Energy Savings Products	3
Free Energy Savings Products	4	Give A Ray	2
Give A Ray	16	Home Energy Savings	13
Home Energy Savings	9	LIHEAP	16
LIHEAP	13	Retail Discounts	4
Multi Family Energy Savings	8	SARP	11
Payment Arrangements	14	60649	100
Retail Discounts	3	Budget Billing	16
SARP	15	Free Energy Savings Products	9
60621	72	Give A Ray	6
Budget Billing	4	Home Energy Savings	10
Free Energy Savings Products	3	LIHEAP	11
Give A Ray	14	Multi Family Energy Savings	14
Home Energy Savings	17	Payment Arrangements	7
LIHEAP	5	Retail Discounts	15
Payment Arrangements	12	SARP	12
Retail Discounts	6	60827	30
SARP	11	Free Energy Savings Products	8
60623	109	Home Energy Savings	13
Budget Billing	17	Retail Discounts	5
Free Energy Savings Products	10	SARP	4
Give A Ray	7		
Home Energy Savings	11		
LIHEAP	12		
Multi Family Energy Savings	15		
Payment Arrangements	8		
Retail Discounts	16		
SARP	13		

Stipulations

Metric 2: In Q4, all (100%) recipients of the Home Energy Savings' Income Eligible Home Energy Assessment (IE HEA) and Income Eligible Retrofits, Product Distribution's Income Eligible Kits and Multi-Family Energy Savings (MFES) program offerings received referrals to the financial assistance programs. In addition to the referrals shown in the tables (*Table 1, Table 2, & Table 3*), customers who received an energy savings kits from a participating school or attended program sponsored food pantry event through the Product Distribution program received additional information to further help them manage their energy bills, including ComEd's financial assistance programs. These program offerings do not track customer level participation information to allow for zip code level reporting. For a breakdown of MFES program recipients by zip code, refer to *Table 5* under stipulation V (D-1b).

Table 1

Income Eligible - Home Energy Assessments Participation Counts - Q4 2023							
Service Zip Code	Customer Counts	Service Zip Code	Customer Counts	Service Zip Code	Customer Counts	Service Zip Code	Customer Counts
60002	138	60172	33	60475	70	60651	968
60004	39	60173	61	60476	13	60652	413
60005	34	60176	22	60477	128	60653	873
60007	52	60177	6	60478	211	60654	3
60008	28	60178	2	60480	7	60655	37
60010	36	60181	5	60481	15	60656	70
60014	6	60185	4	60482	53	60657	27
60015	58	60187	4	60484	15	60659	323
60016	179	60188	10	60487	48	60660	108
60018	54	60189	3	60490	9	60661	5
60020	117	60190	2	60491	6	60706	57
60025	83	60192	4	60501	51	60707	160
60026	15	60193	236	60504	15	60712	16
60030	218	60194	159	60505	12	60714	130
60031	232	60195	16	60506	8	60803	94
60035	90	60201	95	60513	33	60804	408
60040	3	60202	103	60517	3	60805	92
60041	51	60203	7	60518	12	60827	377
60042	3	60301	20	60525	44	60901	3
60044	5	60302	680	60526	9	60914	3
60046	92	60304	110	60527	3	60941	3
60047	33	60305	16	60531	6	61001	21
60048	105	60402	386	60534	50	61006	3
60051	15	60403	54	60538	3	61008	3
60053	50	60404	9	60543	6	61010	7
60056	89	60406	214	60544	39	61014	2
60060	57	60409	330	60545	6	61018	3
60061	115	60410	5	60546	56	61019	9
60062	44	60411	980	60548	8	61020	3
60064	145	60412	2	60552	2	61021	118
60067	45	60415	104	60555	3	61031	2
60068	31	60416	3	60561	10	61032	1,404
60069	3	60418	24	60563	3	61039	9
60070	27	60419	270	60586	26	61044	3
60073	330	60421	6	60601	7	61046	2
60074	103	60422	32	60602	3	61047	5
60076	118	60423	2	60605	73	61048	36
60077	165	60425	93	60606	2	61050	6
60081	6	60426	292	60607	152	61051	2
60083	15	60428	200	60608	836	61052	3
60084	45	60429	237	60609	894	61054	9
60085	487	60430	106	60610	179	61059	9
60087	101	60431	17	60611	19	61060	6
60089	53	60432	44	60612	1,108	61061	17
60090	79	60433	39	60613	130	61062	15
60091	29	60435	130	60614	94	61064	12
60093	6	60436	59	60615	482	61067	12
60096	15	60438	235	60616	654	61068	3
60098	3	60439	26	60617	1,439	61070	6
60099	284	60440	40	60618	301	61071	10
60101	9	60441	23	60619	1,539	61075	12
60103	19	60442	6	60620	1,607	61081	110
60104	151	60443	203	60621	1,013	61085	45
60106	16	60445	96	60622	235	61087	30
60107	58	60446	26	60623	1,784	61101	6
60108	17	60449	9	60624	1,319	61102	6
60115	6	60450	2	60625	238	61103	6
60120	22	60451	5	60626	316	61107	3
60123	3	60452	138	60628	1,341	61108	3
60126	2	60453	219	60629	1,143	61109	9
60130	93	60455	86	60630	222	61111	3
60131	56	60456	23	60631	34	61250	14
60133	89	60457	61	60632	603	61252	26
60135	3	60458	116	60633	162	61270	12
60137	3	60459	115	60634	323	61277	3
60139	3	60461	24	60636	846	61283	8
60148	3	60462	157	60637	1,114	61310	22
60153	281	60463	30	60638	323	61321	2
60154	46	60464	3	60639	793	61342	49
60155	58	60465	61	60640	245	61349	2
60156	3	60466	418	60641	306	61350	10
60160	74	60467	30	60642	40	61353	2
60162	47	60468	3	60643	631	61360	14
60163	16	60469	48	60644	1,269	61364	125
60164	61	60470	2	60645	362	61369	2
60165	10	60471	263	60646	52	61370	2
60169	200	60472	108	60647	421	61377	4
60171	41	60473	134	60649	1,062	61764	3

Stipulations

Table 2

Income Eligible - Home Energy Assessments Participation Counts - Q4 2023							
Service Zip Code	Customer Counts	Service Zip Code	Customer Counts	Service Zip Code	Customer Counts	Service Zip Code	Customer Counts
60007	3	60156	1	60475	3	60640	3
60008	2	60160	8	60476	1	60641	8
60010	2	60162	1	60477	2	60643	18
60012	2	60163	1	60478	9	60644	21
60013	2	60164	3	60481	1	60645	7
60014	3	60169	3	60482	1	60646	3
60015	1	60171	1	60484	3	60647	4
60016	8	60173	1	60487	5	60649	18
60018	3	60176	1	60490	1	60651	14
60020	1	60181	3	60491	1	60652	11
60022	1	60185	3	60501	1	60653	12
60025	6	60188	1	60502	1	60655	3
60030	3	60189	4	60503	1	60657	4
60031	4	60190	4	60504	2	60659	4
60033	1	60191	2	60505	7	60660	6
60035	4	60193	3	60506	4	60706	1
60041	2	60194	1	60510	1	60707	5
60044	1	60201	5	60513	1	60712	4
60045	1	60202	2	60516	1	60714	3
60046	3	60301	1	60517	3	60803	9
60047	1	60302	8	60523	1	60804	12
60050	5	60304	5	60525	1	60805	2
60051	1	60402	14	60526	2	60827	30
60053	3	60403	5	60527	2	60901	3
60056	9	60404	1	60530	1	60914	1
60060	5	60406	6	60532	3	60915	1
60061	1	60407	2	60534	6	60950	1
60062	7	60408	1	60538	1	60958	3
60064	3	60409	29	60540	1	60964	1
60065	1	60410	3	60542	2	61008	2
60067	3	60411	22	60543	1	61019	1
60068	3	60415	5	60544	6	61021	3
60070	3	60416	2	60545	1	61027	1
60071	1	60417	9	60546	2	61032	6
60073	7	60418	2	60548	4	61054	1
60074	1	60419	33	60552	1	61061	1
60076	3	60422	2	60555	2	61065	2
60077	3	60423	3	60556	1	61077	1
60081	2	60424	1	60558	3	61078	1
60083	2	60425	9	60560	1	61081	3
60084	1	60426	19	60561	5	61087	1
60085	9	60428	8	60563	1	61101	5
60087	1	60429	10	60564	1	61102	4
60089	4	60430	5	60585	4	61103	9
60091	2	60431	2	60586	3	61104	1
60096	2	60432	2	60605	1	61107	9
60098	3	60433	5	60607	1	61108	3
60099	9	60435	5	60608	12	61109	2
60101	2	60436	3	60609	9	61111	5
60102	1	60438	23	60610	1	61114	2
60103	3	60439	1	60611	1	61115	1
60104	10	60440	4	60612	9	61319	1
60106	2	60442	1	60613	1	61325	2
60107	3	60443	15	60614	2	61342	2
60108	3	60444	1	60615	9	61349	1
60110	3	60445	5	60616	4	61358	1
60112	2	60446	1	60617	40	61360	1
60115	5	60448	3	60618	6	61364	1
60118	1	60449	2	60619	39	61701	2
60120	9	60450	1	60620	58	61764	3
60123	5	60451	1	60621	13	61769	1
60124	1	60452	2	60622	3		
60126	2	60453	2	60623	14		
60130	1	60455	1	60624	13		
60131	3	60458	3	60626	7		
60135	2	60459	5	60628	56		
60136	1	60461	2	60629	17		
60137	4	60462	3	60630	3		
60140	1	60465	2	60632	7		
60142	4	60466	14	60633	13		
60148	9	60467	2	60634	5		
60152	1	60468	2	60636	15		
60153	7	60471	9	60637	14		
60154	5	60472	5	60638	10		
60155	5	60473	18	60639	16		

Table 3

Income Eligible - Single Family Retrofits Participation Counts - Q4 2023			
Service Zip Code	Customer Counts	Service Zip Code	Customer Counts
60014	1	60473	30
60015	1	60475	3
60030	2	60477	7
60035	4	60478	16
60044	1	60484	3
60045	3	60504	1
60060	2	60506	2
60062	1	60525	1
60064	1	60532	2
60073	2	60542	1
60077	2	60543	1
60085	1	60552	1
60087	2	60603	1
60093	1	60608	4
60101	1	60609	17
60104	9	60612	4
60107	1	60615	1
60123	2	60617	39
60133	1	60618	2
60135	1	60619	26
60143	1	60620	54
60153	14	60621	25
60154	4	60623	4
60155	5	60624	6
60160	1	60625	7
60162	1	60626	2
60177	1	60628	54
60193	2	60629	20
60304	1	60631	2
60402	1	60632	7
60403	1	60633	5
60404	1	60634	8
60406	3	60636	8
60409	28	60637	5
60411	27	60638	5
60415	1	60639	9
60417	2	60641	6
60418	1	60643	45
60419	25	60644	10
60422	1	60646	4
60423	1	60649	19
60425	8	60651	7
60426	23	60652	21
60428	7	60655	7
60429	9	60656	3
60430	6	60659	1
60433	2	60707	3
60438	18	60714	1
60440	3	60803	3
60443	6	60804	2
60449	2	60805	5
60452	1	60827	15
60453	3	60964	1
60455	1	61016	1
60456	2	61101	5
60458	1	61102	7
60459	2	61103	3
60461	2	61104	1
60462	2	61107	1
60465	3	61109	1
60466	19	61111	1
60469	1	61114	1
60471	2	61115	1
60472	5		

Stipulations

- *Metric 3:*
 - Home Energy Savings – Resource Innovation is the program implementer
 - Income Eligible Assessment: Utility Energy Solutions (UES), a subcontractor to Resource Innovation performs the Home Energy Assessments and provides customers with information on ComEd’s financial assistance programs in the assessment report customer receive at the conclusion of the assessment appointment.
 - Income Eligible Retrofits: Customers receive a brochure from a program EESP after their retrofit describing additional programs, including financial assistance, to further help them manage their energy bills.
 - Product Distribution – Walker Miller is the program implementer
 - Income Eligible (IE) and School Kits: Green Home Experts, a program subcontractor, ships IE kits directly to eligible customer’s homes who request a kit or to participating schools to distribute to students. Included in the kit is a brochure describing additional programs, including financial assistance, to help customers manage their energy bills.
 - Food Bank: Program representatives distribute brochures during program sponsored food pantry events to customers. The brochure describes additional programs, including financial assistance, to help customers manage their energy bills.
- *Metric 6:* All residential brochures distributed by ComEd residential energy efficiency programs and through sponsored events, include financial assistance information. Additionally, and as described in the “*Mapping of Assistance Needs...*” section, energy efficiency, financial assistance and revenue management departments coordinated on a marketing campaign (Targeted Hardship Campaign) targeting income eligible customers experiencing payment issues, like arrearages and financial assistance, to drive awareness of and participation in energy efficiency programs. This campaign leverages email and social media tactics to reach targeted customers. The campaign originally launched in 2022, relaunched in March 2023 and will continue for throughout 2023. Lastly, and as described in the “*Pilot Connecting Customers with Payment Trouble...*” section, energy efficiency coordinated with

financial assistance launched a new program offering, Catch Up & Save, in January 2023 which brings together the benefits of energy efficiency with an energy savings kits and a payment plan offered through the Supplemental Arrearage Reduction Program (SARP) historically limited to LIHEAP recipients through a single enrollment process. To date, 1,033 income eligible customers have been enrolled in SARP and also received an energy savings kit, with 111 of those occurring in Q4.

- *Metric 8:* Energy efficiency has been expanding its marketing campaigns and strategies to better target income eligible customers, particularly those living in communities whose residents are predominately income eligible. Typically, most if not all, communities experiencing high disconnections are also those communities whose residents are predominately low income. So, energy efficiency’s marketing campaigns and tactics that target predominately low-income zip codes are also reaching those top 20 communities with historically higher disconnections and are now better targeted and informed of energy efficiencies programs and services to help them reduce energy usage and energy bills. The Targeted Hardship campaign described above and in the “*Pilot Connecting Customers with Payment Trouble...*” section and the resource fairs and community events detailed in the Marketing Education & Awareness section are good examples of efforts focusing on reaching customers experiencing payment troubles including those living in these top 20 communities with disconnections to inform them of energy efficiency offerings.

RSA § IV (A-6b) *Mapping of Assistance Needs and Targeting Delivery of Weatherization Services:* During the Plan 6 Period, ComEd will collect a variety of data for purposes of mapping areas of financial assistance needs and targeting energy efficiency and weatherization efforts. Data will be reported quarterly in the ICC-filed Quarterly Report and updates on targeting efforts will be provided in the ICC-filed Quarterly Report, and at least annually at joint SAG and Committee meetings, with commitment to seek input from interested stakeholders.

Q4 Updates

- The 2023 Targeting Hardship Customers campaign relaunched in March with targeted emails and social media messaging. For 2023, the campaign execution has expanded from a quarterly refresh to bi-monthly to promote energy efficiency and financial assistance programs and services. For social media, the campaign continues to

Stipulations

utilize paid posts through Facebook and Instagram concurrently in English and Spanish. Instagram was new for 2023, replacing X (formally known as Twitter). In Q4, the campaign delivered 587,860 emails and was viewed by 230,054 customers, approximately 39% of the target group. For Q4, targeted English and Spanish social media messaging yielded a total reach of 585,552 customers, cultivating engagement with 6,918 customers, 1.18% of the target group. The following table (*Table 4*) includes the list of historical top 20 zip codes to receive disconnections and the year-to-date participation in the various income eligible Energy Efficiency programs.

Table 4

Top 20 Disconnect Zip Codes	City	Single-Family Retrofits - Income Eligible		Multi-Family Income Eligible and Public Housing		Other Income Eligible Programs*		Totals	
		MWh YTD	Participants YTD	MWh YTD	Participants YTD	MWh YTD	Participants YTD	Income Eligible Energy Savings (MWh YTD)	Income Eligible Participants (YTD)
60409	Calumet City	21,577	92	6	21	9,722	32,278	31,305	32,391
60419	Dolton	24,757	87	11	30	4,817	15,469	29,585	15,586
60426	Harvey	27,714	131	0	0	13,098	49,020	40,812	49,151
60428	Markham	25,954	80	0	0	1,470	3,770	27,424	3,850
60472	Robbins	5,495	23	0	0	1,862	7,277	7,357	7,300
60484	University Park	1,240	13	0	0	282	1,100	1,522	1,113
60619	Chicago	31,881	126	434	813	51,485	177,452	83,800	178,391
60620	Chicago	60,112	200	628	1,243	21,613	67,166	82,352	68,610
60621	Chicago	7,871	53	365	591	10,085	31,668	18,321	32,312
60623	Chicago	7,413	23	21	89	25,600	82,801	33,035	82,913
60624	Chicago	2,790	17	186	315	18,962	62,140	21,938	62,472
60628	Chicago	55,689	167	92	1,625	31,330	107,111	87,110	108,903
60636	Chicago	10,747	42	24	77	15,584	52,098	26,355	52,217
60637	Chicago	5,337	20	231	1,074	19,841	66,884	25,409	67,977
60644	Chicago	13,106	34	611	910	13,383	40,722	27,100	41,666
60649	Chicago	13,823	43	814	1,937	10,598	32,184	25,235	34,164
60827	Riverdale	2,994	40	28	290	8,392	28,103	11,414	28,434
60944	Hopkins Park	0	0	0	0	0	0	0	0
60958	Pembroke Township	0	0	0	0	1,333	4,808	1,333	4,808
61057	Nachusa	0	0	0	0	0	0	0	0

*Includes Product Distribution (IE Kits, Food Bank Distribution, IE School Kits), Income Eligible Retail, and Home Energy Assessments

RSA § IV (A-6d) Pilot Connecting Customers with Payment Trouble to Energy Efficiency: ComEd Energy Efficiency will work directly with relevant ComEd business units to create a pilot or program that recruits customers who are payment troubled (e.g., customers at risk of being disconnected; with high arrears) into its IE energy efficiency programs, with commitment to incorporate ideas and input from interested stakeholders on pilot design and modifications, as practicable. ComEd will direct its independent evaluator to perform an impact and a process evaluation of the pilot. ComEd will provide updates to the SAG and Committee in joint meetings on pilot progress and the evaluation results, and include updates in ICC filed Quarterly Reports, as appropriate.

Q4 Updates

- To date, 1,066 income eligible customers have been enrolled in SARP and also received an energy savings kit, with 111 of those occurring in Q4 through the Catch Up and Save program. Catch Up & Save, in coordination with ComEd Energy Efficiency (EE) and Financial Assistance (FA), is designed to provide additional assistance to customers experiencing payment trouble. This offering provides eligible customers the benefits of energy efficiency with an energy savings kits and a payment plan offered through the Supplemental Arrearage Reduction Program (SARP) historically limited to LIHEAP recipients through a single enrollment process. Included in each kit is a product and installation guide to assist customers with installing the items to begin saving energy and reducing energy costs.

RSA § IV (A-7a,7b) ComEd will track bill impacts and reduced energy burden based on deemed savings across all IE customers, for each IE offering. ComEd will also pilot ways to track actual bill impacts and reduced energy burden for a portion of IE Single-Family and Multi-Family customers, which will be for the purpose of facilitating follow up with customers to determine if actual savings were in line with projections. This pilot initiative and its associated data are for research and development purposes, and parties acknowledge that the pilot results are not intended or designed to inform changes to the IL-TRM. However, to the extent the pilot results are relevant and applicable, nothing in this Revised Stipulation would preclude consideration of the results in shaping future evaluation activities. ComEd will provide updates on this pilot in its ICC-filed Quarterly Reports, including, but not limited to, an overall comparison of deemed savings projections with actual bill impacts broken out between Single Family and Multi-Family. ComEd will work with interested stakeholders at the SAG to define energy burden and discuss ideas for piloting the tracking of EE bill impacts and related reduced energy burden. The funds spent on the pilot(s) will be considered IE R&D funds.

Q4 Updates

- In Q4 2023, ComEd worked internally to develop a set of modeling tools to support the ongoing identification of weatherization program participant outcomes. The goal of this “Phase 2” effort is to categorize IE weatherization program participants by post-retrofit bill impacts using customer AMI electric usage data. Once this approach is established and tested, the R&D team will use the Phase 1 (2022-2023) study recommendations to develop a communication strategy

Stipulations

with customers flagged as having less-than-expected savings outcomes (this will be Phase 3 of this initiative).

RSA § IV (A-8e) Income Eligible (“IE”) - Low Income Energy Efficiency Accountability Committee (“LIEEAC” or “Committee”) Facilitator Independence, Budget, and Process e) ComEd acknowledges that Section 8-103B imposes certain quarterly reporting obligations on ComEd relative to the operation of the Committee. ComEd agrees to include in the narrative section of each such quarterly report updates on all of the reporting requirements set forth in Section 8-103B(c) of the PUA, and including new approaches or changes to program approaches adopted by ComEd pursuant to the recommendations of the LIEEAC. ComEd also agrees to attach the LIEEAC’s quarterly budget report to ComEd’s quarterly report filed with the Commission.

Q4 Updates

- ComEd has not received input or recommendations from the committee regarding the design, implementation, or evaluation of our income eligible energy efficiency programs. As reported in Q2, the IQ-N Leadership Team terminated the Facilitator contract in April of 2023 and a new facilitator has not been identified and approved at this time.

RSA § V (D-1b) ComEd commits to providing the following IE Multi-Family reporting metrics in its ICC-filed Quarterly Reports:

- Actuals (YTD)
 - 1) Participation – buildings by zip code and apartment units
 - 2) Spending – incentives, non-incentives, total
 - 3) Savings (1st year) – MWh, therms

Q4 Updates

- **Participation – buildings by zip code and apartment units**

In Q4, the Multi-Family Energy Savings program served verified income eligible (IE) and public housing (PH) multi-family properties in 160 unique zip codes throughout ComEd’s service territory. In total, 2,163 IE and PH buildings participated with 33,809 tenant units receiving free products such as smart thermostats, LEDs, low flow showerheads and faucet aerators. Following table (*Table 5*) shows the breakout of the number of buildings and tenant units served, by program component (income eligible, public housing) and by zip code.

 - *# of Building Participants (Income-Eligible & Public Housing):*
Assuming each building under an account is participating,

including both direct install and rebate projects with a date install in Q4 of 2023.

- *# of Apartment Units:* Each project with a recorded project type of “Direct Install” represents a unit served.

Stipulations

Table 5

Zip Code	# of Building Participants (Income-Eligible)	# of Apartment Units Served (Income-Eligible)	# of Building Participants (Public Housing)	# of Apartment Units Served (Public Housing)
60005	2	120	0	0
60007	8	427	0	0
60008	45	1,436	0	0
60010	1	16	0	0
60016	95	2,264	0	0
60020	1	104	0	0
60025	2	105	0	0
60026	80	286	0	0
60030	1	148	0	0
60035	185	209	0	0
60056	26	350	0	0
60064	4	34	0	0
60073	1	6	0	0
60074	12	135	0	0
60076	3	16	0	0
60077	1	0	0	0
60083	1	6	0	0
60085	20	397	0	0
60087	1	11	0	0
60088	1	819	0	0
60090	1	78	0	0
60096	1	3	0	0
60099	17	251	0	0
60101	6	77	0	0
60104	4	102	0	0
60106	2	4	0	0
60110	2	373	0	0
60115	14	88	11	260
60118	4	6	0	0
60120	4	55	0	0
60123	7	476	0	0
60126	1	80	0	0
60130	9	131	0	0
60131	1	10	0	0
60137	1	54	0	0
60139	1	89	0	0
60152	2	9	0	0
60153	5	86	0	0
60155	2	9	0	0
60160	1	6	0	0
60163	1	6	0	0
60164	1	125	0	0
60165	1	3	0	0
60169	20	774	0	0
60171	1	6	0	0
60173	80	732	0	0
60176	5	20	0	0
60177	4	14	0	0
60178	4	52	2	100
60181	13	150	0	0
60185	1	20	0	0
60187	1	15	0	0
60188	6	560	0	0
60193	2	12	0	0
60201	4	468	0	0
60202	8	102	0	0
60301	5	136	0	0
60302	30	604	0	0
60304	18	205	0	0

Table 5, continued

60305	0	0	0	0
60402	25	345	0	0
60426	0	0	0	0
60403	2	21	0	0
60406	11	96	0	0
60409	5	9	0	0
60411	8	23	0	0
60419	5	10	0	0
60432	1	90	0	0
60433	2	155	0	0
60435	8	313	0	0
60438	18	263	0	0
60440	0	0	0	0
60441	1	80	0	0
60442	5	18	0	0
60443	10	138	0	0
60449	1	4	0	0
60450	1	105	0	0
60452	3	18	0	0
60459	1	3	0	0
60464	1	81	0	0
60465	1	8	0	0
60466	63	388	0	0
60468	5	12	0	0
60472	0	0	0	0
60471	2	4	0	0
60475	0	0	0	0
60481	1	3	0	0
60504	1	99	0	0
60505	5	111	1	188
60506	30	364	0	0
60515	0	0	0	0
60517	2	12	0	0
60525	1	6	0	0
60526	1	264	0	0
60532	1	440	0	0
60534	2	132	0	0
60538	1	4	0	0
60543	2	9	0	0
60544	1	56	0	0
60545	3	6	0	0
60546	1	30	0	0
60548	4	16	0	0
60555	1	30	0	0
60556	1	15	0	0
60559	1	558	0	0
60561	2	64	0	0
60605	1	80	0	0
60607	1	3	0	0
60608	11	539	0	0
60609	3	137	2	13
60610	3	48	0	0
60612	9	53	4	61
60613	0	0	0	0
60614	0	0	0	0
60615	51	1,664	1	72
60616	14	105	2	32
60617	18	208	2	0
60618	11	179	0	0
60619	64	565	0	0

Stipulations

Table 5, continued

60620	60	529	0	0
60621	25	449	0	0
60622	0	0	7	497
60623	20	16	0	0
60624	14	249	0	0
60625	19	175	0	0
60626	55	1,115	0	0
60628	14	432	0	0
60629	45	511	0	0
60630	6	90	0	0
60631	1	84	0	0
60632	8	30	0	0
60633	1	84	0	0
60634	2	32	0	0
60636	3	70	0	0
60637	49	842	1	165
60638	2	141	0	0
60639	12	287	0	0
60640	32	1,134	0	0
60641	4	61	0	0
60643	7	131	0	0
60644	35	627	0	0
60645	15	155	0	0
60647	6	26	0	0
60649	115	1,027	1	51
60651	13	78	0	0
60653	18	384	6	230
60655	4	39	0	0
60656	1	24	0	0
60659	17	82	0	0
60660	27	504	0	0
60707	2	3	0	0
60714	3	80	0	0
60803	22	216	0	0
60804	13	166	0	0
60827	15	116	0	0
60901	1	70	0	0
60915	1	107	0	0
60950	4	26	0	0
61008	49	134	0	0
61010	1	6	0	0
61021	0	0	3	110
61012	2	9	0	0
61032	5	13	0	0
61073	6	4	0	0
61081	1	10	0	0
61101	12	34	0	0
61103	16	24	0	0
61104	8	43	0	0
61107	9	152	0	0
61108	41	90	0	0
61109	36	172	0	0
61111	7	63	0	0
61114	21	175	0	0
61115	3	16	0	0
61319	0	0	0	0
61367	0	0	2	10
61342	1	7	0	0
60550	0	0	3	12

- **Spending – Incentives, non-incentives and 1st year savings by MWh and Therms**

In Q4, the Multi-Family Energy Savings program allocated \$20,741,886 in ComEd incentives for efficiency upgrades within income eligible and public housing buildings and achieved 24,763 net MWhs and 741,291 net therms (to be converted to MWhs). Below (Table 6) is a breakout of savings and spend by program component (income eligible, public housing).

- The incentive and savings data are specific to ComEd and not the full program (the gas incentives and savings have been removed).

Table 6

	Incentive Spend	Non-Incentive Spend	Net MWh Savings Achieved	Net Therms Achieved
Income Eligible	\$17,869,085	\$8,676,641	23,072	712,787
Public Housing	\$2,872,801	\$477,991	1,691	28,504
Total	\$20,741,886	\$9,154,632	24,763	741,291

RSA § V (D-3a) ComEd commits to providing the following in its ICC-filed EE Quarterly Reports:

- 1) Number or proportion of diverse vendors by category (i.e., MBE, WBE and VOSB), as well as by primary contractors and subcontractors, and network service providers)
- 2) Breakdown of diverse vendors by category (i.e., MBE, WBE and VOSB)
- 3) Percent of or amount of portfolio dollars (excluding pass-through incentives) for diverse spend, by category (i.e., MBE, WBE and VOSB)

Q4 Updates

- Year to date, ComEd has utilized 27 diverse prime contractors (Tier 1) and 75 diverse sub-contractors and service providers (Tier 2). The following tables (Table 7 and Table 8) show a breakdown of vendor diversity and spend, by category.

Stipulations

Table 7

Tier 1 Diverse Category	Spend	# of Vendors YTD
MBE	\$23,151,164	10
WBE	\$30,612,118	15
VOSB	\$2,515,509	2
Total	\$56,278,790	27

Table 8

Tier 2 Diverse Category	Spend	# of Vendors YTD
MBE	\$13,343,356	33
WBE	\$34,090,615	37
VOSB	\$9,329,217	5
Total	\$56,763,188	75

- **Data Definitions:**
 - **Tier 1 vendors:** Prime diverse vendor
 - **Tier 2 vendors:** Prime non-diverse vendor, subcontracting to a diverse vendor
 - **Minority-owned Business Enterprise (MBE):** A for-profit enterprise, regardless of size, physically located in the United States, which is 51% owned, operated, and controlled by minority group members, defined by the following:
 - **Asian-Indian-owned business enterprise:** A U.S. citizen whose origins are from India, Pakistan, or Bangladesh
 - **Asian-Pacific-owned business enterprise:** A U.S. citizen whose origins are from Japan, China, Indonesia, Malaysia, Taiwan, Korea, Vietnam, Laos, Cambodia, the Philippines, Thailand, Samoa, Guam, the U.S. Trust Territories of the Pacific, or the Northern Marianas

- **African-American-owned business enterprise:** A U.S. citizen having origins in any of the Black racial groups of Africa
- **Hispanic-owned business enterprise:** A U.S. citizen of Hispanic heritage, from any of the Spanish-speaking areas of the following regions: Mexico, Central America, South America, or the Caribbean Basin
- **Native-American-owned business enterprise:** A person who is an American Indian, Eskimo, Aleut, or Native Hawaiian, and is regarded as such by the community of which the person claims to be a part
- **Woman-owned Business Enterprise (WBE):** An independent business concern that is at least 51% owned and controlled by one or more women who are U.S. citizens or Legal Resident Aliens; whose business formation and principal place of business are in the U.S. or its territories; and whose management and daily operation is controlled by one or more of the women owners
- **Veteran-owned Small Business (VOSB):** A business that is at least 51% owned, operated, and controlled by one or more veterans

RSA § V (D-4a) ComEd commits to annually providing the following Health & Safety-related metrics for IE Whole Building Retrofit Programs at joint SAG and Committee meetings, in 4th quarter quarterly SAG reports, and in ICC-filed Annual Reports.

- 4) Number of properties deferred because of health and safety issues and general trends in the type of related H&S issues (will also be provided in ICC-filed Quarterly Reports).
- 5) The percentage and/or dollar amount of the Health and Safety Fund that has been spent down (will also be provided in ICC-filed Quarterly Reports)

Stipulations

Q4 Updates

- The following tables (*Table 9* and *Table 10*) show a breakdown of health and safety related deferrals and total spend year to date for IE retrofit programs. The type of health and safety issues identified include:
 - Structural issues
 - Roof issues
 - Asbestos
 - Mold
 - Standing Water
 - Mechanical Issues
 - Plumbing Repair
 - Electrical Issues/panel upgrades
 - Emergency Boiler

Table 9

Health and Safety Related Deferrals*	
Home Energy Savings	178
Multi-Family Energy Savings	27

*Note: Deferrals do not include IHWAP project deferrals. The 27 projects deferred under Multi-Family Energy Savings will be under reconsideration in 2024.

Table 10

Health and Safety Related Spend YTD*	
Home Energy Savings	\$7,384,525
Multi-Family Energy Savings	\$3,958,327

*Note: Spend includes dollars spent on exhaust fans and emergency HVAC replacement, which also contribute to energy savings.

RSA § VIII (B-3) ComEd will report to the ICC in its ICC-filed Quarterly Reports on the progress of the Market Development Initiative (MDI) with the ICC-filed Annual Reports summarizing annual progress.

Q4 Updates

During Q4, ComEd completed a competitive RFP and awarded Walker-Miller Energy Services with the Phase 2 contract beginning late 2023 and ending December 2025. Walker-Miller is responsible for implementing the program design created during Phase 1 of the initiative which includes four specific channels, Workforce Development (WFD), Diverse Vendor Procurement (DVP), Energy Efficiency Service Provider (EESP) Engagement, and Community-based Organization (CBO) Partnerships. A standup contract was implemented in late Q4, preparing for implementation in Q1 2024.

Total Resource Cost

CY2023 New Measures

All measures in the table below were launched in CY2023.

Sector	Program	Measure	IL TRC	Justification for TRC < 1.00
Residential	Retail/Online	Bath Fan	1.14	
Residential	Retail/Online	HP Dryer - Electrification	1.65	
Residential	Retail/Online	Induction Cooktop - Electrification	0.05	The savings two measures noted in the table (induction cooktop and HP dryer) were given with an assumption of an electric baseline, and thus do not have therms savings. There is limited market data on what percent of purchases for these items are due to fuel switching, so we assumed all would be electric-to-electric. The calculations and assumptions used are based on the IL TRM V11.
Residential	Retail/Online	Showerheads	23.05	
Residential	Retail/Online	Bathroom Faucets	1.55	
Residential	Retail/Online	Switch and Outlet Gaskets	38.70	
Residential	Retail/Online	Window Film	0.01	This measure is offered to improve the customer experience and provide a high level of customer satisfaction.
Residential	Retail/Online	Caulk	46.85	
Residential	Retail/Online	Spray Foam Insulation	162.28	
Residential	Retail/Online	Weatherstripping	6.13	
Residential	Retail/Online	Door Sweeps	9.96	
Residential	Multifamily Upgrades	Heat Pump Water Heaters	13.79	
Residential	Multifamily Upgrades	ASHP Heat Pump - Electrification	0.63	This electrification measure is offered in alignment with Illinois's Climate and Equitable Jobs Act (CEJA) allowance of fuel switching. ComEd may offer and promote measures that electrify space heating, water heating, cooling, drying, cooking, industrial processes, and other building and industrial end uses that would otherwise be served by combustion of fossil fuel at the premises, provided that the electrification measures reduce total energy consumption at the premises.
Residential	Multifamily Upgrades	Heat Pump Water Heater - Electrification	0.30	See above electrification measure justification
Residential	Multifamily Upgrades	Cooking Range - Electrification	0.14	See above electrification measure justification
Residential	Multifamily Upgrades	Clothes Dryer - Electrification	0.22	See above electrification measure justification
Residential	Single-Family Upgrades	Fossil to Electric or Induction Cooktop - Electrification	0.09	See above electrification measure justification
Residential	Single-Family Upgrades	Ductless Heat Pumps - Electrification	0.66	See above electrification measure justification
Residential	Single-Family Upgrades	Electric Clothes Washer - Electrification	0.22	See above electrification measure justification
Residential	Single-Family Upgrades	Electric Water Heater - Electrification	1.21	
Residential	Single-Family Upgrades	Heat Pump Water Heater (IE) - Electrification	0.21	See above electrification measure justification
Residential	Single-Family Upgrades	Air Source Heat Pump - Electrification	0.68	See above electrification measure justification
Residential	Single-Family Upgrades	Clothes Dryer (IE) - Electrification	0.18	See above electrification measure justification
Residential	Single-Family Upgrades	Dusk to Dawn LEDs	22.10	
Residential	Single-Family Upgrades	Shower Flow Reducer	36.32	
Residential	Single-Family Upgrades	Smart Socket	1.28	
Residential	Single-Family Upgrades	Air Handler Filter Replacement	3.12	
Business	Targeted Systems	Building Operator Certification	3.11	
Business	Midstream/Upstream	Fork Truck (Non-Fuel Switch)	1.42	
Business	Midstream/Upstream	Fork Truck (Fuel Switch) - EE	10.77	
Business	Midstream/Upstream	Ductless Mini-Split Heat Pump - EE	1.16	

Appendix: Program Descriptions

Program Descriptions

Home Energy Savings (Single-Family Upgrades) Home Energy Assessments (Market Rate & Income Eligible), Retrofits (Income Eligible)

Overview: Under the Home Energy Savings program, ComEd provides three offerings for single family residential customers: Home Energy Assessments (HEA) - Market Rate, HEA – Income Eligible, and Income Eligible Retrofits. These offerings are closely linked through a centralized intake process and coordinated customer journey. Single family includes single family detached, vintage homes (30+years), manufactured homes, condo units, townhomes, two-flats, and duplex. The program offers free assessments and installation of energy savings products such as LEDs, water-saving devices, water heater pipe wrap, advanced power strips and thermostats with income eligible customers receiving all products installed for free. Certain income-eligible customers also receive comprehensive weatherization services. The program is delivered jointly with the Northern Illinois Gas Utilities (Nicor Gas, People Gas and North Shore Gas).

Multi-Family Energy Savings (Multi-Family Upgrades) Market Rate, Income Eligible, Public Housing

Overview: The Multi-Family Energy Savings (MFES) program is a single comprehensive program offering that provides a full range of multi-family energy efficiency services. The MFES program consists of three offerings for 2023: Income Eligible, Public Housing, and Market Rate. This program offers efficiency upgrades for multi-family properties, including gas and electric measures for tenant units and common areas. This program offering is delivered jointly with the Northern Illinois Gas Utilities (Nicor Gas, Peoples Gas, and North Shore Gas). Income Eligible, Public Housing, and Market Rate Property owners/managers who complete weatherization and other energy efficiency improvements enjoy reduced operating costs, increased comfort in tenant spaces, increased occupancy rates, and improved property value. Additionally, building tenants experience increased comfort and reduced energy costs.

Whole Home Electrification

Overview: The Whole Home Electrification program refers to ComEd's initiative to convert income-eligible single family and multi-family homes and buildings to all-electric using highly efficient technologies. The offering includes comprehensive appliance and HVAC upgrades, building weatherization, and health and safety modifications required to safely and efficiently reduce reliance on fossil fuel energy sources, like gas and propane, for homeowners and residents in multi-unit homes. Prior to proceeding with a project, the

offering models energy bill impacts to ensure the upgrades will result in overall savings to the customer.

Home Energy Reports

Overview: The Home Energy Report provides select residential customers with information on how they use energy within their households. Reports and the online portal include usage comparison to that of similar, nearby households, personalized energy efficiency advice, program promotions, and application of behavioral principles and social norms to drive adoption of energy efficient behaviors.

Retail Market Rate, Income Eligible

Overview: ComEd offers residential delivery customers rebates on select ENERGY STAR® certified appliance, home products and lighting products. Deeper discounts are available to income eligible customers on select products via instant discount at retail locations within zip codes where at least 60% or more of the households are at or below 80% Area Median Income (AMI) or through customized discount channels to pre-qualified income eligible customers, like Limited Time Offers (LTOs). Retail Program also includes incentives offered via the ComEd Marketplace.

Product Distribution Food Bank (Income Eligible), IE Kits (Income Eligible), School Kits (Market Rate and Income Eligible)

Overview: Product Distribution includes kits (Market Rate and Income Eligible school kits and Income Eligible kits distributed through Community Action Agencies and other partners) and distribution of products through Food Banks, food pantries and other partners. By providing free energy efficiency products and education distributed through trusted channels, ComEd can reach more customers, particularly those most in need and introduce them to the wide-ranging benefits of energy efficiency including reduced energy usage, reduced energy costs, improved their quality of life and reduced environmental impacts.

Residential New Construction Affordable Housing New Construction, Electric Home New Construction

Overview: Residential New Construction consists of two offerings: Affordable Housing New Construction (AHNC) and Electric Homes New Construction (EHNC). The AHNC Program offering provides technical support and incentives for whole-building energy efficiency for new construction and major renovation projects to reduce the energy burden for income eligible households by lowering their potential monthly energy costs. The program

Appendix: Program Descriptions

supports developers building or providing major renovation to affordable housing buildings, including both single and multi-family projects. The program offering's incentives are based on the square footage of the areas serving income eligible tenants, while upgrade requirements apply to the full building. The Affordable Housing New Construction offering is delivered in partnership with Nicor Gas.

The EHNC Program promotes high performance all-electric homes that allow ComEd customers to stack the benefits of all-electric energy efficiency, demand-response, electric vehicles, solar, and new rate structures. Program works with local builders and Home Energy Rating System (HERS) raters to ensure that new homes exceed the requirements of the state's energy code for increased energy savings.

Heating and Cooling

Overview: ComEd offers Heating & Cooling incentives to ComEd residential delivery customers that replace existing heating and cooling equipment with qualifying, high-efficiency central air conditioners, air source heat pumps, ductless mini-split heat pumps, geothermal (ground source) heat pumps, or smart thermostats. Measures including central air conditioning (CAC), air source heat pump, and ductless mini-split heat pumps, are offered through a distributor (midstream channel). Measures including smart thermostats, duct sealing, CAC tune ups, air source heat pump tune ups, and geothermal heat pumps, are offered by Energy Efficiency Service Providers (contractors) to residential customers and are downstream measures (incentives paid to customers through the participating EESP). Also offered downstream are incentives for new and replacement geothermal heat pumps that involve full loop systems.

Small Business

Private, Public

Overview: Offers private and public sector small business customers cost-effective turn-key energy efficiency retrofit and replacement services. These customers are typically underrepresented in energy efficiency programs due to limited staff and resources, lack of capital, and leased instead of owned facilities. To qualify for the program, private businesses and public facilities must have an electrical peak demand under 400 kW, Customer categories include, but are not limited to: warehouses, office, retail, restaurant, public libraries, police & fire stations and public K-12 schools.

Standard Incentives

Private, Public, ComEd Streetlights

Overview: The Standard Program provides monetary incentives to customers on a "Standard" fixed or per-unit basis. Standard offers incentives for common energy-efficiency improvements including: Indoor and outdoor lighting equipment (including networked lighting and LED streetlights), HVAC equipment (e.g., variable speed drives, chillers, roof-top

units), commercial appliances including industrial and laboratory equipment, compressed air equipment, and Energy Management Systems (EMS).

Custom Incentives

Private, Public

Overview: The Custom Program identifies and implements site-specific and unique cost-effective energy efficiency opportunities that are not available via the Standard program. Customized incentives based on per kWh basis and calculated for specific customer projects are offered. Measures include process efficiency improvements, IT equipment upgrades, process cooling, compressed air, VFDs on large motors, free cooling systems, refrigeration improvements, wastewater treatment plants, combined heat and power, and other measures not covered in the Standard offering.

Retro-Commissioning (RCx)

Private, Public

Overview: The RCx program provides customers with a fully funded engineering study to help business and public-sector customers optimize operations of existing building systems to reduce energy usage while continuing to maintain desired environmental conditions. Common energy conservation measures focus on control of HVAC and lighting using building automation systems. Typical participants include commercial office buildings, hospitals/health care facilities, and higher education buildings. RCx options include RCx Flex and a Monitoring-Based Commissioning (MBCx). Each conduct an engineering study identifying ECMs. Additionally, RCx includes a Virtual Commissioning (VCx) option which offers free identification of energy-saving measures and remote technical assistance for implementation. VCx focuses on smaller customers in which smart meter interval usage data is used to remotely identify operational savings opportunities.

Industrial Systems

Overview: The Industrial Systems program assists industrial customers to optimize and/or identify energy efficiency measures to improve the performance of the following systems or processes: Compressed air, process cooling, industrial refrigeration, water and wastewater treatment plant, process efficiency for heating and cooling in production.

Midstream/Upstream

Private, Public

Overview: ComEd provides point-of-sale discounts on commercial LED lighting and HVAC equipment, as well as industrial forklift battery chargers. Purchasers can verify customer

Appendix: Program Descriptions

and product eligibility through participating distributors using a full-service webtool, which reimburses distributors for incentives instantly provided to eligible purchasers.

Strategic Energy Management (SEM)

Private, Public

Overview: SEM helps organizations embed energy efficiency into their operations and company culture. Efforts ultimately allow for organizations to establish energy policies, improve operating efficiencies, and build budgets for energy efficiency efforts. SEM provides tools, coaching, and technical resources to support customers' energy goals through a year-long series of workshops and one-on-one coaching. It draws on principles of continuous improvement and organizational change and integrates Lean, Six Sigma, and other cost savings and operational excellence initiatives. SEM provides incentives for behavioral energy savings as well as operational measures.

C&I New Construction

Private, Public

Overview: The New Construction Program offering provides technical assistance, support for the Leadership in Energy and Environmental Design (LEED) rating system, and incentives for whole-building energy efficiency for new construction and major renovation projects to influence building design practices during the design and construction of new buildings, major renovations of existing buildings, and tenant build-outs in the C&I market. The program serves private commercial and industrial buildings (CINC) as well as public sector buildings (PSNC) through a combined offering. The New Construction Program offering is delivered in partnership with all the northern Illinois gas utilities.

Illinois Commercial Food Services

Private, Public

Overview: The Illinois Commercial Food Services offering provides instant discounts to the purchaser when buying qualified commercial food service equipment utilizing channels including manufacturers, manufacturer representatives, distributors, and dealers of food service equipment. This is a joint utility program available through the state of Illinois and

includes Ameren Illinois, Nicor Gas, People's Gas and Northshore Gas. Customers benefit by receiving incentives for both qualifying electric and qualifying natural gas measures.

Assessments

Private, Public

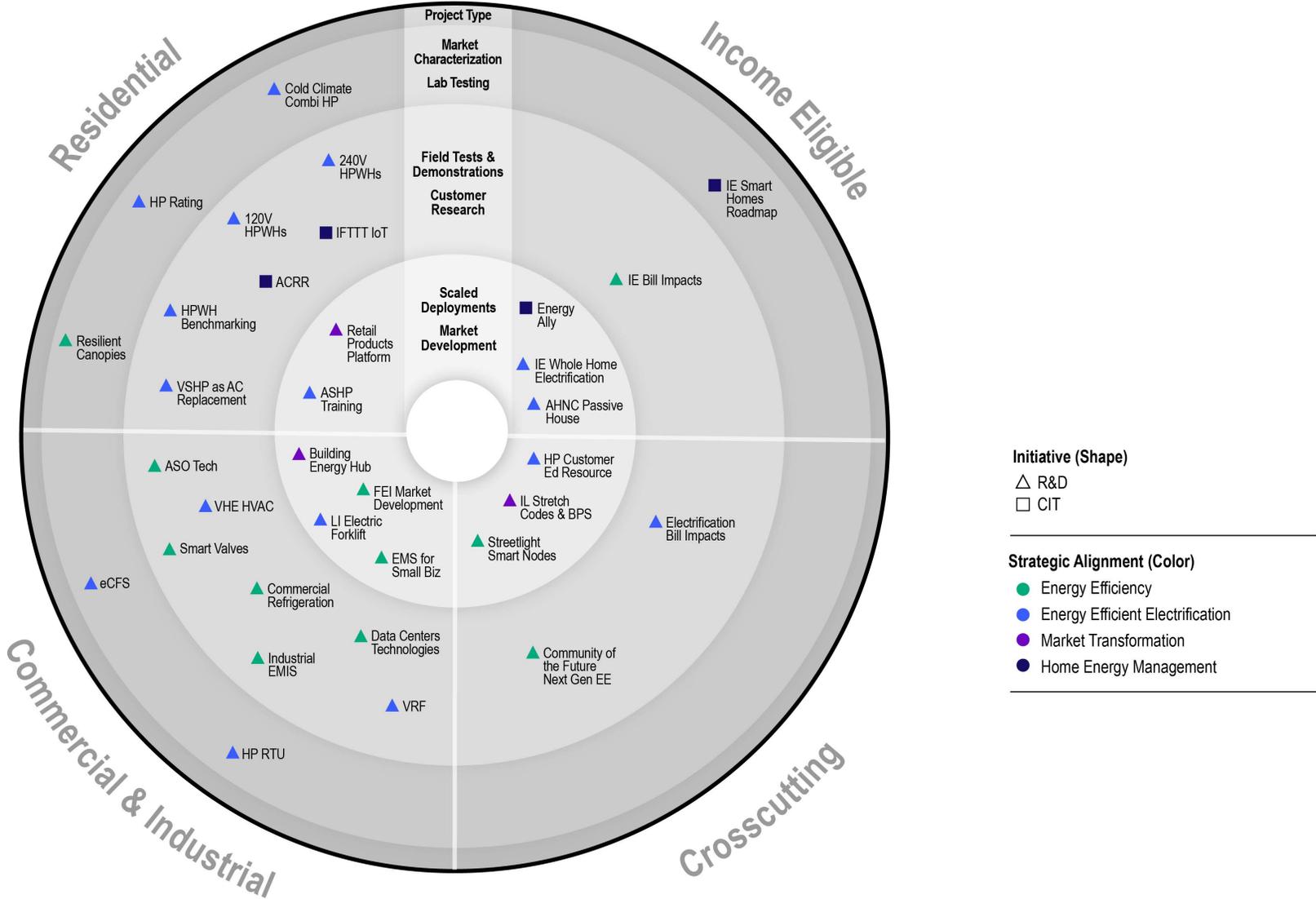
Overview: Assessments identify energy saving measures (capital cost and operational) and provide information on available financial incentives for energy efficient equipment upgrades and retrofits. Assessments save energy annually and lower operating expenses through implementation of recommended measures. The free Facility Assessment is a tool that helps customers take the first step toward making their facility more efficient by identifying opportunities to participate in the various programs within the EE portfolio. The assessments involve an initial site visit (in-person or virtual) where an engineer collects data regarding a facility. After the site visit, the engineer compiles all the opportunities with their estimated savings, costs, incentives, and simple paybacks into a report that is presented to the customer. Customers >10 MW (except for private commercial accounts that have opted out) are now eligible to have a free assessment and for the portfolio to claim operational savings measures.

Voltage Optimization

Overview: The Voltage Optimization Program deploys circuit voltage detectors and control equipment that will effectively assess and adapt the amount of voltage traveling across a power line at any given time. Once in place, these devices will allow ComEd to more precisely monitor, manage, and deliver the voltage customers need. No additional effort by consumers will be required as the control equipment will automatically adjust to consistently deliver only the voltage each customer requires while providing energy savings.

Customer Innovation

ComEd Customer Innovation Portfolio Summary 2023 Q4



This visualization provides an overview of the Customer Innovation Team’s selected research concepts and projects for 2023, organized by stage of research and relevant customer segments. Further information about each project may be found in the following table. Project descriptions are available on the ComEd Customer Innovation website at [Innovate.ComEd.com](https://www.innovate.comed.com).

Customer Innovation Portfolio Summary 2023 Q4

Project	Work Description	Partners	Project Type	Customer Segment	End Date	Status Update
Scaled Deployments & Market Adoption						
Air Source Heat Pump (ASHP) Training	Series of educational activities designed to develop the EESP market for heat pumps.	Slipstream	Market Development	Residential	2024 Q1	The team is in the process of transitioning the new program to the Business Operations team so that ongoing contractor trainings are available for 2024. As of Jan 2024, this training is required for contractors to participate in heat pump incentives (Home Heating & Cooling Program).
Building Energy Resource Hub	A hub providing training and resources to customers and stakeholders across the region to support meeting aggressive climate action goals, improve building performance, and building an inclusive green economy.	Illinois Green Alliance	Market Development	Commercial and Industrial	2025 Q2	The project team hosted monthly events to educate customers and stakeholders about energy efficiency and decarbonization. The project team also hired a new Senior Program Manager to manage the Hub.
Energy Ally	Provides customers with an in-home display that communicates real-time, actionable energy use information, including energy prices, budget trends, and weather.	The Will Group, Calico, Eire Direct Marketing, Prism	Scaled Deployment	Income Eligible	2025 Q4	The project team is restarting efforts to evaluate savings resulting from the Energy Ally pilot and will evaluate next steps for the pilot based on evaluation results
Energy Management Systems (EMS) for Small and Medium Business	Testing a two-tiered energy management system (EMS) offering for small business customers.	Resource Innovations	Scaled Deployment	Commercial and Industrial	2024 Q3	The project team continued to face recruitment and installation delays due to supply chain backups and hesitation from both contractors and customers to participate.
Fan Energy Index (FEI) Market Development	Integration of savings algorithm to Illinois TRM and new savings opportunity for C&I offering.	Slipstream	Market Development	Commercial and Industrial	2023 Q4	The project completed and presented their recommendations to the Instant Discounts program. The final report executive summary is available on innovate.comed.com/projects .
Heat Pump Customer Education Resource Development	Preparation of a web-based resource for customers and contractors to learn about the energy and bill impacts of switching to heat pumps.	Energy Solutions	Market Development	Crosscutting/Strategic Priority	2024 Q4	The project team conducted a usability study, which included interviews with 10 residential customers, to gather feedback about the website to inform future revisions. Also, the team started planning for work in 2024, which will include improving the heat pump customer content and adding new content for contractors and other electrification end uses.
Illinois Building Energy Code Advancement	Development of a market transformation approach to drive energy savings through advancement of energy codes and building performance standards.	Slipstream	Market Development	Crosscutting/Strategic Priority	2025	The project team delivered draft logic model and MPIS for IL stretch code and BPS market transformation. The team delivered a draft natural market baseline (NMB) and energy savings framework for stretch code in December. NMB for BPS and the continuation of work with municipalities are expected in 2024 PY. Nicor Gas and Peoples Gas/North Shore Gas opted to end their support of this initiative at end of 2023; going forward, ComEd will be the only utility sponsor.
Income Eligible Whole Home Electrification	Investigating energy savings, installation barriers and costs, and customer experience of whole-home electrification via a 100+ home field demonstration.	Elevate	Scaled Deployment	Income Eligible	2023 Q4	The project team completed whole home electrification retrofits at 66 single family homes and 40 units across two multifamily buildings, with a final 16-unit multifamily building yet in progress. The team submitted a final report summarizing findings on the home selection process and project costs, as well as initial findings regarding customer experience and bill impacts.
Lithium-Ion Electric Forklift Case Studies	Creating real-world case studies for use in future promotional efforts.	DNV	Market Development	Commercial and Industrial	2024 Q1	The project team continued to monitor customer operation patterns and energy use at the site.
Passive House Affordable Housing New Construction (AHNC) Portfolio Integration Pilot	Integration of a PHIUS+ incentive tier into the Affordable Housing New Construction offering.	Slipstream	Market Development	Income Eligible	2026	Six multi-family projects are on course to achieve PHIUS certification when complete. A total of 279 units will be built, including 253 that will be for income-eligible customers. Three projects are scheduled to complete in 2024, two in 2025, and one in 2026.
Retail Products Platform	Testing of a national Market Transformation program delivery model which provides incentives to large retailers to use their influence with appliance manufacturers to bring more efficient models to market.	Energy Solutions	Scaled Deployment	Residential	2023 Q4	ESRPP has been deemed successful and was transferred to the Residential Retail program for 2024. The team is considering adding new appliances in 2024 to the 2022-2023 portfolio of refrigerators and clothes washers.
Streetlight Smart Nodes	Addition of technology to allow improved control of LED streetlights.	ComEd Internal	Scaled Deployment	Crosscutting/Strategic Priority	2024 Q2	All nodes were installed in 2023 and the project team is now implementing a dimming strategy and troubleshooting some communication issues with the technology.

Customer Research, Field Tests & Demonstrations

120V HPWH Field Demonstration	Testing the 120V HPWH in ComEd customer homes to understand installation experience, resident experience/satisfaction, and the equipment's performance through data monitoring.	Slipstream	Field Tests & Demonstrations	Residential	2024 Q4	All HPWHs were successfully installed by the end of 2023. The project team is developing an interim findings presentation for Q1 2024. Otherwise, the project team is continuing to monitor performance data from the units installed.
Residential Heat Pump Water Heaters (240V)	Testing the implementation of a "beachhead" strategy for heat pump water heater (HPWH) installations to prepare the market for broader adoption.	CLEAResult	Field Tests & Demonstrations	Residential	2023 Q4	The pilot completed with final deliverables submitted. This research will be used to develop a new Residential Retail offering in 2024 based on recommendations collected during the pilot.
Automated Carbon Reduction Reporting (ACRR)	The ACRR project builds on the "If This Then That" (IFTTT) Internet of Internet (IoT) program, which utilizes optimization applets to enable load shifting in response to real-time price signals and/or carbon signals.	WattTime, Calico	Field Tests & Demonstrations	Residential	2024 Q2	As part of the IFTTT evaluation, the team is investigating the customer satisfaction of those enrolled in carbon index and carbon quality app triggers to ensure they are finding value and use learnings to optimize program.
Commercial Automated System Optimization (ASO) Technology	Use of AI-based tools to optimize energy usage in commercial buildings through automated real-time management of energy-using systems.	Hank	Field Tests & Demonstrations	Commercial and Industrial	2024 Q3	The project team successfully integrated the new software to the existing building system controls. They onboarded the majority of floors and took control of zone heating and cooling as well as Outdoor Air. Connection to chilled water system made and discussions on optimization are ongoing.
Commercial Refrigeration Controls	Testing novel advanced controls for large refrigeration systems in real-world conditions.	Slipstream	Field Tests & Demonstrations	Commercial and Industrial	2024 Q4	Continued progress on data collection, data cleaning, and preliminary analysis at four sites. The project team provided an update on that preliminary analysis. A fifth customer site joined the project.
Communities of the Future Next Generation HVAC Demonstration	Testing energy savings and customer experience in real-world conditions, focused on customers situated within ComEd's Communities of the Future areas.	Slipstream	Field Tests & Demonstrations	Crosscutting/Strategic Priority	2024 Q4	The project team is moving into the data collection phase for post-installation for the first site, Quinn Chapel. A video about the project was developed by Slipstream and ComEd. Coordination is ongoing to recruit additional sites for 2024.
Cold Climate Variable Refrigerant Flow (VRF) HVAC	Test of VRF systems to quantify energy savings potential and comfort benefits in cold climates.	Slipstream	Field Tests & Demonstrations	Commercial and Industrial	2023 Q4	The project was completed and final report delivered. Presentation was given on the final results and recommendations on moving forward.
Energy Efficiency Electrification Savings and Bill Impacts Estimation	Analysis of and calculator creation for customer bill impacts related to electrification measures.	Center for Energy and Environment	Customer Research	Crosscutting/Strategic Priority	2023 Q4	The project team made updates to the bill impacts calculator, such as documenting applications to typical multifamily case studies and exploring the implications for different approaches to estimating natural gas rates.
HPWH Incentives Benchmarking	Market research to establish a better understanding of customer preferences, willingness to pay, and optimal program designs.	ICF	Customer Research	Residential	2023 Q4	Completed with customer surveys giving guidance on a possible offering for late in 2024 or early 2025.
"If This Then That" (IFTTT) Internet of Things	Provides customers with options for automating their participation in programs, such as Hourly Pricing and Peak Time Savings, to reduce energy and demand usage, as well as help customers react to carbon signals. The applets connect to select smart devices to enable automated control of these devices.	IFTTT, Calico	Field Tests & Demonstrations	Residential	2024 Q2	The project team completed an initial analysis to estimate the number of participants needed to complete a statistically robust impact evaluation. The team also conducted a customer survey to determine what experience and satisfaction benefits customers realize through the IFTTT program. Results from the initial analysis and customer survey will be used to recommend next steps for the IFTTT pilot.
Income Eligible Weatherization Bill Impacts - Phase 2	Creating tools to support weatherization participant outcomes.	Internal	Customer Research	Income Eligible	2024 Q1	The R&D team is working with the internal ComEd data analytics specialists to develop a set of tools to support the ongoing identification of weatherization program participant outcomes.
Industrial Energy Management Information Systems (EMIS)	Testing new program design approaches for implementing energy management information systems that help industrial customers optimize their energy use.	Leidos	Field Tests & Demonstrations	Commercial and Industrial	2024 Q1	Four projects completed improvements eligible for incentives in Q4 2023. This pilot will receive a CY2023 impact evaluation for each site.

Liquid Cooling in Data Centers	Characterization of the data centers market and assessment of the barriers to adoption for an advanced energy-saving technology.	ERI	Customer Research	Commercial and Industrial	2023 Q3	The project completed and a final presentation of the project results and recommended next steps was shared with internal stakeholders.
Pressure Independent Control Valves Retrofit Study	Testing energy savings and identifying a methodology and framework to accurately estimate savings for a novel commercial HVAC technology.	Slipstream	Field Tests & Demonstrations	Commercial and Industrial	2025 Q3	The PICV retrofit completed and post-install data collection began. Initial savings were lower than expected but difficult to quantify due to complex issues with chiller plant operation and chilled water system components.
Variable Speed Heat Pumps as AC Replacement	Assessment of the performance, energy savings and cost savings of variable speed heat pumps as replacements for AC units.	Center for Energy and Environment	Field Tests & Demonstrations	Residential	2023 Q4	Project analysis completed in 2023 and the final presentation was given in early January. Final report will wrap up by end of month.
Very High Efficiency (VHE) HVAC	Testing the VHE HVAC systems approach for HVAC retrofit/replacement installations to improve ventilation and indoor air quality while reducing building energy use.	Institute for Market Transformation	Field Tests & Demonstrations	Commercial and Industrial	2024 Q3	At the first site, monitoring continued and preliminary data analysis was developed. An operating manual was created and occupants were happy with comfort levels. At the second and third sites, the installation of equipment and M&V monitoring devices was completed. Data collection was started at site two. At the fourth site there were construction and equipment shipping delays but equipment installation continued and sections of the building were brought online. A fifth and final site is being planned for 2024.

Market Characterization and Lab Testing

Cold Climate Combination Heat Pump Study	Development of a novel residential heat pump system with integrated thermal storage.	Lawrence Berkeley National Lab, Oak Ridge National Lab, GTI Energy, Emanant Systems	Market Characterization, Field Tests & Demonstrations	Residential	2025 Q4	Project development is ongoing as the team is still in an early stage of research.
Commercial Food Service Electrification (eCFS)	Promotion of electrification opportunities within a high-potential commercial customer segment.	Frontier Energy	Market Characterization	Commercial and Industrial	2025 Q4	This project was paused after completing phase 1 to assess and prioritize across all commercial electrification program opportunities.
Heat Pump Rating Representativeness	Research partnership to improve standardized performance testing for heat pumps.	Northeast Energy Efficiency Partnerships	Lab Testing	Residential	2024 Q1	This nationally-involved effort is ongoing and will continue into 2024. Phase 2 lab testing is underway, but will not be complete until 2024. The project team began lab testing, which will be compared to Phase 1 field testing.
Heat Pump Rooftop Unit (RTU) Market Research	Market research to understand the current state of the market for heat pump RTUs, to develop program recommendations and to inform a potential field demonstration.	Center for Energy and Environment	Market Characterization	Commercial and Industrial	2023 Q4	Phase 1 (Market Characterization) completed in Q4 2023. The team is now revising the scope of work for future work with plans to move on to Phase 2 (Field Study) in early 2024.
Income Eligible Smart Homes Roadmap	Study to identify broadband technology solutions to provide smart home energy management to income eligible customers.	Slipstream	Market Characterization	Income Eligible	2025 Q4	The project team provided a first draft report to evaluate the energy savings potential of the IE HEMS measure.
Resilient Canopies in the Chicago Region	Study of the localized impact of afforestation to mitigate urban heat island effects in ComEd communities.	University of Illinois	Market Characterization	Residential	2024 Q2	Simulations of future climate have been completed; in Q1 2024 the project team will begin analysis of the effectiveness of afforestation for mitigating warming.

Appendix: Corrections

Corrections to ComEd's CY2023 Third Quarter Report

- On page 21, *table 4*, measures from the Food Bank Distribution program were double-counted under the *Other Income Eligible EE Programs* category, resulting in erroneously reported participation counts under the *Mapping of Assistance Needs and Targeting Delivery of Weatherization* stipulation IV (A-6b). This has been corrected and Q4 updates in this report now present the correct YTD participation counts in this table.
- On pages 22 and 23, the YTD totals for stipulation V (D-1b) and accompanying dataset in *table 5* presented Q3 values only (i.e. July to September). The totals in Q4 now correctly reflect YTD totals through Q4 (i.e. January through December).
- On page 24, *table 8*, the Tier 2 vendor metrics – 93 YTD vendors and \$42,182,252 YTD spend - were erroneously reported due to an incorrect categorization. This was revised and corrected and Q4 updates reflect the revised amounts.