ComEd. Energy Efficiency Program



CY2018 FOURTH QUARTER REPORT



Data presented in this document is based on preliminary results and is subject to revision and evaluation adjustments. ComEd Energy Efficiency is funded by ComEd customers in compliance with Illinois Public Act 95-0481.

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Portfolio Summary

1,886,075

Actual Net MWh YTD

1,855,202

CY2018 MWh Forecast

1,713,451

CY2018 MWh Filed Goal

\$352,988,359

Actual Spend YTD

\$351,334,190

CY2018 Spending Cap

PORTFOLIO

- Through Q4, the portfolio has achieved 102% of its CY2018 forecast of 1,855,202 MWh and 110% of its CY2018 filed goal of 1,713,451 MWh.
- The portfolio has surpassed the conversion limit for fuels other than electricity, defined as 10% of the Applicable Annual Incremental Goal, or 94,423 MWh. Of the 1,886,075 MWh achieved through Q4, 94,423 MWh savings were converted from approximately 3.2 million therm savings. Of the 94,423 MWh, 21,280 MWh were converted from approximately 726,272 therm savings achieved by income eligible programs including Single-Family Retrofits, Multi-Family Retrofits, and Public Housing Retrofits.
- Since its inception in 2008, the ComEd Energy Efficiency Program has saved ComEd customers over \$3.7 billion on their electric bills.

RESIDENTIAL PROGRAMS

- Through Q4, residential programs have achieved 100% of its combined CY2018 forecast of 670,080 MWh.
- Customers have received over 235,000 rebates, recycled over 53,000 appliances, and received over 36,000 assessments through Q4.
- ComEd has collected and responsibly recycled more than 418,000 refrigerators and freezers since ComEd began to
 offer this service to our customers in June 2008.

INCOME ELIGIBLE PROGRAMS

- Through Q4, income eligible programs have achieved 121% of their combined CY2018 forecast of 82,141 MWh.
- 21,280 MWh savings were converted from approximately 726,272 therm savings achieved by income eligible programs, including Public Housing Retrofits.
- Over 44,400 income eligible households have participated through Q4.

BUSINESS PROGRAMS

- Through Q4, business private sector programs have achieved 103% of their combined CY2018 forecast of 719,500; business public sector programs have achieved 92% of their combined CY2018 forecast of 138,128 MWh.
- Over 11,700 business private sector projects and 900 business public sector projects have been completed through Q4.

Residential Programs

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.

- ° 292,636 MWh savings achieved (102% of forecast)
- The program is reaching 1.7 million participants with a low opt-out rate and high customer satisfaction through customer inquiries and a high digital communication engagement rate.
- There continues to be a steady volume of approximately 200 customer inquiries per month. Each customer inquiry is responded to personally and promptly. A portion of customer inquiries also require technical support and coordination with our engineering group.
- In Q4, ComEd fielded research on High Usage Reports, continuing research previously completed in 2017, with the final report anticipated in January 2019.

Lighting Discounts

Overview: The Lighting Discounts Program provides instant in-store discounts to ComEd residential customers at participating retail stores on select ENERGY STAR® certified lighting: LEDs, LED trim kits, and LED integrated fixtures.

- 267,329 MWh savings achieved (101% of forecast) based on 11,251,649 units sold
- Over 11 million LEDs, LED trim kits, and LED integrated fixtures sold through Q4
- Field representatives have conducted over 250 in-store lighting demonstrations and trained more than 9,000 store associates, including appliance retailers.

Appliance Rebates

Overview: The Appliance Rebate Program provides rebates for qualifying ENERGY STAR® appliances sold through retail channels to ComEd residential customers. Eligible measures include the following select ENERGY STAR® certified appliances and products: air purifier, clothes washer, electric clothes dryer, refrigerator, freezer, dehumidifier, variable speed pool pump, room air conditioner, ventilation fan, water dispenser, smart thermostat, and advanced power strip.

- 34,333 MWh savings achieved (86% of forecast) based on 219,784 appliance rebates issued
- The program has seen great success with the Instant Coupon tool, with over 9,000 smart thermostats purchased through this channel. The reservation to redemption rate is over 50%.
- Marketing tactics including email, social media, and direct mail campaigns resulted in strong Black Friday and Cyber Monday activity for smart thermostats.

Fridge and Freezer Recycling

Overview: The Fridge and Freezer Recycling Program provides ComEd customers free pickup and recycling of older, working refrigerators and freezers from residential customer homes. In addition to free pickup, customers receive a \$50 dollar incentive for fridge and freezer units and \$10 for AC units when collected in conjunction. Customers can enroll via phone, following the prompts on the ComEd® Energy Efficiency Program hotline at 855-433-2700, or through the ComEd website.

- 25,360 MWh savings achieved (105% of forecast) based on 53,604 units
- 2018 was the best year on program record with the most units collected in a year so far. Since inception, the program has recycled 418,000 units.
- ° The program yielded a 97% overall customer satisfaction during 2018.

Residential Programs

Home Energy Assessment

Overview: Offered in partnership with Nicor Gas, North Shore Gas, and Peoples Gas, the Home Energy Assessment is a free walkthrough assessment with an energy advisor that determines the ways energy is used in the home. Customers receive personalized energy-efficiency recommendations, and the following energy-saving products are installed for free: ENERGY STAR® certified LEDs, programmable thermostats, WaterSense® certified showerheads, faucet aerators, and hot water pipe insulation. Advanced Power Strips are provided and left behind for the customer to install. Ecobee4 and Ecobee3 Lite smart thermostats are also available for purchase at a discount and include free installation.

- 23,551 MWh savings achieved (96% of forecast) based on 18,646 assessments
- The program is receiving positive responses from customers after their appointments with a customer satisfaction score of 4.8 out of 5.
- Savings per home are higher than expected with significant opportunities being found for LED installations.

Multi-Family Energy Savings

Overview: In partnership with Nicor Gas, North Shore Gas, and Peoples Gas, the Multi-Family Energy Savings Program provides multi-family tenants and property owners and managers with a variety of ways to save electricity and natural gas. The program will serve as a "one stop shop" to generate energy savings throughout the property. After an initial assessment, immediate energy savings are generated by the direct installation of energy-saving products in both tenant and common area spaces. The program further provides Trade Ally (TA) installs of common area lighting measures.

- 11,195 MWh savings achieved (92% of forecast)
- Completed 959 assessments; completed direct install work in 16,515 tenant units and 486 common area spaces; completed 194 service provider projects.
- The program has experienced greater demand, especially in the joint Nicor Gas service territory, compared to the initial forecast for the year. Greater

market saturation was anticipated, but viable opportunities continue to be discovered. This has resulted in a commitment by all the utilities to increase program funding to support the increased level of demand for direct install work and TA projects.

Heating & Cooling Rebates

Overview: The Heating & Cooling Rebates Program promotes investment in longterm savings by providing rebates for the purchase and installation of high efficiency central air conditioners, air source heat pumps, ductless mini-split heat pumps, ECM furnace blower motors, heat pump water heaters, smart thermostats, and ground source heat pumps.

- 10,029 MWh savings achieved (114% of forecast) based on 15,780 rebates
- Over 14,700 customers have received rebates for energy efficient heating and cooling equipment, including contractor-installed smart thermostats, through Q4.
- Heating & Cooling contractors were engaged for feedback and sales training opportunities at the Fall Residential Trade Ally Forum to increase program engagement and participation.
- The program offered a \$150 bonus for central air conditioners from August through the end of 2018.
- ° The Service Provider (FKA Trade Ally) network has increased to over 500.

Weatherization Rebates

Overview: The Weatherization Rebates Program promotes investment in longterm savings by providing rebates for the purchase and installation of weatherization measures including air sealing, duct sealing, and attic and wall insulation. The program is offered jointly with Nicor Gas, North Shore Gas and Peoples Gas.

 656 MWh savings achieved (98% of forecast) based on 3,607 projects

Residential Programs

- Contractors were engaged for feedback and sales training opportunities at the Fall Residential Trade Ally Forum to increase program engagement and participation.
- The program made up ground for inactivity at the start of CY2018, including tapping existing contractors to increase focus and efforts on work in the ComEd service territory.

Elementary Energy Education (Super Savers)

Overview: ComEd, Nicor Gas, North Shore Gas, and Peoples Gas have partnered to offer schools the opportunity to teach 5th grade students and their families how to use less energy at home. Students learn about valuable ways to save energy and money through in-class education. They also receive free take-home kits containing ENERGY STAR®-certified LEDs, faucet aerators, and other energy-saving products to install at home with their families.

- 5,379 MWh savings achieved (70% of forecast) based on 52,229 kits
- The program continues to successfully collaborate with partnering gas utilities on co-branded materials, a web portal to support teacher enrollment and student resources, and vendor and program management.

Residential New Construction

Overview: In partnership with Nicor Gas, the Residential New Construction Program increases awareness and understanding among Home Energy Rating System (HERS) rating companies and home builders of the benefits of energyefficient building practices with a focus on capturing energy efficiency opportunities available during the design and construction of new single-family homes. Incentives are provided to HERS-certified consultants that certify homes and builders who construct homes that are at least 20 percent more energyefficient than what currently is required by the State of Illinois Energy Code. Incentives are also provided to RESNET/HERS-certified consultants for submitting homes to the program.

306 MWh savings achieved (92% of forecast) based on 695 homes

- The program made temporary updates to its incentive structure to boost savings and participation in Q3. The program added a new tier which allows for homes that complete at 15% better than code to receive an incentive. Builder incentive levels were increased for all existing tiers. Similarly, rater incentives were increased. This promotion lasted through Q4.
- The program fell below goal. This is due to a recent update to the American National Standards Institute (ANSI) standard which negatively impacted savings per home.
- In efforts to increase program awareness and participation, the program team is supplementing continuing outreach efforts to HERS rating companies and builders, with new marketing avenues such as sponsorship of the GreenBuilt Home Tour and a builder focused training scheduled.
- As housing market preferences shift to smaller, cost-conscious homes, the program will continue to work with builders to help identify new ways to increase performance in new models.

Middle School Kits - National Theatre for Children (NTC)

Overview: The Middle School Kits Program leverages a live professional theater experience, performed at schools, to increase awareness of energy efficiency and initiate the ordering of kits. Kits are offered based on watering heating fuel type: natural gas and electric.

- 1,341 MWh savings achieved (120% of forecast) based on 7,568 kits
- The program feedback (general) is families feel the program creates a positive engagement with ComEd.
- It was not one of the 11 recommended programs selected by the Independent Bid Evaluator as a result of the Third Party RFP for 2019-2021. The program ended as of December 31, 2018

Income Eligible Programs

Income Eligible Lighting Discounts

Overview: The Income Eligible Lighting Discounts Program provides instant instore discounts to ComEd residential customers at participating retail stores on select ENERGY STAR® certified lighting: LEDs, LED trim kits, and LED integrated fixtures. Instant Discounts will minimize the burden on the target market by lowering barriers to participation.

- 46,340 MWh savings achieved (151% of forecast) based on 1,141,533 units sold
- New small independent retailers participating in this program represented nearly 45% of the total incentive spend for the year. These retailers include small-box retailers, dollar/discount format stores, hardware stores, and small/mid-sized grocers.

Single-Family Retrofits

Overview: The Single-Family Retrofits Program is implemented by Resource Innovations and the Illinois Community Action Agencies, as well as Franklin Energy and the Chicago Bungalow Association (CBA). Implementers complete comprehensive home energy audits and work with contractors to make weatherization and additional upgrades at no cost to the customer. On the Franklin/CBA side, CBA identifies and determines qualified vintage homeowners located in the City of Chicago and coordinates Home Assessments to identify areas prone to air leaks or drafts and works with contractors to make weatherization updates at no cost to the customer. This program covers costs associated with completing Air Sealing, Attic and wall insulation, duct sealing, direct install measures (LEDs, water saving measures, programmable thermostats) as well as Health & Safety improvements. This program is delivered in partnership with Peoples Gas. On the Resource Innovation/CAA side, ComEd, in coordination with the northern gas utilities is partially and, in some cases, fully funding whole home energy upgrades, in coordination with the State and its Illinois Home Weatherization Assistance Program. Measures may include all of those in the Franklin/CBA side, as well as mechanicals.

 3,074 MWh savings achieved (64% of forecast) based on 1,931 homes

- An additional 7,860 MWh savings were converted from approximately 268,245 therm savings achieved through Q4.
- Through Q4, a total of 1,931 income-eligible customers have had projects completed in their home at no out of pocket expense.
- Through Q4, 81 Nest E smart thermostats have been installed in customer homes.
- ° Chicago Bungalow Association:
 - With a revised goal to complete 1,250 in the City of Chicago CY2018 with CBA, ComEd and Peoples Gas jointly funded 1,000 projects in the City of Chicago, while ComEd funded 250 projects on its own.
 - Launched late in Q2 of CY2018, the program is piloting the same program in Oak Forest, Midlothian, Lansing and Posen with CVHA with a goal of completing 250 homes in CY2018 to assess further expansion in future years. Through the end of CY2018, 311 projects were completed (124% of goal).
 - Since expanding the program to Oak Forest, Midlothian, Lansing and Posen, total project cost has been lower than expected and compared to projects completed in the City of Chicago. However, the DI opportunity appears to be on par with what was expected. The lower project costs allowed the program to complete more projects in 2018.
 - The program is seeing less opportunity for direct install measures in homes where projects are completed, while weatherization improvements continue to drive the majority of energy savings.
- ° Illinois Home Weatherization Assistance Program:
 - 350 comprehensive retrofit projects and an additional 18 Emergency Furnace replacements, for a total of 368 projects
 - 280 Braided with IHWAP projects
 - 70 Utility-Only projects
 - 18 Emergency Furnace projects
 - Efforts during Q4 were focused on (1) close coordination with Community Action Agencies (CAAs) throughout ComEd service territory to identify projects and maximize their year-end production capacity to complete joint with IHWAP (braided) and utility-only funded single family units, (2) execute quality control processes, completing a field sample of 16 units, to ensure high quality and uniform implementation standards

Income Eligible Programs

through the pillars of Safety, Contractor Management, and Data Quality, and (3) assisting three CAAs to identify and develop significant single family project opportunities, including partnership with a nonprofit organization to serve Group Homes in Will County, a mobile home park in Kane County, and a high density townhome community in Lake County.

Multi-Family Retrofits

Overview: The Multi-Family Energy Upgrade Program is implemented by Elevate Energy, and Resource Innovations and the Illinois Community Action Agencies. The program is a one-stop shop for multi-family building owners and managers whose buildings serve income-eligible residents, including energy assessments, direct installation of energy-saving devices, and replacement of inefficient equipment/systems at no or very limited cost. The CAA work is jointly funded with the gas utilities, and Elevate is joint with Peoples/NorthShore.

- 4,361 MWh savings achieved (97% of forecast)
- An additional 13,359 MWh savings were converted from approximately 455,926 therm savings achieved through Q4.
- ° Elevate
 - The program completed direct install work in 5,119 tenant units and 92 common area spaces, 167 trade ally projects, 154 weatherization/prescriptive projects, and 75 capital improvement projects.
- ° IHWAP
 - Lake County: North Lake Farms is a 222-unit multi-family and entirely income qualified development in Gurnee. Retrofit measures on 78 units were completed in 2018 including: air sealing, attic insulation, bathroom exhaust fans, central air conditioners, domestic hot water pipe insulation, low flow aerators, refrigerators, LEDs, as well as health and safety measures. This work was accomplished despite a three-week delay in production start due to additional review time needed by the property management company. The remaining measures to be completed in 2019, on these and the remaining units, include smart thermostats, furnaces, and hot water heaters. (78 units received measure installs in

2018, with additional measures planned for 2019). An all-Electric 12-Plex in Antioch was also completed in Q4. Retrofit measures included air sealing, LEDs, room air conditioners, low flow aerators, refrigerators, specialized programmable thermostats, as well as health and safety measures. (12 Units completed)

 Kendall-Grundy: Saratoga Towers, a 95-unit building in Morris, was mostly completed in 2018. Retrofit measures included: packaged terminal air conditioners (PTACs), mini-split heat pumps, refrigerators, air sealing, as well as health and safety measures. Remaining measures for 2019 include a roof replacement and rooftop HVAC units. (95 units completed, with additional property-level measures planned for 2019).

Affordable Housing New Construction

Overview: The Affordable Housing New Construction Program offers technical support and incentives for whole-building efficiency for new construction and rehab projects that increase the energy efficiency of income eligible households.

- 2,055 MWh savings achieved (211% of forecast) based on 9 projects
- A total of 1,373,972 income-qualified square feet has been incentivized through Q4.
- The development of an updated allocation agreement is in process. The allocation will differ for buildings heated with gas vs. all-electric buildings vs. hybrid system projects, which will be incorporated into the updated agreement.
- Planning for sponsorship and participation at two conferences is underway.
 Program staff will present on the program at both conferences.
- There was feedback that the standard requirements were too aggressive. A version 1.1 of the ComEd Multifamily Standard was drafted for CY2019. This is anticipated to increase the customer success rate in adhering to the Standard requirement and is not anticipated to have a significant impact on savings.
- Additionally, the program is looking into creating a high performance track, for projects being certified under verifiable performance standards, such as

Income Eligible Programs

Passive House Institute US. This will help increase program cost effectiveness.

Food Banks Distribution

Overview: The Food Banks Distribution Program provides ENERGY STAR® LEDs and advanced power strips to food banks affiliated with Feeding America. The food banks then use their network of local food pantries to distribute the bulbs to utility customers in need, who may elect to receive a free 4-bulb pack and one advanced power strip.

- 35,041 savings achieved (101% of forecast) based on 1,711,320 products
- The program has distributed 1,700,326 9W LED bulbs and 11,064 advanced power strips through Q4.
- ^o The program collaborated with the LED manufacturer, to create a tear off sheet directly affixed to the LED 4-Packs. This displays an LED educational tear off in English and Spanish, and an additional 25,000 4-packs display a tear off directing them to participate in an optional online survey to support evaluation research with the chance to win a \$250 gift card in exchange for their feedback.
- Warm reception of ComEd outreach and the new branded packaging was on full display in the Q4. Both food banks and pantries alike were very appreciative of the new marketing tear off based on the ease of customer access and how simple it is to distribute.
- ^o This new marketing initiative offers the program an increased opportunity to ensure Food Pantry patrons receive information regarding LEDs and energy savings. In addition, ComEd can directly target their willing income eligible participants by utilizing the tear offs to obtain direct customer data, and program satisfaction results, currently not captured in this program
- In December, program team members volunteered at the Salvation Army in the Chicago Lawn neighborhood to help distribute LEDs and holiday food packages to nearly 100 community members.

Income Eligible Kits

Overview: The Income Eligible Kits Program delivers energy efficiency kits to single family income eligible homes. The kits include (4) 9-watt LED bulbs, (2) 15-watt LED bulbs, (1) tier 1 advanced power strip, and general guidelines for energy savings. A portion of the kits will also contain (1) low-flow kitchen aerator, (1) low-flow bathroom aerator, and (1) low-flow showerhead.

- ° 8,482 savings achieved (127% of forecast) based on 34,899 kits
- The program has partnered with Community-Based Organizations and various organizations hosting events to provide participants options in how to obtain a kit.
- The program has received great feedback and is making an impact on the income eligible community.

Standard

Overview: The Standard Program provides monetary incentives to customers on a "Standard" per-unit or per-fixture basis. Offered measures include LEDs, T-8 and T-5 lighting and controls, building automation systems, air- and water-cooled chillers and variable speed drives, as well as equipment with niche or targeted market applications, such as laboratory, farm and commercial food service equipment, and grocery refrigeration measures.

- Private: 192,348 MWh savings achieved (103% of forecast) based on 2,996 projects
- Public: 19,234 MWh savings achieved (81% of forecast) based on 529 projects
- The program extended the HVAC Variable Speed Drive (VSD) Bonus from September 30th to December 15th to drive savings.
- A 15% "Early Bird" bonus was enacted on September 4th to encourage faster submissions of final applications, as well as generate new applications. The deadline for the bonus was November 16th.
- November and December were both the largest months of the year and brought a strong close to the program year. In the last two months alone, the program processed \$8 million worth of incentive applications.

Custom

Overview: The Custom Program identifies and implements site-specific and unique cost-effective energy efficiency opportunities that are not available via the Standard element. Customized incentives based on calculated savings for specific customer projects are offered. Measures include process efficiency improvements, system upgrades, and those measures not covered by the Standard program.

- Private: 8,801 MWh savings achieved (52% of forecast) based on 110 projects
- Public: 4,473 MWh savings achieved (47% of forecast) based on 12 projects
- ° The program completed 41 private and 6 public projects in Q4.

- The "Early Bird" bonus for custom final applications received before November 16th precluded waste water applications.
- Waste water treatment projects currently make up the majority of the program's public sector pipeline.
- ^o Custom under-performed primarily due to outreach activity yielding fewer than expected projects. A refocused effort towards the end of 2018 yielded more identified projects, however due to the nature of custom projects, most of what was identified in 2018 ended up becoming pipeline for 2019.

Data Centers

Overview: The Data Center Program follows the basic tenets of the Custom Program such that all energy-saving measures that can be measured and verified via industry accepted measurement and verification techniques are eligible for incentives. Incentives are based on actual energy saved from pre-project conditions to post-project conditions. The targeted segment for this program includes data centers as a business, data centers that support businesses and subsequent systems that support those data centers.

- Private: 20,868 MWh savings achieved (78% of forecast) based on 31 projects
- Public: 39 MWh savings achieved (5% of forecast) based on 1 project
- The program completed 19 private and 1 public project in Q4.
- Lower than expected Private performance was mainly impacted by customer tenant loading until 2019. Tenants needed to delay server loading, which significantly impacted our forecast. Public performance significantly underperformed due to the inability to secure projects in the public sector. Refocused outreach effort in 2019 should yield improved results.
- In Q4, the program began moving away from new construction data center projects and moved toward medium and smaller sized retrofit projects for improved program cost effectiveness.
- An action plan was initiated to identify additional projects that could be completed in CY2018, including:
 - Outreach to existing customers to identify additional savings available for their facility

- Developing simple engineering tools to help non-technical customers make informed decisions about their energy usage
- Working with customers to complete low-cost RCx measures identified in Technical Assistance Services reports

Combined Heat & Power (CHP)

Overview: The Combined Heat and Power (CHP) Program supports the investigation of CHP opportunities for conventional and waste heat to power (WHP) systems, existing systems that have been dormant for at least three years, and generation equipment that currently does not have waste heat recovery capabilities. The program provides an economic assessment of site specific CHP opportunities and promotes implementation of CHP projects by customers.

- ° The program succeeded in approving five CHP Feasibility Studies by Q4.
- The program gained its first public sector customer (WWTP) based on feedback during an FA review meeting in December 2018.
- ° The program focused on stronger outreach and communication.
- The October 30th CHP Workshop was successful in promoting the program as members of ComEd's Interconnection and Rates teams were available for questions from both the CHP EESP network and a few potential customers.
- Due to a long sales and development cycle, CY2018 saw a lot of activity in building a pipeline of projects for CY2019 and not actual installations.
- Joined the U.S. Department of Energy Packaged CHP Accelerator pilot, a national best-in-class effort, to introduce packaged CHP to customers as a way to decrease implementation costs.

Small Business Energy Savings (SBES) & Small Facilities

Overview: The SBES Program and Public Small Facilities Program implement energy efficiency projects for customers under 100 kW peak demand. The program provides comprehensive energy savings solutions for customers including advanced lighting, refrigeration, HVAC, and compressed air.

 Private: 193,517 MWh savings achieved (103% of forecast) based on 7,710 projects

- Public: 7,725 MWh savings achieved (123% of forecast) based on 218 projects
- The program collaborated with the Non-Profit, Multi-Family, and Public Small Facilities teams to encourage cross promotion of various ComEd offerings to help fully service customer needs.
- The program commenced the second of two campaigns to promote the offering within underrepresented, or lower participating, areas.
- The program continued to release new versions of the Mobile Assessment Tool to improve the experience for both TAs and customers.
- Multiple waves of Trade Ally Mentorship were completed including the Track
 1 initiative which focuses on partnering new TAs with long-standing TAs as a path for growth and success.
- Two new lighting fixtures were added the Small Facilities measure list in June to support customer and TA requests.
- ° Program recognized nationaly as Exemplary Program by ACEEE.

Business Instant Discounts

Overview: The Instant Discounts Program provides instant discounts on qualifying commercial screw-in, pin-base, HID, and exit signs. Linear fluorescent lamps can be replaced with reduced wattage T8 lamps or Tubular LED (TLED) lamps. All screw-in, pin-base and exit sign replacements are LED.

- Private: 190,956 MWh savings achieved (107% of forecast) based on 2,334,861 products sold
- Public: 15,535 MWh savings achieved (103% of forecast) based on 251,874 products sold
- Beginning in July, a bonus of \$1.00 per lamp was added to omni-directional lamp incentives to spur sales of this high impact, low cost per kWh measure.
- The bonuses provided the market stimulation needed to achieve year-end goals, but at a cost in excess of the program budget.
- The program participated in a "Lighting Spectacular" billboard downtown in November, promoting lighting discounts on all LED lamps for home or business.
- A Google ad words campaign significantly increased web traffic to the program's web page.

AirCare Plus

Overview: The AirCare Plus Program is an enhanced HVAC maintenance service program designed to optimize the performance of all major energy-using components of packaged HVAC Roof Top Units (RTUs) and split systems. The program offers a variety of energy saving hardware retrofits, replacements and mechanical adjustments for 3 to 60-ton commercial units.

- Private: 17,737 MWh savings achieved (104% of forecast) based on 592 unique projects
- Public: 3,014 MWh savings achieved (84% of forecast) based on 70 unique projects
- Over 5,400 measures have been installed through the program for more than 670 customers through Q4.
- The program has helped several HVAC contractors enter the energy efficiency space with an offering aligned with their businesses and skill set.
- Q4 involved planning for the 2019 integration of AirCare Plus measures into other portfolio offerings to streamline customer engagement and drive more project comprehensiveness.

C&I New Construction

Overview: The New Construction Program provides technical assistance, support for the Leadership in Energy and Environmental Design (LEED) rating system, and incentives for efficient designs and measure implementation 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.

- Private: 21,134 MWh savings achieved (103% of forecast) based on 71 projects
- Public: 239 MWh savings achieved (180% of forecast) based on 4 projects
- In Q4, the program accepted 29 new applications for multiple program years, of which 4 were Expedited Assistance and 1 was Accelerate Performance.

- The program held 7 in-person meetings with customers to discuss the program and their specific projects. 12 leads were referred to other programs within the portfolio for projects that were not eligible for New Construction.
- ^o The program ended CY2018 below its savings goal for non FEJA-eligible public sector buildings. The program is seeing a pipeline shortfall in 2019 as well, forecast to be 50% below the plan goal.

Industrial Systems

Overview: The Industrial Systems offering is a study-based program for compressed air, process cooling, industrial refrigeration and wastewater treatment plant. The target customer is over 500 kW but under 10 MW. Because this is a study-based program, there are no predefined measures. Measures are a mix of no- to low-cost system optimization as well as capital improvements like custom measures.

- Private: 18,542 MWh savings achieved (72% of forecast) based on 109 projects
- ° Public: 0 MWh savings achieved (0% of forecast)
- There was a focused effort in Q4 to closeout projects with customers that resulted in 69 closed projects, 63% of the total closed projects for the year.
- The program launched a new offering for Fix It Now compressed air to allow service providers to survey and fix compressed air leaks at the same time, with a total of 48 completed projects as of Q4. This was a new approach after listening to service providers on ways to improve the offering.
- The program utilizes energy advisors to assist customers with implementing projects that were identified in facility assessments.
- Private sector fell below performance due to start-up delays with the new IC. Once program started, there were some projects that did not yield the initial forecasted energy savings post M&V. Also, Fix It Now yielded the anticipated number of projects, however project size was smaller than estimated.
- Public sector goal was 280 MWh, which was not achieved primarily due to lack of projects. One study was performed at a wastewater treatment plant, however the study was completed in August with the customer pursuing approval to implement. We have found that study-based public sector

projects take longer than private sector primarily due to the approval process.

Retro-Commissioning (RCx)

Overview: The RCx Optimization Program provides detailed engineering analysis of building systems designed to identify energy-saving operational improvements with a bundled simple payback of 18 months or less. Incentives are provided to customers who commit to implementing agreed-upon energy-saving equipment scheduling, optimization of economizer operations, and adjustment of heating, ventilation, and air conditioning (HVAC) setpoints.

- Private: 30,153 MWh savings achieved (109% of forecast) based on 132 projects
- Public: 7,051 MWh savings achieved (153% of forecast) based on 44 projects
- ° Program recognized nationally as Exemplary Program by ACEEE.
- Program incentives, service provider fees and performance-based kWh incentives were increased slightly in CY2018 to drive participation. This was the first increase in several years.
- The MBCx incentive structure changed to pay incentive to service providers instead of customers, who will now receive the study for free, similar to RCx.
- An MBCx project at The Franklin was selected for national recognition by the Department of Energy's Smart Energy Analytics Campaign, achieving over 4,700 MWh in savings. Sieben Energy Associates was selected for recognition by the same campaign for their accomplishments as an MBCx service provider.
- ^o The RCx Building Tune-Up offer has been well-received by the public sectorin addition to the 2018 projects, over 100 applications have been received for 2019 projects. Customers with multiple locations (school districts, police departments, etc.) have been very active.

Strategic Energy Management (SEM)

Overview: Strategic Energy Management provides tools, coaching and technical resources to support your 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 will help implement organizational structures, behavior changes, and systematic practices that can lead to reducing energy costs by up to 15% for both electricity and natural gas.

- Private: 13,443 MWh savings achieved (134% of forecast) based on 20 customers
- ^o Public: 0 MWh savings achieved (0% of forecast)
- The change in culture to incorporate energy saving practices may take more than a year but will produce a significant impact over time. Several new cohorts will be over a two-year period to encourage deeper savings at customer sites.
- Both the Practitioner Cohort and Cohort 3 (Industrial Customers) were closed out. The Practitioner Cohort participants were able to take the ideas from the initial cohort participation to the next level to achieve significant savings for the year.
- The program is in the final stage of establishing a waste water treatment plant cohort that will deliver potential savings of 6,859 MWh over a two-year period and an industrial refrigeration cohort that will deliver potential savings of 5,685 MWh over a two-year period.
- A K-12 school district cohort was added that will deliver potential savings of 2,700 MWh over a one-year period and a commercial real estate cohort that will deliver potential savings of 2,700 MWh over a one-year period.
- ^o The new cohorts for waste water treatment plants and K-12 school districts will uniquely target these public sector customers to engage and deliver significant energy savings. These cohorts were originally forecasted to start in 2018, however contract issues delayed start until 2019 resulting in underperformance.
- In addition, there will be a continuation of the practitioner cohort (alumni group) that all previous cohort members will be eligible to participate in.
- The program will continue to look for ways to increase the results in year one with milestone incentives and increasing the overall incentive rate. Also, the program will offer an energy advisor that can assist the customer with implementation of more capital-intensive measures.

• The addition of new cohorts and approaches is being pursued to drive bestin-class performance compared to national peers.

LED Street Lighting

Overview: The program is to replace existing ComEd-owned mercury vapor (MV) or high pressure sodium (HPS) fixtures with LED street lights. These street lights are installed and maintained by ComEd and the municipality pays a rental charge for the fixture as well as an energy charge. LED street lights provide energy efficient lighting which reduces operating costs and increases the life of street lighting.

- Private (ComEd Owned): 18,277 MWh savings achieved (122% of forecast)
- Public (Municipality Owned): 67,779 MWh savings achieved (98% of forecast)
- ° Installations of 23,963 ComEd owned fixtures were completed as of Q4.
- For municipality owned fixtures, there have been more than 198 projects paid for applications serving more than 44 municipalities through Q4.
- ° Program recognized nationally as Exemplary Program by ACEEE.

Operational Savings

Overview: The Operational Savings Program identifies no-cost/low-cost opportunities that do not qualify for incentives. These opportunities are identified by engineers during various types of ComEd Energy Efficiency Program studies and Facility Assessments. Examples of such opportunities include shutting off idle equipment, optimizing the efficiency of existing systems and changes in the operating habits of occupants.

- Private: 3,459 MWh savings achieved (262% of forecast) based on 234 implemented measures
- Public: 361 MWh savings achieved (107% of forecast) based on 36 implemented measures
- A record number of Facility Assessments (FAs), 1,147 (779 in the private sector and 368 in the public sector) have been completed through Q4. This is greater than the previous annual peak of 663 FAs.

- A total of 1,992 operational measure opportunities (1,318 in the private sector and 674 in the public sector) have been identified in FAs through Q4.
- The program has increased supporting personnel (Outreach Service Professionals and Engineers) as well as a greater focus on marketing FAs, resulting in an increase in both the kWh pipeline and activities focused on program participation.

Rural Small Business Kits

Overview: The Rural Small Business Kits Program targets harder to reach electric energy savings in office, restaurant, or other general facilities located in ComEd's rural counties. The program achieves savings through a kit of self-install energy efficiency measures delivered directly to customer facilities. A customer survey is used to determine installation rates for each measure.

- 2,384 MWh savings achieved (101% of forecast) based on 4,012 kits
- The program did not begin production until the final week of Q1; however, the program rebounded to reach goal before year-end, fulfilling 100% of the kits goal in early November 2018.
- Restaurants continue to be a difficult market to reach due to the unique hours of operation and the narrow window to contact these customers.

Power TakeOff Energy Advisor

Overview: Using analysis of AMI data, Power Takeoff identifies customers that have significant potential for operational savings. When such a customer is identified, Power Takeoff reaches out directly to engage the customer and provides recommendations to help them operate their facility more efficiently. The customer documents the changes to operations that are made, and Power Takeoff measures and verifies savings using the same AMI data. Since the change in usage over time needs to be adequately demonstrated, verification takes three to six months to complete.

- 8,138 MWh savings achieved (319% of forecast) based on 342 actions
- ° The program has 238 participants through Q4.

- Support from the ComEd Large Customer Services team for national accounts was very valuable in providing introductions to the appropriate customer personnel for Power Takeoff to work with. The program is also coordinating with outreach teams for commercial real estate and health care segments.
- This offering will conclude as a stand-alone in 2018 and will reside under Retro-Commissioning for 2019.

Business Energy Analyzer (BEA)

Overview: Business Energy Analyzer provides business customers with tools to visualize their energy usage over time, pinpointing high use periods and suggesting potential strategies to reduce energy costs. Customers receive personalized energy-efficiency solutions based on their unique energy use and the ability to compare usage patterns with similar businesses.

- The BEA is being maintained until the new tool within My Account, part of the Business Intelligence and Data Analytics (BIDA) initiative, can demonstrate comparable performance.
- ^o While the new tool is similar in function to BEA, a parallel evaluation process is being developed, in which some BEA users will be transitioned to the new tool and others will remain on BEA. Once it has been demonstrated that the new tool successfully generates savings on the same level as BEA, the BEA will be phased out.
- In Q4, marketing of the BEA, such articles in customer-facing newsletters, increased, resulting in an increase in the number of users.

Public Housing Retrofits

Overview: The Public Housing Retrofits Program provides energy efficiency retrofits in Public Housing Authority (PHA) facilities in the ComEd service territory. The program offers energy assessments and incentives to upgrade most inefficient equipment in buildings owned and managed by a PHA, including residential units, and common areas at no cost. For energy efficiency projects requiring funding beyond program incentives, technical assistance will be offered to support implementation and identify financing options.

- ° 2,202 MWh savings achieved (81% of forecast)
- An additional 62 MWh savings were converted from approximately 2,101 therm savings achieved through Q4.
- Direct install work has been completed 2,497 tenant units and 29 common area spaces, 29, 26 capital, and 35 prescriptive TA projects have been completed through Q4.
- The program received very positive feedback from housing authorities. Chicago Housing Authority's appreciation for the Altgeld project completion and the joint utility effort at Blackhawk to replace 189 furnaces and ECM motors were significant program successes.

Voltage Optimization & Market Transformation Programs

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.

- ° 103,491 MWh savings (100% of forecast)
- ° 40 substations are online and actively controlling voltage.
- Substations have taken slightly longer to come on line than was originally anticipated. This is not unexpected for a new control system, and those lessons learned have been applied as new substations are brought on line.

Building Operator Certification (BOC)

Overview: This training and certification program for large commercial building managers is operated by the MEEA Team. Energy savings are attributed to both increased awareness of energy efficiency opportunities from the training and from participation in utility programs.

- The CY2018 BOC Program is now operating as a statewide program with funding from ComEd, Ameren, Nicor and Peoples/North Shore Gas. There were four training sessions that took place in 2018 – in Chicago, Peoria, Joliet, and Bloomington. More information on training options and schedules is available at <u>http://www.boccentral.org/training/illinois</u>.
- ° 30 individuals were trained in 2018
- ° 175 scholarships were given out to Illinois graduates for credential renewal
- ° Over 70 graduates attended 4 continuing education webinars
- The BOC team attended outreach events throughout northern Illinois, building a strong pipeline of new trainees for 2019
- BOC will hold a minimum of 5 trainings in 2019, with more offerings likely being added as demand grows, and will be targeting the following areas:
 - o Chicago
 - o Lake County

- o Springfield or an area further south
- o Algonquin

Illinois Home Performance (IHP)

Overview: The Illinois Home Performance with ENERGY STAR® Program consists of processing ENERGY STAR® certificates for homeowners, training realtors and appraisers, and conducting a building science training series.

- The CY2018 IHP Program is now operating in Northern Illinois with funding from ComEd, Nicor Gas, and Peoples/North Shore Gas.
- Through the IHP's Building Science Training Series (BSTS), 129 students were trained through 13 separate courses all focusing on topics relevant to the Home Performance industry. More courses are scheduled for 2019. More information on upcoming courses can be found at http://www.illinoishomeperformance.org/training.
- Eight BPI rebates were issued to area Illinois contractors who successfully completed training and testing that resulted in BPI Building Analyst and/or Envelope certifications.
- A total of 45 real estate and appraisal professionals were trained on energy efficiency through three courses. Each course was 2-days and for realtors, successful completion resulted in a Green Designation recognized by the National Association of Realtors (NAR). Appraisers who successfully completed both days of the course were listed on the Appraisal Institute's (AI) Green Registry.
- ° The IHP program attended 15 total outreach events in 2018.
- 982 total Illinois Home Performance with ENERGY STAR certificates were sent to ComEd customers to recognize their qualifying projects. These certificates are compatible with MRED, the state of Illinois' largest MLS.

Market Transformation Summit

Overview: On September 12-13, 2018, ComEd sponsored a Market Transformation Summit meeting that brought together many of the leading Market Transformation thinkers in the industry to discuss the key elements of a best-in-class program. The meeting was held at the Catalyst Ranch facility in

Voltage Optimization & Market Transformation Programs

downtown Chicago. Attendees included utilities, national energy efficiency not-forprofits, evaluators and consultants.

- The meeting began with brief five-minute presentations on the "must-have" recommendations for Market Transformation Programs and was followed by break-out sessions to discuss and add detail to the recommendations.
- Attendees participated in a resource allocation exercise to determine group priorities for program elements before finishing up with a final discussion of the most important take-aways.
- ComEd not only received invaluable program guidance, but also received excellent feedback on the value of the Summit from attendees

Emerging Technology

Mission: Assess, introduce, and accelerate the adoption of emerging cost-effective energy efficient technologies and services through demonstration and pilot projects in the ComEd service territory that have the potential to offer sustainable kWh and kW savings

Smart Meter Connected Devices Service (SMCD)

Overview: Customers are able to purchase smart devices directly from manufacturers and have their smart device connected or joined to their smart meter to receive real-time energy data. Primary customer benefits include increased awareness of electric energy consumption, potentially reduced electric energy use due to behavioral changes.

- ° Service Launch: December 2014
- ° Target Customer: ComEd residential customers with smart meters
- ° 930 customers have been successfully commissioned into the SMCD service.

Water/Energy Nexus

Overview: A study has been completed to quantify the energy required to deliver water to a customer site. This value, introduced to the TRM in Jan 2019, could allow ComEd to claim energy savings from water reduction measures. Additional research is ongoing to identify potential new water conservation-focused measures and their cost-effectiveness.

- Target Sector: Cross Cutting
- Completion Date: 2019 Q1; study findings will be reported in 2019 Q1.

Nest Seasonal Savings Phase II

Overview: During the summers of 2017 and 2018, Nest thermostat owners within the ComEd service territory were offered the opportunity to opt-in to the Seasonal Savings program, which makes small set-point adjustments to deliver additional energy savings for the customer while balancing comfort requirements. Navigant is calculating the impact of this program on savings and savings persistence.

- Target Sector: Residential
- Type of Test: Pilot
- ° Completion Date: September 2018; currently under evaluation

Total Connected Savings

Overview: In 2018, certain customers with a Honeywell Wi-Fi thermostat (not a smart-thermostat, i.e., one that can sense occupancy), were able to enroll into the Total Connected Savings pilot which provides cloud-based advanced analytics to control the thermostat based on outside weather conditions to increase energy savings while maintaining occupants' comfort.

- ° Target Sector: Residential
- ° Completion Date: September 2018; currently under evaluation

High-Efficiency Public Housing Retrofit

Overview: A team of stakeholders and experts designed and deployed retrofit strategies incorporating new heating and cooling technologies, including advanced heat-pumps and low capacity furnaces, for seven housing units located at Rockford Housing Authority's (RHA) Blackhawk Courts. Tenants moved back into the retrofitted units in fall 2017 and data collection has been ongoing ever since..

- ° Target Sector: Residential & Income Eligible
- ° Completion Date: Winter 2018; savings data will be reported in 2019 Q1.

HVAC SAVE

Overview: The HVAC SAVE pilot provided training for Trade Allies to provide a Verified Quality Installation (QI) of Residential AC units to improve their performance. This pilot aimed to have 400 QI installs during summer 2018 and collect information on QI energy savings to encourage TRM inclusion for 2020.

- ° Target Sector: Residential
- Completion Date: Completed in November 2018; currently under evaluation

Emerging Technology

Commercial & Industrial Geothermal Program Design

Overview: This pilot aimed to design a Standard incentive for commercial geothermal projects. A TRM workpaper was approved in 2018 and five geothermal projects have been submitted for pre-approval to date. Pre-application deadline is February 28, 2019 and installations must be completed by June 30, 2019.

- Target Sector: C&I
- Completion Date: TRM workpaper complete; pilot complete June 2019; study findings will be reported in 2019 Q3.

Condenser VFD Pilot

Overview: This project studied the impact of adding variable frequency drives (VFDs) to refrigeration system condenser fans in 23 condensers in 4 supermarkets. The pilot compared system performance pre- and post- condenser fan retrofit with VFD and will result in a TRM measure update in 2019.

- ° Target Sector: C&I
- Completion Date: Completed in September 2018; TRM update submission in progress; currently under evaluation

Passive House

Overview: The Latin United Community Housing Association's (LUCHA) Tierra Linda project is comprised of several new construction multifamily buildings intended for low income residents. Located along the 606 Trail in Chicago's Humboldt Park neighborhood, one of the six-unit buildings will be constructed to Passive House Institute U.S. (PHIUS) certification standards, and compared to a neighboring building built to the typical ENERGY STAR® standard. The pilot team installed energy monitoring equipment in 2018 and will survey residents and analyze construction cost data in 2019 to better understand the potential for integrating Passive House standards into the Affordable New Construction program.

° Target Sector: Residential and Income Eligible

 Completion Date: Monitoring equipment was installed at end of 2018 Q2; first data analysis report June 2019

Q-Sync Motors

Overview: This project will measure energy savings and demand reduction from retrofitting equipment motors with synchronous motors from manufacturer QM Power - Q Sync motors. These motors are approximately 20% more efficient than electrically commutated motors. Currently, the application for these motors is on the evaporator fans of coolers and freezers. A TRM measure exists for reach-in cooler applications and this pilot will attempt to expand their application to larger, walk-in coolers/freezers.

- Target Sector: C&I
- Completion Date: Completed winter 2018; currently reviewing final report; TRM measure update in progress

Absorbent Air Cleaning Technology Demo

Overview: This field verification will test an emerging technology from manufacturer enVerid, which scrubs contaminants from indoor air in large commercial buildings to reduce the amount of outside air ventilation required for proper IAQ. One building has been recruited in downtown Chicago and installation is underway.

- ° Target Sector: C&I
- Completion Date: Installation deadline Feb 2019, data collection ongoing in 2019, final report in 2020

Ductless Heat Pumps

Overview: This pilot will test the performance of cold climate ductless heat pumps as a retrofit opportunity in all-electric low-rise multifamily buildings with income eligible residents. 80 heat pumps were installed across seven buildings during winter 2018-19. Data collection will be ongoing through 2019.

- ° Target Sector: Residential and Income Eligible
- Completion Date: Data collection ongoing in 2019, final report in 2020

Emerging Technology

Baseline and Potential Study

Overview: ComEd will conduct a baseline and potential study to determine how ComEd customers (residential, small business, commercial and industrial) use energy (end use study) and determine how much potential is left for energy efficiency in our service territory. This project will heavily leverage AMI data conduct the study.

- ° Target Sector: Cross-Cutting
- ° Completion Date: Q3 2019

Low-E Indoor Storm Windows

Overview: In partnership with Nicor Gas and GTI, this project will study the energy reduction potential of low-E, removable storm windows for indoor residential use.

- ° Target Sector: Residential
- ° Completion Date: Q4 2019

Savings for income Eligible Seniors

Overview: This pilot will create partnerships with regional agencies serving income eligible senior citizens to test a direct installation program model exclusively serving these customers. The team will employ qualified technicians to install weatherstripping, door sweeps, caulking, smart thermostats, LED lamps and LED nightlights in participating households.

- ° Target Sector: Residential and Income Eligible
- ° Completion Date: Q4 2019

Breathe Easy

Overview: Breathe Easy is a US HUD study in partnership with Elevate Energy and IIT to study the effectiveness of approaches to upgrading residential mechanical ventilation systems for reducing indoor air pollution and improving asthma symptoms.

- ° Target Sector: Residential, Income Eligible
- Completion Date: 2020

Marketing Education & Awareness

General Outreach

- ° Participated in 60 energy efficiency events
- ° Interacted with approximately 6479 customers

Residential E&A Family Campaign – Neighbors

Overview: The campaign was to promote awareness of the Energy Efficiency Program offerings with a call to action of ComEd.com/HomeSavings

- ° In-market September 3 December 31, 2018
- ° Included Radio, OOH and Print
- ° Generated 16,767,542 digital impressions through December
- ° Drove 172,000+ page visits to ComEd.com/HomeSavings

Business E&A Facility Assessment Campaign - Moving Up

Overview: The campaign was to promote awareness of our facility assessment offerings with a call to action of ComEd.com/FacilityAssessments.

- ° In-market January December 31, 2018
- ° Includes TV, cable, digital, radio, social and print
- Generated 13,705,103 digital impressions through December
- ° Drove 29,000+ page visits to ComEd.com/FacilityAssessments

Rebates Campaign

Overview: The campaign was to promote awareness of the rebates offerings with a call to action of ComEd.com/Rebates.

- ° In-market through November 31st, 2018
- ° Included cable, digital, radio, social and print
- ° Generated 10,743,411 digital impressions November
- Drove 242,000+ page visits to ComEd.Com/Rebates

Public Sector Campaign

Overview: The campaign was to promote awareness of our public sector offerings with a call to action to look at incentives available on ComEd.com

- ^o In-market thru December 31st, 2018
- Includes Pre-roll, digital, social and print
- Generated 43,041,200 digital impressions through December
- Drove 24,000+ page visits to ComEd.com/PublicSector

Instant Discounts – Pass the Buck

Overview: The campaign was to promote participation in the Instant Discounts program with a call to action to learn more about all of the lighting solutions available.

- ° Included TV, digital and radio
- ° In-market February December 2018
- ° Generated 14,865,399 digital impressions through December
- ° Drove 115,000+ page visits to ComEd.com/InstantDiscounts

Income Eligible Lighting Discounts Campaign

Overview: The campaign was to promote awareness of income eligible lighting discounts through the ComEd Energy Efficiency program with a call of action to get instant in-store discounts at your local retailer.

- ° In-market November -December 2018
- ^o Included Print, Digital, OOH, and Social
- Has generated 1,720,195 digital impressions through December
- Drove 99,000+ page visits to ComEd.com/EnergyUpgrades

Fridge Recycling Campaign - Found Money

Overview: The campaign was to promote awareness of fridge recycling through the ComEd Energy Efficiency program with a call to action to get \$50 to recycle your old, working fridge.

- ° In-market January December 2018
- ° Included digital, radio, social and digital billboard
- Has generated 34,466,236 digital impressions through December
- ^o Drove 180,000 + page visits to ComEd.com/FridgeRecycling

Marketing Education & Awareness

Standard Offerings Campaign – Lighting, HVAC and VSD

Overview: The campaign was to promoted awareness of through standard offerings for lighting, HVAC and VSD through the ComEd Energy Efficiency program with a call to action.

- ° In-market November -December 2018
- ° Included digital and Linkedin
- Has generated 11,397,918 digital impressions through December
- Drove 44,000 + page visits to ComEd.com (lighting, HVAC and VSD) an increase of 87% year over year

IT Optimization Campaign

Overview: The campaign was created to promote awareness around IT optimization projects including offerings for lighting, HVAC and VSDs through the ComEd Energy Efficiency program with a call to action.

- ° In-market November -December 2018
- ° Included digital, print and Facebook
- Has generated 8,715,885 digital impressions through December
- Drove 20,000 + page visits to ComEd.com/IT

Lighting Discounts Campaign – Saved by Savings

Overview: The campaign was to promoted awareness of through standard offerings for lighting, HVAC and VSD through the ComEd Energy Efficiency program with a call to action.

- ° In-market September 3 December 9th, 2018
- ° Included TV, digital, radio and transit
- Has generated 4,003,771 digital impressions through December

Lighting Spectacular – Lighting for All Page Search

Overview: The campaign was to promoted awareness of through standard offerings for lighting, HVAC and VSD through the ComEd Energy Efficiency program with a call to action.

- ° In-market October 1st -December 16th, 2018
- Paid Search
- Has generated 367,925 digital impressions through December
- Drove 161,000+ page visits to ComEd.com/LightingforAll

360 Digital Campaign

Overview: The campaign was to promoted awareness of through all of the residential offerings for discounts, recycling and rebates through the ComEd Energy Efficiency program with a call to action.

- ° In-market December 3 December 31st, 2018
- Included digital
- Has generated 6,243,008 digital impressions through December

Influencer Campaign

Overview: The campaign was the first of its kind for the ComEd Energy Efficiency Program where we engaged with Social Media influencers to promote awareness of lighting discounts and rebates from the perspective of a homeowner.

- ° In-market December 3 December 31st, 2018
- Instagram, Facebook and Twitter
- ° Generated 142,512 social media impressions

Stipulations

Commitments Regarding Interactions with the Income-Qualified Advisory Committee (Settlement Stipulation § IV(D)(1))

ComEd agrees to report on a quarterly basis to both the Income-Qualified Energy Efficiency Advisory Committee and the SAG on the development of reporting metrics on the following topics:

- Identification of budget, savings, and number of participants served through Income-Qualified Plan funding, separately tracking by single-family and multi-family programs:
 - For budget and savings, please refer to the Income Qualified Programs section on the "Ex Ante Results" tab of the statewide quarterly report template. Total Income Qualified homes served is captured on the "Other" tab of the statewide quarterly report template.
 - The Single-Family Retrofits program has completed projects in 1,931 income-qualified homes through Q4.
 - The Multi-Family Retrofits program has completed direct install work in 5,119 tenant units tenant units through Q4.
 - The Public Housing Retrofits program has completed direct install work in 2,497 tenant units through Q4
 - The Affordable Housing New Construction program has completed 9 projects through Q4.
 - The Income Eligible Kits program has distributed 34,899 kits to incomequalified single-family homes through Q4.
 - The Food Banks Distributions program has distributed 1,700,326 9W
 LED bulbs and 11,064 advanced power strips through Q4.
- ° Income-Qualified pilot program results:
 - The Emerging Technology program has several projects specific to income eligible and public housing customers: High-Efficiency Income Eligible Housing, LUCHA Passive House, Multi-Family Ductless Heat Pumps, Income Eligible Journey Mapping, Income Eligible Market Provider, and Breathe Easy US HUD study. The total spend on these projects was \$1,427,507 through Q4.

- Please refer to the Emerging Technology section on page 23 of this report for additional information on High-Efficiency Income Eligible Housing and LUCHA Passive House.
- ² Identification of implementation vendors who receive funding designated for Income-Qualified programs, indicating whether each vendor is an independent third party that has demonstrated capabilities to serve such households, including not-for-profit entities and government agencies that have existing relationships with or experience serving Low-Income communities in the State:
 - Single-Family Retrofits Chicago Bungalow Association (not-for-profit), Chicagoland Vintage Home Association (not-for-profit), Franklin Energy (for-profit), Illinois Association of Community Action Agencies (not-forprofit), Resource Innovations (WBE for-profit), 15 community action agencies in the ComEd territory (not-for-profits)
 - Multi-Family Retrofits Elevate Energy (not-for profit), Franklin Energy (for-profit), Resource Innovations (WBE for-profit), Shelton Solutions (WMBE for-profit), 15 community action agencies in the ComEd territory (not-for-profits)
 - Public Housing Retrofits Elevate Energy (not-for-profit), Franklin Energy (for-profit), University of Illinois at Chicago Energy Resources Center (not-for-profit)
 - Affordable Housing New Construction Seventhwave (not-for-profit)
 - Income Eligible Lighting Discounts CLEAResult (for-profit)
 - Low Income Kits University of Illinois at Chicago Energy Resources Center (not-for-profit), 15 community action agencies in the ComEd territory (not-for-profits)
 - Food Bank CLEAResult (for-profit), Greater Chicago Food Bank (nonfor-profit), Northern Illinois Food Bank (non-for-profit), Riverbend Food Bank (non-for-profit)
 - Outreach & Marketing Eire (WBE for-profit), Faith in Place (not-forprofit), Franklin Energy (for-profit), Ignition (for-profit), PACO (MBE forprofit), Surge Solutions (MBE for-profit)
- Job training in economically disadvantaged and diverse communities within its service territory that is supported by ComEd's efficiency program portfolio funding, including training offered through the IHWAP program necessary to increase capacity to deliver services in ComEd's territory

Stipulations

- ComEd intends to develop metrics for this area in coordination with the Income Eligible Advisory Committee. There have been preliminary conversations on this topic at 4 of the 5 meetings in 2018. A new Workforce & Business Development Working Group will be established in 2019 to finalize these metrics
- ^o ComEd agrees to work with the Income-Qualified Advisory Committee in the development of a metric to be added to quarterly energy efficiency reports filed with the Commission that reports the number of businesses and employees based in economically disadvantaged communities hired to assist in the delivery of energy efficiency programs
 - ComEd intends to develop metrics for this area in coordination with the Income Eligible Advisory Committee. There have been preliminary conversations on this topic at 4 of the 5 meetings in 2018. A new Workforce & Business Development Working Group will be established in 2019 to finalize these metrics

ComEd agrees to report on an annual basis to both the Income-Qualified Energy Efficiency Advisory Committee and the SAG on the following topics:

- Implement energy efficiency program training, to the extent practicable, through the existing IHWAP program training infrastructure, assuming the availability of federal and/or state funding sufficient to maintain the IHWAP delivery infrastructure, with an emphasis and focus on trainee recruitment in economically disadvantaged communities. Any expenses incurred through these training activities will count towards the Income-Qualified allocation spend.
 - The utilities committed under an MOU with DCEO to provide up to \$70K for training in 2018, of which DCEO requested \$24K from ComEd in expenses. In 2019, ComEd will continue to financially support training under the IHWAP framework.
- Discussion of opportunities for coordination of energy efficiency, IHWAP, and other job training initiatives in Low-Income communities
 - This has been a key area of 2018 discussion of the Income Eligible
 Advisory Committee, with excellent preliminary conversations at 4 of the
 5 meetings, including presentations from the utilities as well as the FEJA-

funded job training program. Additionally, at ComEd's September Job Fair, job training programs from across the territory were represented. In 2019, a new Workforce & Business Development Working Group will be established to better articulate objectives in this space

- Discussion of opportunities for consultation and coordination of job training, where applicable, with the Department of Commerce and Economic Opportunity's Office of Employment and Training and Office of Community Assistance
 - This has been a key area of 2018 discussion of the Income Eligible Advisory Committee, with excellent preliminary conversations at 3 of the 5 meetings. In 2019, a new Workforce & Business Development Working Group will be established to better articulate objectives in this space.
- Further discussions related to direct contracting with independent third parties that have demonstrated capabilities to serve Income- Qualified households, with a preference for not-for-profit entities and government agencies that have existing relationships with or experience serving Low-Income communities in the State. The purpose would be to understand the economic and job creation impact by using these strategies and to establish best practices guidelines
 - This has been a key area of 2018 discussion of the Income Eligible Advisory Committee, with excellent preliminary conversations at 4 of the 5 meetings, including presentations from the utilities. In particular, at the October meeting, the Committee Facilitator presented its findings on preliminary job training program best practices. In 2019, a new Workforce & Business Development Working Group will be established to reach consensus on best practices.
- ^o ComEd agrees to discuss, and establish goals and best practices outside the context of Docket No. 17-0312, in consultation with the Income-Qualified Advisory Committee and other job training initiatives, for increasing the diversity and number of locally-based trainees, vendors and employees of its energy efficiency workforce, and for establishing tracking methodologies for reporting purposes. ComEd will coordinate and consult with the Income-Qualified Advisory Committee, IHWAP, and other workforce development program administrators to establish best practices and methodologies for

Stipulations

attracting, training, and employing diverse candidates for the EE 2018-2021 Plan and other workforce development efforts.

 This has been a key area of discussion of the Income Eligible Advisory Committee, with good preliminary discussion at 4 of the 5 2018 meetings. Discussions included ComEd's presentation of proposed plans and goals, related job training efforts, and best practices – with time dedicated for stakeholder input on all of these topics. In 2019, a new Workforce & Business Development Working Group will be established to reach consensus on goals and best practices.

CY2018 New Measures

All measures in the table below were launched in CY2018.

MEASURE TOTAL RESOURCE COST (TRC)

	Sector	TRC
Screw-In HID LED Mogul Base	Business	2.50
Screw-In HID LED Medium Base*	Business	2.04
4 & 2 Pin Base LED*	Business	0.61
Closet to Colocation	Business	3.55
Compressed Air Storage	Business	7.10
Voltage Optimization	Business	3.79
LED Traffic and Pedestrian Signals Flashing Signal	Business	2.51
LED Traffic and Pedestrian Signals Round Signals	Business	1.69
LED Traffic and Pedestrian Signals Turn Arrows*	Business	0.43
LED Traffic and Pedestrian Signals Pedestrian Sign	Business	3.95
Packaged RTU Sealing	Business	1.42
Dehumidifiers	Residential	2.46
ComEd Affordable Housing New Construction Standard*	Residential	0.85

Residential Programs – Monthly Charts



RESIDENTIAL LIGHTING NET MWH







Monthly MWh Saved - Forecast 22,500 4,500 Monthly MWh Saved - Actual ······ Cumulative MWh Saved - Forecast 4.000 20,000 - Cumulative MWh Saved - Actual 3,500 CY2018 MWh Forecast - 24,544 5 10,000 🥳 7.500 1 500 Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Sep-18 0ct-18 NOV-78 Dec-18 Jul-18 AUB-18



HOME ENERGY ASSESSMENTS NET MWH

Residential Programs – Monthly Charts









NATIONAL THEATRE FOR CHILDREN KITS NET MWH



Income Eligible Programs – Monthly Charts







AFFORDABLE HOUSING NEW CONSTRUCTION NET MWH







FOOD BANK DISTRIBUTION NET MWH























INSTANT DISCOUNTS PUBLIC NET MWH





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INDUSTRIAL SYSTEMS PRIVATE NET MWH





RETRO-COMMISSIONING PRIVATE NET MWH

BUSINESS NEW CONSTRUCTION PUBLIC NET MWH







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LED STREET LIGHTING PUBLIC NET MWH





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Voltage Optimization – Monthly Chart

