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November 12, 2025

ComEd Quarterly Report-Out: Electrification Update

Customer Energy Solutions (CES)

Agenda

1. Electrification Results YTD
2. Bill Impact
3. C&I Electrification Update: Forktrucks
4. Residential Electrification Update: Whole Home Electric (WHE)
5. Research & Development: Pilots & GoElectric

Elder Calderon

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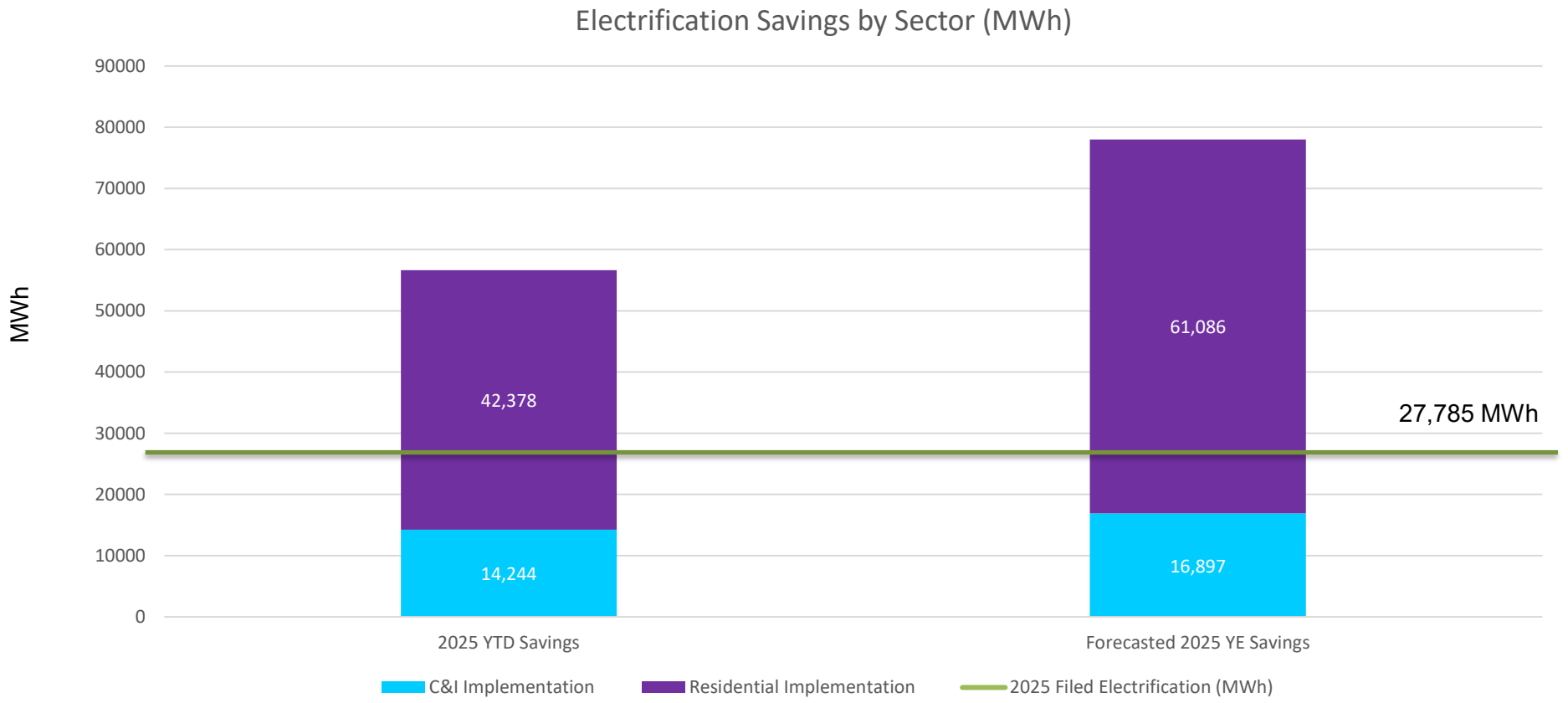
Electrification Update YTD

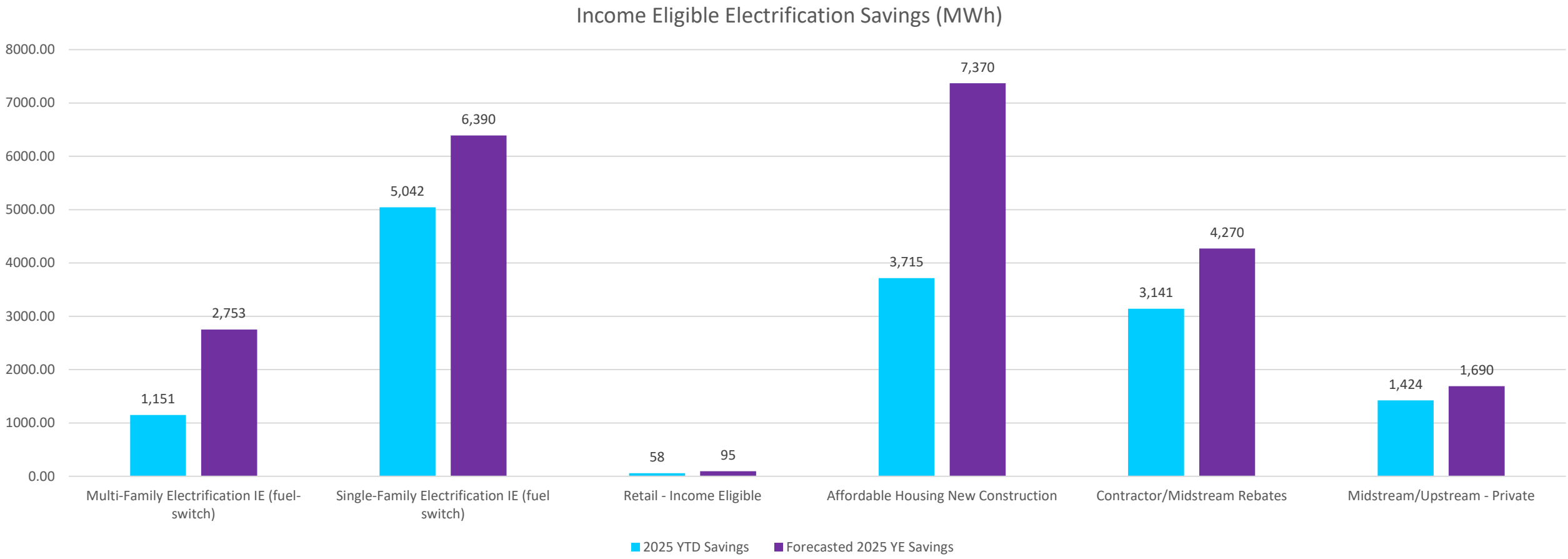
Daniel Gonzalez Diaz

Electrification Update YTD



- Forecasting nearly 78 GWh of Electrification Savings for 2025
- Nearly 57 GWh saved year to date, surpassing the filed target of 28 GWh
- Majority (~75%) of savings are claimed from Residential offerings

Income Eligible Electrification Update YTD



- Nearly 29% (23 GWh) of Electrification savings impact IE Households, exceeding the 25% requirement
- Majority of IE Savings claimed in Affordable Housing New Construction (AHNC) and Whole Home Electric offerings (SF & MF)

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Bill Impact

Channel Turbides

Bill Impacts and Program Design

- **The level of detail available about an upgrade will be different based on program delivery channel**
  - To accurately estimate bill impacts, even for a single measure (e.g., HPWH), several variables impact actual savings
  - Many programs have little or no way of collecting information on the customer premise prior to their purchase
  - For programs having access to some of these variables through site visits or pre-project modeling, implementation teams may develop a more custom calculation in some cases
  - In some cases, a range of savings potential, rather than a single value, is likely warranted.
- **The ability to communicate with customers, and the communication format, will also differ**
  - For a program with closer customer contact this may look like (as an example) an information packet with potential bill impacts included
  - For a program with no customer contact this may be a bill impacts estimate or calculator on ComEd.com, or EESPs trained to communicate further

Spectrum of Bill Impact Communication

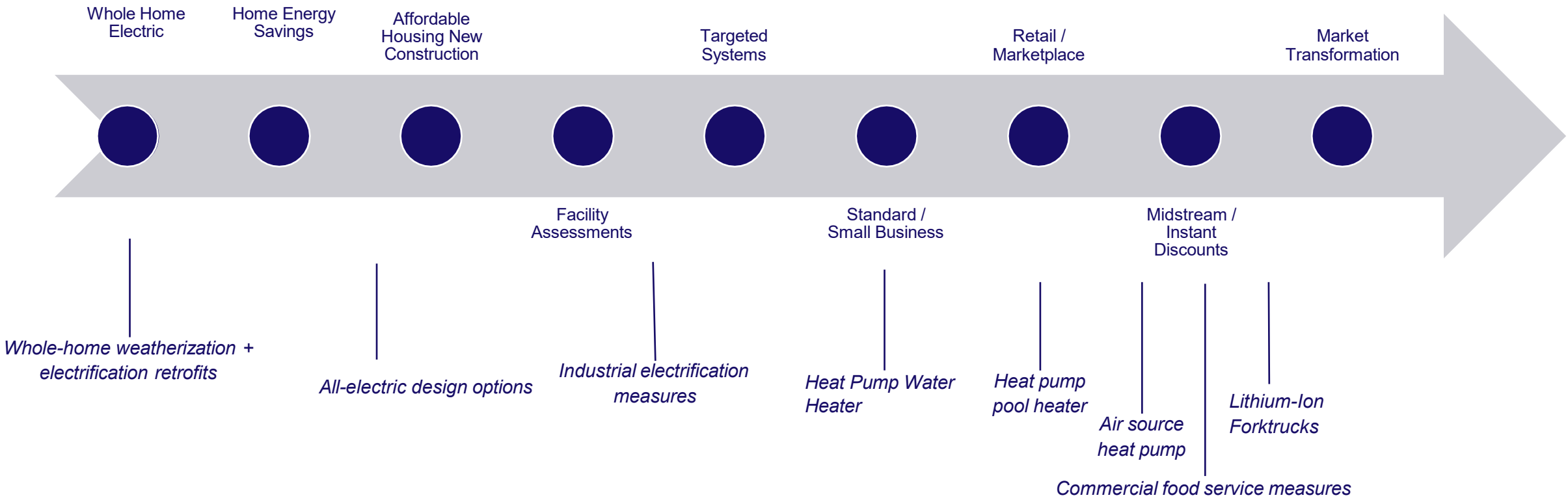
For illustrative purposes only

More Detail/More Personal Communication

- More information about customer premise or making direct recommendation; use more custom approach
- Direct or indirect channel to customer; communicate directly through program partners

More General/Less Personal Communication

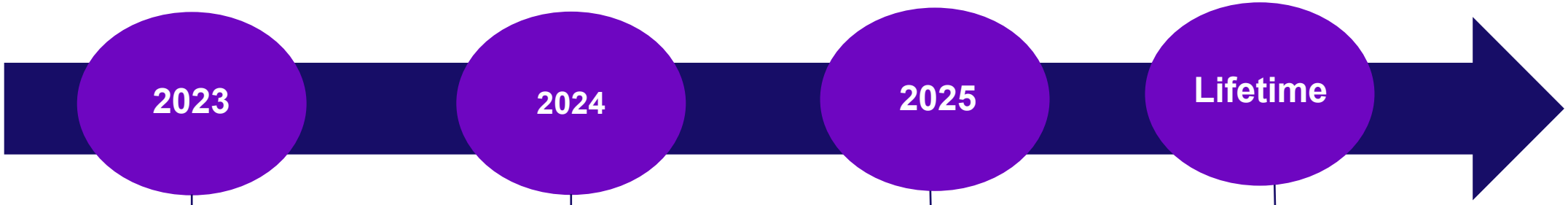
- Little to no information about customer purchase or premise available; use average market assumptions
- No direct channel to customer; communicate through contractors, distributors or online resources



C&I Electrification Update: Fork trucks

Jaleesa Scott

Key Fork Truck Timeline: 2023-2025



Instant Discounts launches Fork Truck measure

- Midstream model
- Goal of **5500 net MWh**
- Full subscription by July 2023

Measure success leads to growth

- Program reimagined:
  - Improved cost effectiveness
  - Increased MWh goal

~ 21,400 net MWh achieved, 202 trucks

On track to meet all EEE goals & continuing to grow the network

- 2025 goal: **16,800 net MWh, 156 trucks**

Sustained interest and participation

2023-2025:

- 15 distributors
- 350+ fork trucks incentivized
- >40,000 net MWh achieved

2025 Measure Design- Fork Trucks

- 15 Fork Truck Distributors
- 16,800 net MWh goal
- Energy Efficiency Electrification (EEE) incentives range from $8k to $20k for purchases that involve fuel switching; EE incentives range from $1,700 to $4k for purchases w/out fuel switching (lead acid to lithium-ion)
- Incentives capped at 33% of equipment price not to exceed full incentive values
- Cost effectiveness ranges from $.17- $.20/kWh

Fork Truck Incentives

		Fuel Switching	Non-Fuel Switching
Class I, II, III Fork Truck >100 Ah	<36v	Up to $8,000	Up to $1,700
	≥36v - ≤48v	Up to $15,000	Up to $3,000
	>48v	Up to $20,000	Up to $4,000

Eligibility

Eligible products are sold through participating distributors and are listed on the program's Qualified Product List. Instant discount is provided at the time of purchase only. Customers must have an active ComEd account at the site where the equipment will be installed and used.

High-Efficiency
Fork Truck Battery Chargers

Incentive:
- $500 per charger

Requirements:
- 3 phase, high frequency battery chargers
- 3 year product warranty
- ≥89% power conversion efficiency

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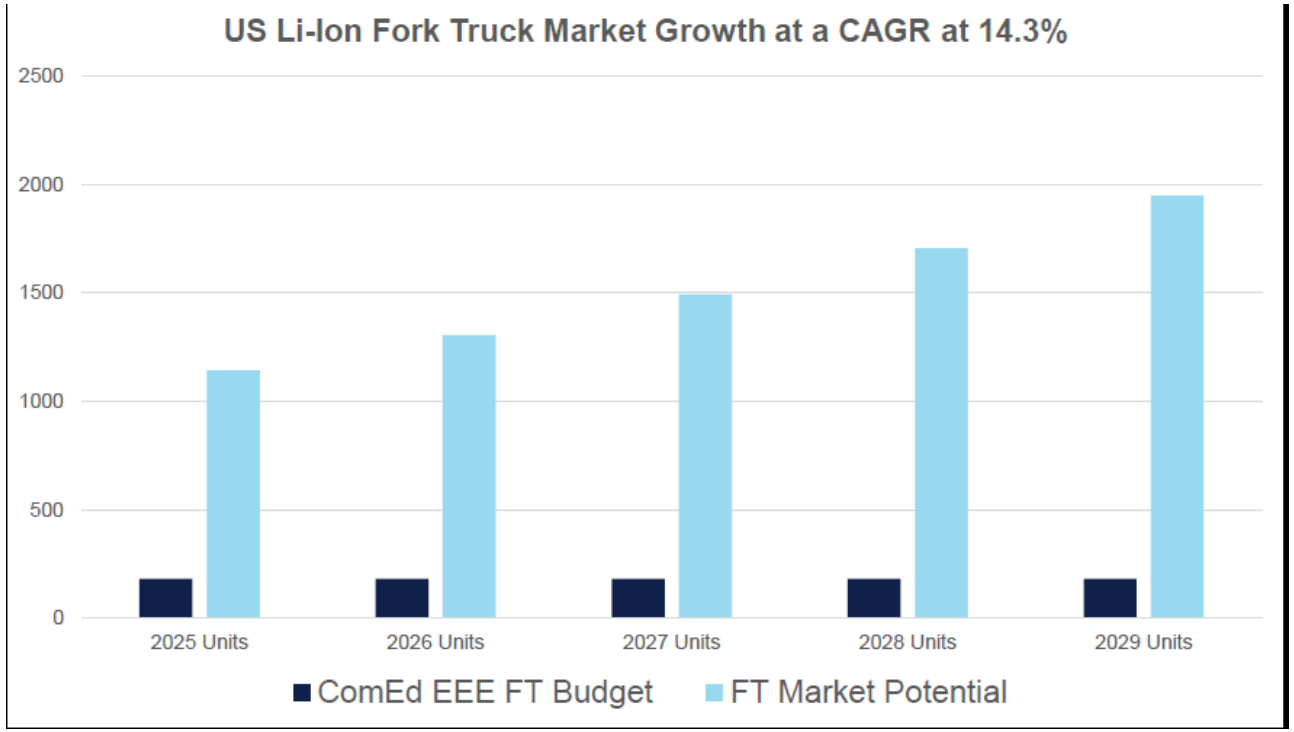
Fork trucks 2026 and beyond

• **2026 Goal:** ~ 16,800 net EEE MWh goal; $3M in incentives

- Fork trucks continue to be an opportunity area for growth in non-lighting savings
- Exploring changes in measure design to capture more market potential
- Cost effectiveness ranges from $.17- $.20/kWh and could continue trend down with measure design modification.



Residential Electrification Update: Whole Home Electric (WHE)

Liz Connolly, Danielle Munroe

Offering Overview

- Goal: Serve both income eligible single family and multi-family customers that would most benefit from electrification with comprehensive measures, including electrification technologies, to replace fossil-fueled appliances and heating and cooling systems with high efficiency electric appliances and systems (e.g. heat pumps).
- Strategically target and screen for customers that will realize the most energy savings and bill savings.
- Single family
  - Detached homes, townhouses and two-flats (both units must qualify)
  - Owner occupied
  - Fully funded by ComEd (no customer co-pay)
- Multi-family
  - Individually metered, in-unit mechanicals
  - ~20% property owner co-pay for non-weatherization measures
  - Weatherization measures are fully funded by ComEd

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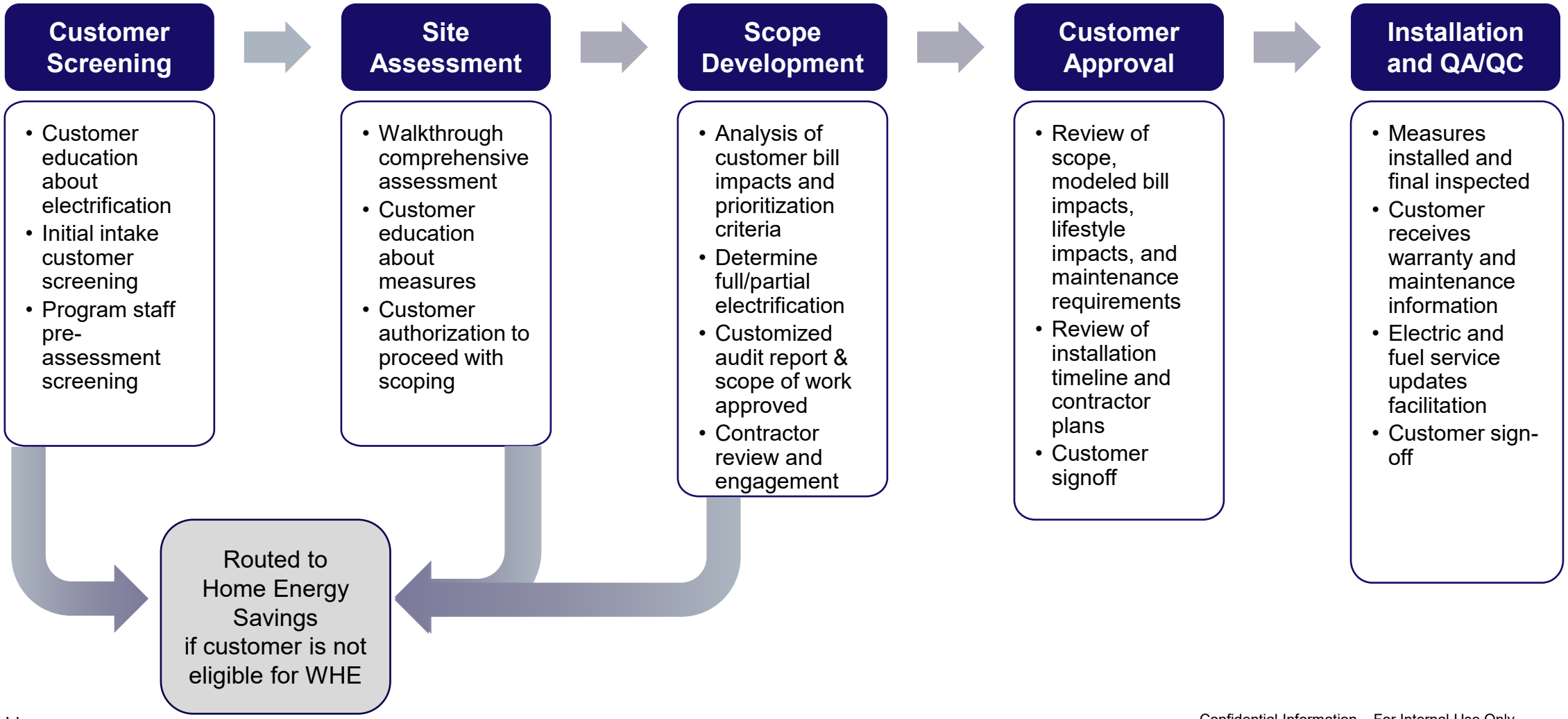
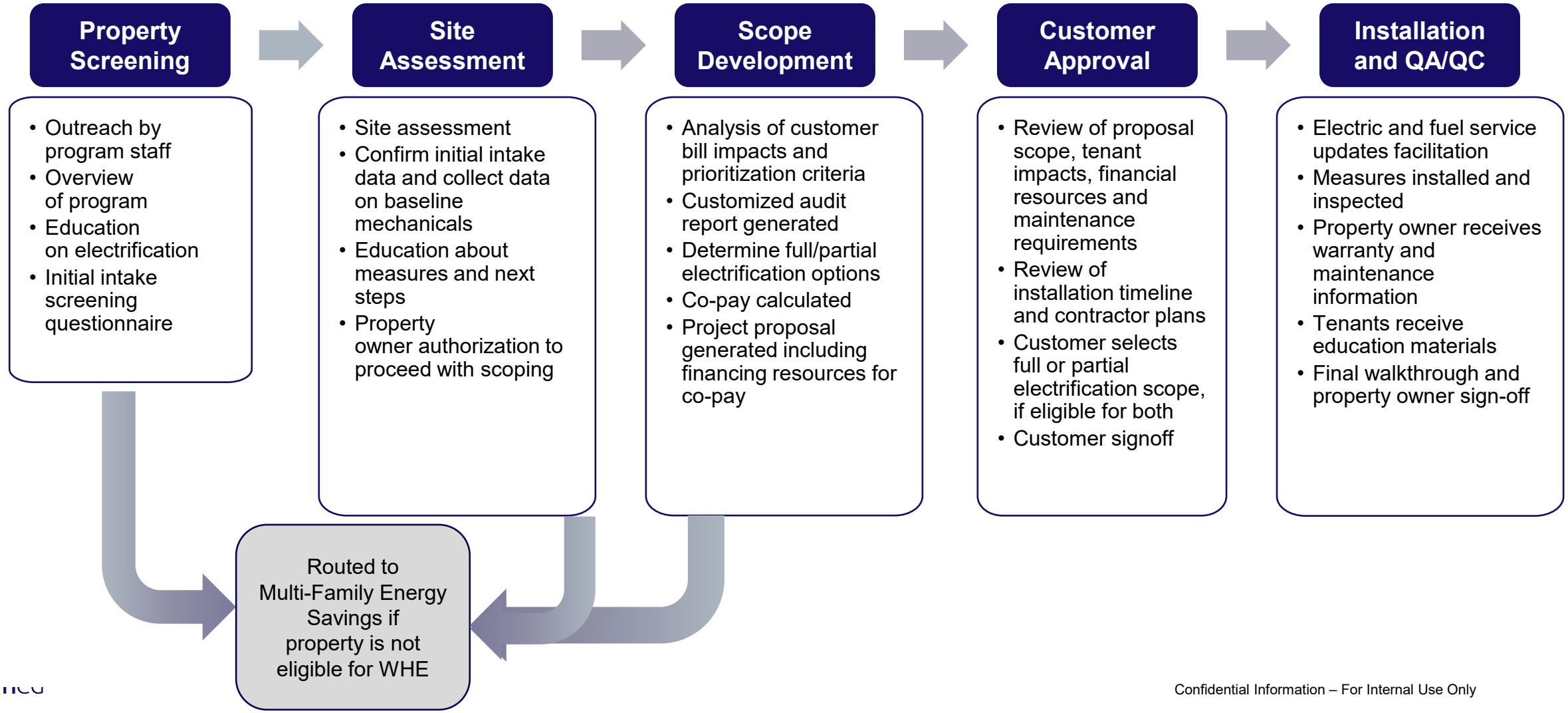
Energy Efficiency Service Provider (EESP) Network

- Closed EESP network
- In 2025 there are 13 participating EESPs
  - 5 certified diverse
- RFQ underway to identify 2026 EESP network
- Focus on diverse contractors serving disadvantaged and rural communities
- EESPs must have the ability to provide comprehensive project execution, including conducting assessments and the use of subcontractors
  - Project scope includes: heat pump sizing and installation, heat pump water heater installation, electrical panel upgrade and electric appliance installation; some projects will include weatherization
- ICC certification is required
- BPI Building Analyst – Professional (BA-P) certification is required for conducting assessments and any projects that include weatherization

Single Family Customer Journey



Multi-Family Customer Journey



Partial Electrification

- New in 2025, offering now evaluates single family customers for partial electrification if customer is not eligible for full electrification. Partial electrification includes full heating load displacement with a cold climate HP and other remaining gas end uses OR partial heating load displacement with a hybrid HP and other remaining gas end uses, including the existing furnace. Full heating load displacement is prioritized if the customer qualifies for both partial electrification options.
- This allows more income-eligible customers to benefit from the offering and experience the benefits of electrification.
- Multi-Family properties are evaluated for full and partial electrification options. If the property qualifies for both, the property owner chooses the pathway (considering factors such as required co-pay).

	Full Electrification	Full Heating Displacement	Heat pump + existing gas furnace, 29 degree switchover
Weatherization	X	X	X
Electric panel upgrades	X		
Heat pump (ductless or ducted)	X	X	X
Heat pump water heater	X	X	X
Induction cooktop	X		
Heat pump dryer	X		
Health & safety measures	X	X	X
# of projects/units in 2025	191	13	6

*SF Partial electrification efforts began in July.

Bill Impact Calculations & Project Impact

- Model bill impacts for every home/unit served
- Customer bill savings based on home / equipment characteristics and the kWh/therms savings anticipated (based on TRM savings calculations) and current utility bill rates
- Customer bill impacts communicated in the customer audit report
- Program facilitates switching customer over to the electric space heat rate for their ComEd bills

2024-2025 Whole Home Electric Project Averages		
	Single Family	Multi-Family
ComEd Investment per Unit	$ 45,469	$ 12,318
Fuel Switch Savings / Project (net MWhs)	30.53	12.54
Non-Fuel Switch Savings / Project (net MWhs)	11.31	1.69
Modeled Annual Bill Savings per Unit	$ 930.97	$ 358.29

Looking Ahead

- Continue partnering with City of Chicago's Green Homes Chicago program
  - First projects completed in August, 2025; 13 projects completed YTD
  - Cost sharing up to $32,500 for eligible projects
  - Anticipated increase in production in 2026
- Further scale Whole Home Electric
  - ComEd's approved Energy Efficiency Plan 7 assumes ~$40.6M average annual investment
  - Beginning in 2026, offering will target and serve income eligible homes and buildings with inefficient electric resistance heating systems
- Work with Community Organizations to educate customers on offering
- Evolve data-driven targeting and pre-screening tools
- Continue to identify and implement cost control strategies

Research & Development: Pilots & Go Electric

Steven Labarge, Hira Majeed

Electrification and EE R&D

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.

EE R&D has prioritized electrification technologies and market adoption strategies to build pathways for future program implementation

Project Highlights:

- Window Mount HPs
- VRF for Small-Medium Commercial
- Go Electric Customer Micro-site

Other Projects:

- Commercial Dual Fuel Roof Top Units (RTUs)
- Lithium Ion Fork Truck Customer Insights Support
- Alternative Form Factor Heat Pumps for Residential Customers
- Industrial Electrification Market Research

Window Mount Heat Pump Pilot Opportunity

Traditional air-source heat pump programs typically target homes with existing ductwork and 240V electrical capacity.

This leaves key building segments – such as multifamily housing, older homes, and units lacking existing ductwork – under-served by conventional HVAC upgrade pathways.

Window-Mount Heat Pumps offer a pathway to expand access to Energy Efficiency and Electrification for these Residential Customers while reducing utility program implementation costs.

Window-mount Heat Pumps

Source: gradientcomfort.com

FEATURES

Like-and-better than window AC replacement
- Installed over a windowsill (saddlebag-style)
- Provides heating capacity

High efficiency, variable speed, low noise

Operates on standard 120V AC outlet
- No Electrician needed for install

Self-contained condensation management

Cold climate ready

Significant cost reductions compared to existing ductless HP systems

Window-mount Heat Pumps

Source: https://www.mideacomfort.us

PILOT DESIGN	
Scope	Lab + Field Testing
Manufacturers	Gradient, Midea
Quantity of units	+/- 20 total units (+/- 10 Gradient, +/- 10 Midea)
Customer Target	Multi Family dwellings (Income Eligible)
Potential Measures	IE Multifamily Retrofits, Affordable Housing, Midstream

Research Objectives

Primary Objectives

- Lab testing to verify manufacturer claims on thermal performance including capacity + efficiency across a variety of operating conditions.
- Field testing to monitor and verify system performance during heating and cooling season operation.
- Quantify potential savings and benefits (energy + non-energy).
- Determine “best-fit’ programs for future offerings

Secondary Objectives

- Better understand homeowner feedback regarding installation, noise level, comfort, user controls, etc.
- Compare Gradient and Midea unit performance in ComEd territory.
- Visibility into use cases for other utility partners.

VHE HVAC Pilot

EE R&D Team has supported installation of 5 VRF HVAC systems in Small-Medium customers across ComEd Service Territory.

- Projects held to a Very High Efficiency (VHE) Standard. To meet this standard, new HVAC systems installed were VRF Heat Pump Systems with Heat Recovery and Demand Control Ventilation equipment.
- Installed Sites
  - Suburban Religious Building
  - Rural Medical Clinic
  - Suburban Community Center
  - Suburban Office Building
  - Rural Commercial Restaurant
- R&D Team using findings to determine future Program fit and customers best served by this equipment, as well as understand Energy Savings, Bill Impacts, and specific building types best suited for this approach

Suburban Religious Building HVAC Description

- Pre-Retrofit HVAC system
  - Steam boiler and open-loop municipal-water-cooled chiller
  - Worship spaces served by air handling units with hot water heating and chilled water cooling
  - Classrooms served by hot water radiators and window air conditioners
  - Office and administrative spaces served by packaged DX-cooled, gas-fired rooftop units
  - Mechanical ventilation only present in AHUs and RTUs
- Post-Retrofit HVAC system
  - Replace all existing HVAC systems to air-cooled variable refrigerant flow units
  - Mechanical ventilation to all spaces supplied through energy recovery ventilators

Suburban Religious Building Annual Summary

Assumptions

- Electricity Rate
  - 0.14 $/kWh
- Natural Gas Rate
  - 0.67 $/therm
  - $155.70/month (pre-retrofit)
- Water: 13.38 $/thousand gal
- Emissions Rate
  - 0.00529 ton CO2eq/therm
  - 0.00046 ton CO2eq/kWh

	Pre-Retrofit (modeled)		Post-Retrofit (monitored)	Savings	
HVAC Weather	Existing TMY	Code TMY	VHE HVAC TMY	Existing – VHE HVAC TMY	
Electricity (kWh)	72,013	71,656	377,466	-305,453	-424%
Natural Gas (therm)	29,261	17,937	0	29,261	100%
Total Energy (kBtu)	3,171,809	2,038,220	1,287,914	1,883,895	59%
Utility Bill ($)	$ 31,694	$ 24,058	$ 53,593	$ (21,899)	-69%
Emissions (metric ton CO2e)	188	128	172	16	8%
EUI (kBtu/ft2)	85	55	35	50	59%

Water Savings	Thousand Gal/day	Thousand Gal/Year	$/year	
Pre-Retrofit	1.5	536	$ 7,171	4/30/2019-5/11/2022
Post-Retrofit	0.4	131	$ 1,757	2/1/2024-1/7/2025
Savings	1.1	405	$ 5,413	

Rural Medical Clinic HVAC Description

- Pre-Retrofit HVAC system
  - Single zone DX-cooled, hot water heat air handling unit for lower level
  - Multizone DX-cooled, hot water heat air handling unit for upper level
  - Non-condensing natural gas boiler provides hot water to the AHU heating coils, cabinet heaters, convectors and unit heaters
  - All thermostats are pneumatic without any type of programmable control
- Post-Retrofit HVAC system
  - Replace all existing HVAC systems to air-cooled variable refrigerant flow units
  - Mechanical ventilation supplied through energy recovery ventilators

Rural Medical Clinic Annual Summary

Assumptions

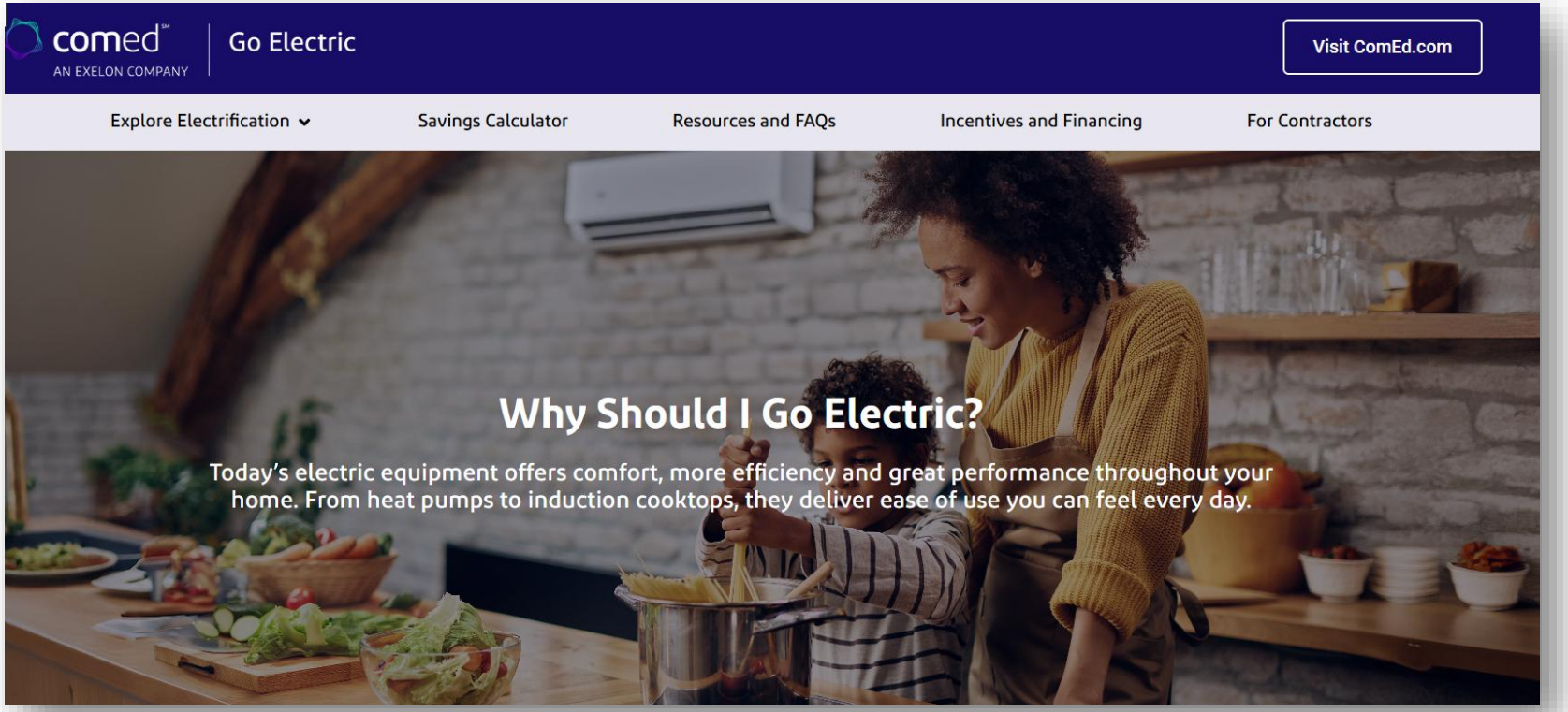
- Electricity Rate
  - 0.06 $/kWh
- Natural Gas Rate
  - 0.59 $/therm
  - $162.09/month (pre-retrofit)
- Emissions Rate
  - 0.0053 ton CO2eq/therm
  - 0.000371 ton CO2eq/kWh

	Pre-Retrofit (modeled)		Post-Retrofit (monitored)	Savings	
HVAC Weather	Existing TMY	Code TMY	VHE HVAC TMY	Existing – VHE HVAC TMY	
Electricity (kWh)	65,802	51,994	82,959	-17,157	-26%
Natural Gas (therm)	4,243	3,754	0	4,243	100%
Total Energy (kBtu)	648,769	552,832	283,056	365,713	56%
Utility Bill ($)	$ 8,490	$ 7,353	$ 5,114	$ 3,376	40%
Emissions (metric ton CO2e)	47	39	31	16	34%
EUI (kBTU/ft2)	63	53	27	35	56%

Go Electric Website Overview

https://GoElectric.ComEd.com

- Provide ComEd's residential customers with educational information for relevant electrification end uses including space conditioning, water heating, cooking, laundry, and outdoor end uses, to enable them to understand steps and decision-making when considering electrification in their home
- The latest phase of the Go Electric site was launched in September 2025
  - Provides customers with savings calculator tool to estimate bill impacts for heat pumps and heat pump water heaters
- Go Electric site includes information for contractors including why and how to get involved, and links to trainings and other resources

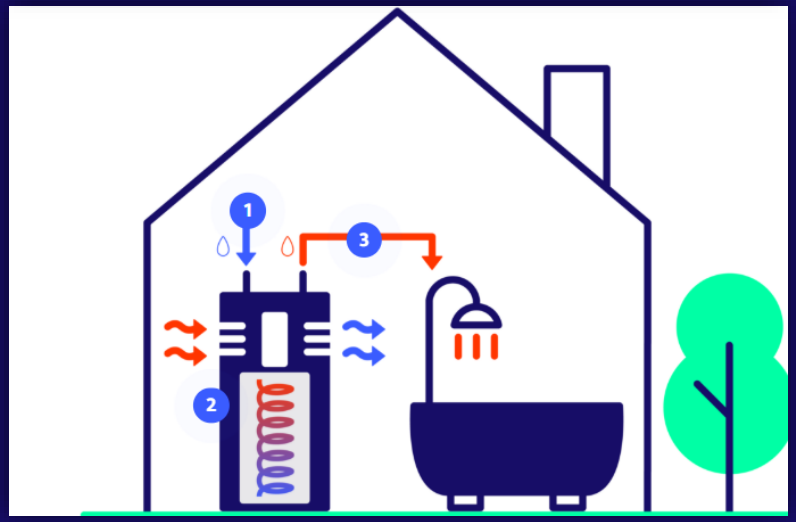


Go Electric Site Features

Heat Pump Water Heaters

How They Work

A heat pump water heater doesn't create heat—it moves it. It works like a refrigerator in reverse, pulling heat from the air around it and using it to warm your water. This process uses far less energy than traditional water heaters to keep your home supplied with hot water.



- Additional content on heat pump water heaters, including options for your home and information on how to use your heat pump water heater

Electric Appliances

Your path to a fully electric home doesn't stop at heating, cooling and hot water. From laundry to cooking to lawn care, today's electric appliances offer clean, efficient and powerful performance for every part of your routine.

Laundry

More efficient. Gentler on clothes.

Explore →

Cooking

Faster cooking, precision control, easy clean up—induction ranges transform mealtime.

Explore →

Outdoor Tools

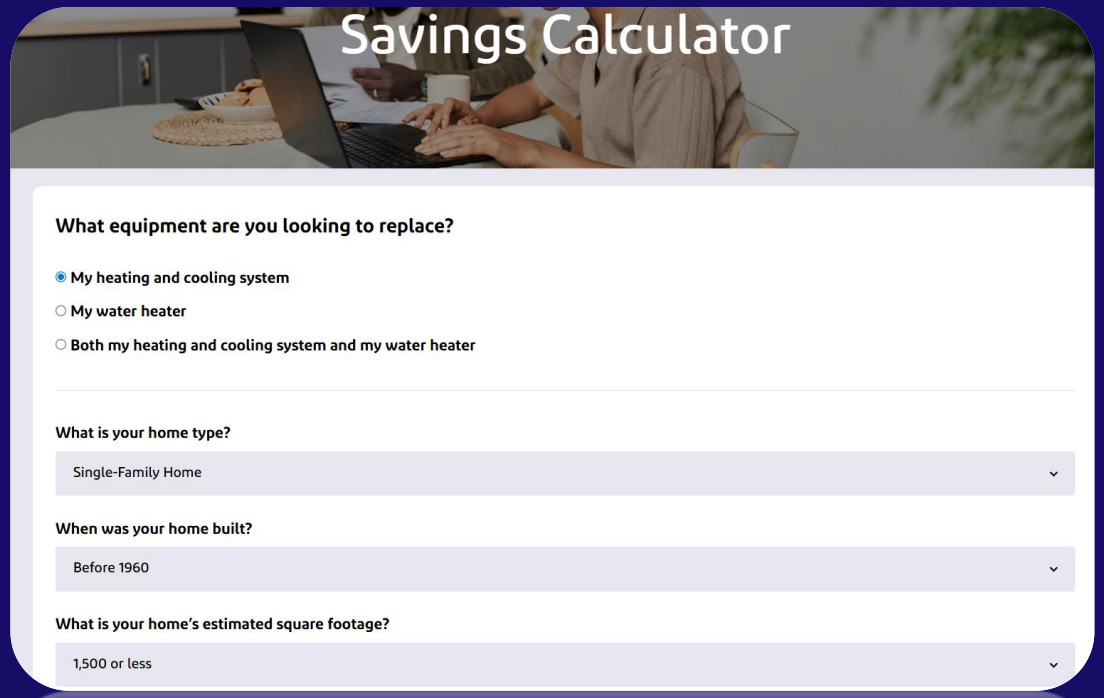
Make your garden and lawn care easier.

Explore →

- Site expansion includes information on heat pump dryers, induction cooktops, electric lawnmowers, and more! Providing the customer easy to electrify options throughout their home

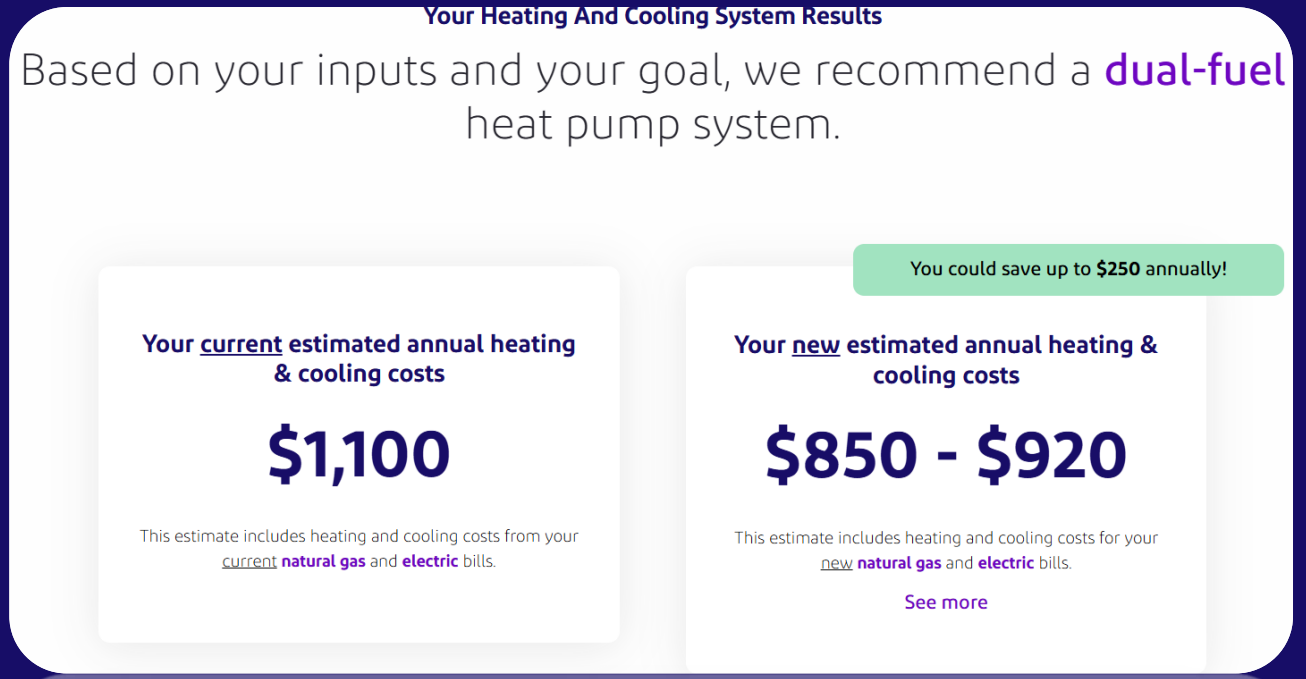
Go Electric Site Features

Savings Calculator – Inputs



- Provides customers with a bill savings estimate using specific characteristics of their home

Savings Calculator – Results



- Calculator estimates bill impacts in terms of annual savings, monthly savings, and avoided CO_2

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Thank you