
Partners in Energy

Town of Erie Beneficial Electrification Plan Workshop 3



AGENDA

Time	Item
8:30-8:40	Welcome and Grounding
8:40-9:10	Community Focus Area Overviews
9:10-10:00	Community Strategy Action Planning
10:00-10:30	Report out and target setting
10:30-10:35	Wrap Up and Next Steps
10:35-10:45	Break
10:45-11:30	Town Strategy Action Planning

WORKSHOP OBJECTIVES

- Revisit goals based on bottom up analysis
- Understand the scope and baseline of each focus area
- Develop draft strategy action work plans
- Discuss process for plan finalization



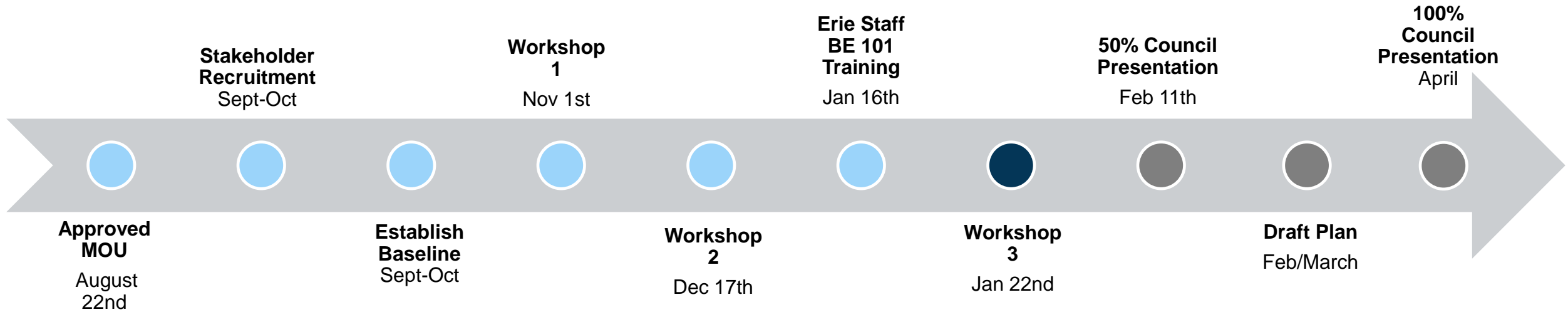


GROUNDING

WHAT HAVE WE DONE SO FAR?



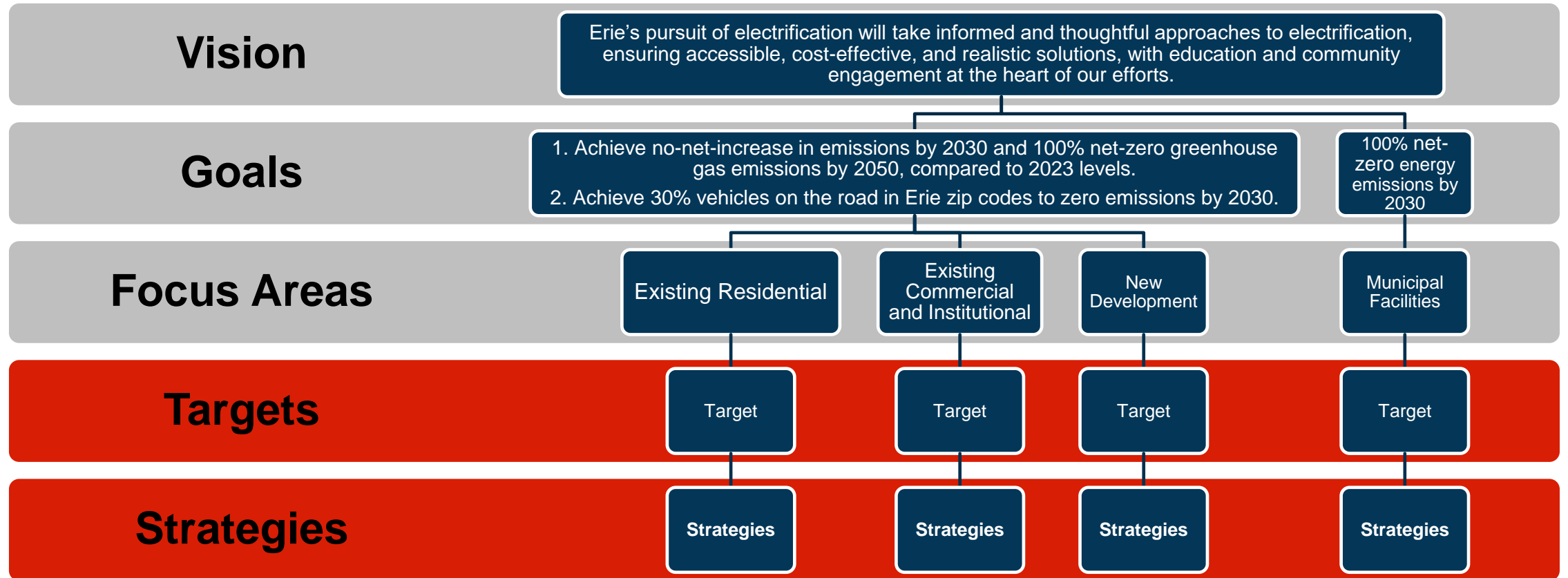
PLANNING TIMELINE



- Completed
- Current Stage
- Next Steps



PLAN STRUCTURE



POLLING QUESTIONS

- Link: Mentimeter
- Scan the QR code
- Go to Menti.com and enter:
4949 1867





COMMUNITY FOCUS AREA OVERVIEW

WHERE ARE WE NOW?





Photo courtesy of Erie Subdivision Facebook

EXISTING RESIDENTIAL

SINGLE-FAMILY HOMES AND SMALL MULTIFAMILY (UP TO 4 UNITS).

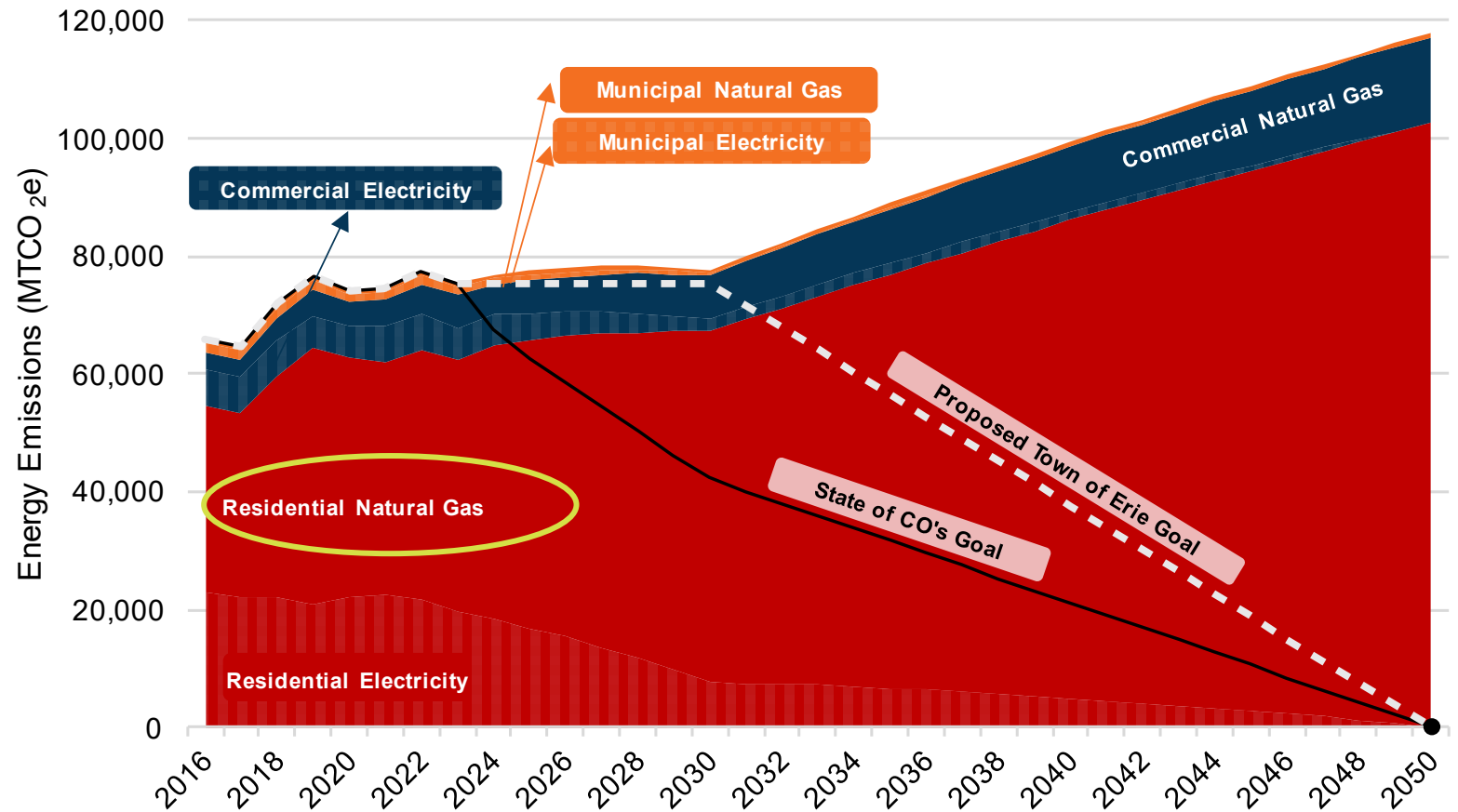
MAY INCLUDE LARGER MULTIFAMILY BUILDINGS IF THE UNITS ARE METERED SEPARATELY.

GOAL SUPPORTED

Achieve no-net-increase in emissions by 2030 and 100% net-zero greenhouse gas emissions by 2050, compared to 2023 levels.

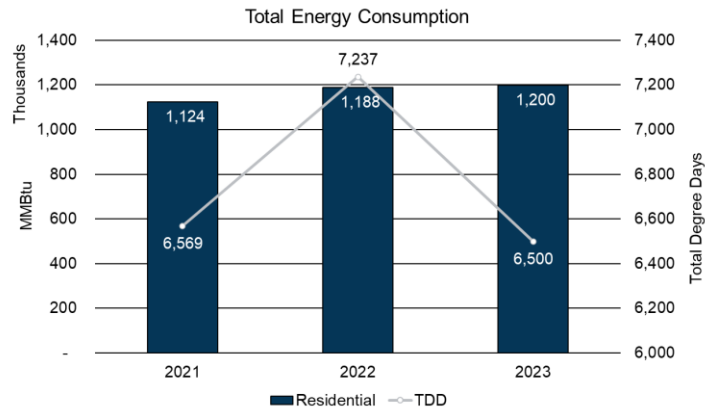
Other emissions will be addressed in the Climate Action Plan.

Town of Erie Energy Emissions Forecast

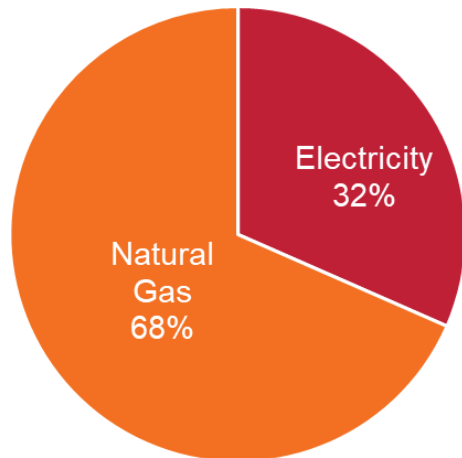


Energy Emissions graphed include buildings community-wide and town facilities

RESIDENTIAL ENERGY USE BASELINE



2023 Energy Use Breakdown: Residential
Total Energy (MMBtu): 1,199,755

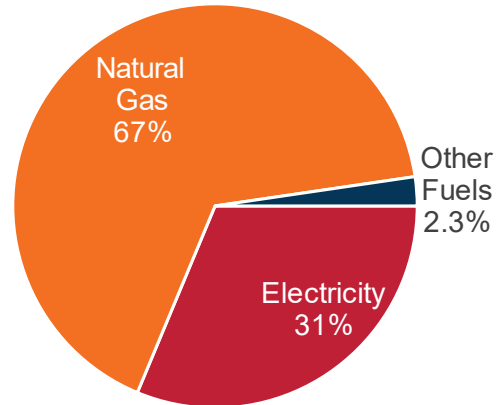


Key Observations:

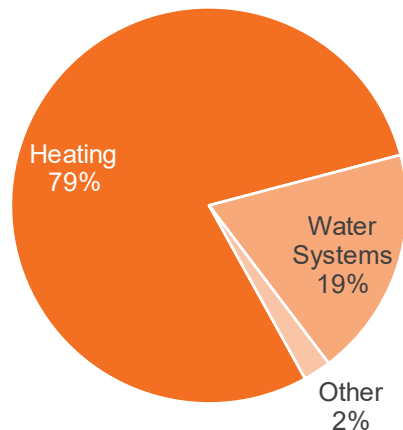
- Premise count is growing faster than energy use
 - Trend indicates a few potentials:
 - New homes are more energy efficient than older homes
 - Residents are improving older home efficiency
 - Residents are improving their personal energy practices
 - Residents are decreasing grid electricity dependence (e.g. via solar array generation)
- Erie residents rely heavily on natural gas. Reflecting on GHG emissions due to natural gas use (previous slide), a major reduction focus will need be on residential natural gas use to achieve goals.

RESIDENTIAL ENERGY END USE BREAKOUT BASELINE

Longmont City & Erie Town
Residential Energy Use: 1.86 TWh



Longmont City & Erie Town
Natural Gas End Use Breakout: 1.23 TWh



Note:

- This is regional data from an NREL dataset and not specific to Erie.
- Intended to indicate typical end uses

Natural Gas Key Observations:

- Space heating represents 80% of the natural gas use
→ greatest opportunity for beneficial electrification
- Important! Heating electrification should be accompanied with building envelope efficiency upgrades

HOME ENERGY SQUAD – 3 OPTIONS TO CHOOSE FROM!

Standard Visit

■ What Is It?

- A technician comes to your home and installs energy-saving equipment like a programmable thermostat, LEDs efficient showerheads, weatherstripping, and faucet aerators

Cost: Free for a limited time

(Typical cost: \$50)

Virtual Visit

■ What Is It?

- Virtual walk through using a smart phone or tablet
- Customized DIY efficiency kit shipped to your door

Cost: \$0

Plus Visit

■ What Is It?

- Everything in a standard visit PLUS
- A full energy audit with blower door test for leak detection
- Audit report with recommended action and financing information

Cost: \$100 for a limited time

(Typical cost: \$150)

Eligibility

- Xcel Energy gas or electric customer with own account
- Detached single family home or part of building with 4 or fewer units
- Renters eligible with prior approval from property owner

*Home Energy Squad will be available for FREE to income-qualified customers.

Want More Information?

xcelenergy.com/HomeEnergySquad

RESIDENTIAL XCEL ENERGY REBATES/PROGRAMS FOR ELECTRIFICATION

Heat pumps

- Air Source Heat Pumps: Up to \$750 per heating ton for cold climate, participating contractor-installed systems.
- Ground Source Heat Pumps: Up to \$1,100 per heating ton for participating contractor-installed retrofits

Heat pump water heater

- Up to \$800 for participating contractor-installed electric heat pump water heaters.

On-site solar incentives

- Net metering
- Solar*Rewards

EV rebate updates coming soon



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RESIDENTIAL UNITED POWER ELECTRIFICATION REBATES

UnitedEV Program:

- Lease a ChargePoint Home Flex Charger for \$19/month.
- Rebates up to \$1,000.

Heat Pump Rebates:

- Mini-Split Heat Pumps: Up to \$2,000 for contractor-installed systems.
- Ducted Air-Source Heat Pumps: Up to \$2,500 for cold-climate retrofits.
- Ground Source Heat Pumps: Up to \$2,500 for contractor-installed retrofits.

Electric Water Heater Rebates:

- Up to \$300 for heat pump water heaters.
- \$200 for desuperheater tank installations.

Electrification Wiring Rebates:

- \$250–\$500 for panel upgrades or wiring for heat pumps or water heaters.

Outdoor Power Equipment Rebates:

- Lawn mowers and snow blowers: \$75–\$150 based on cost.



RESIDENTIAL BOULDER COUNTY AND TOWN OF ERIE ELECTRIFICATION REBATES

Town of Erie

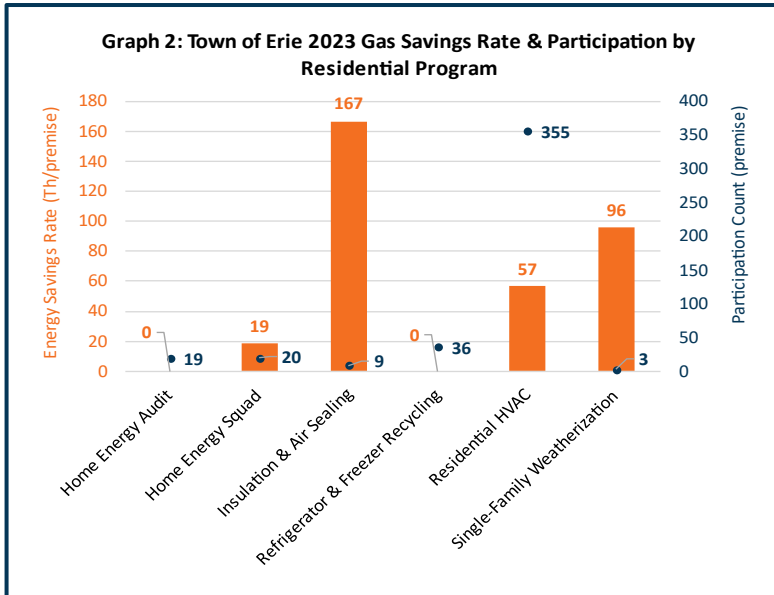
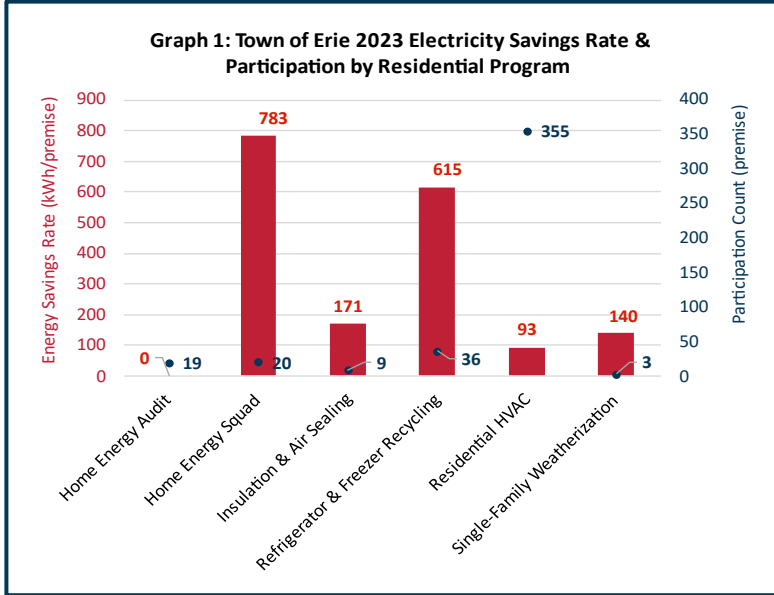
- Energy Efficiency Rebates
 - Rebates for different types of heat pumps vary from \$150 - \$500
 - Heat pump water heater - \$200
 - Evaporative cooler - \$50
 - Photovoltaic solar - \$500

Boulder County EnergySmart

- Insulation and Air Sealing
 - Receive 30% of all projects costs up to \$300
 - Extra \$100 rebate for completing exterior top plate air sealing in conjunction with attic insulation and air sealing
- Appliances and HVAC Rebates
 - Rebates for different types of heat pumps vary from \$100 to \$400
 - \$100 electrical panel upgrade rebate
- Income-qualified rebates
 - Additional rebates for Boulder County residents whose household earns 100% of Area Median Income (AMI) or less



RESIDENTIAL ENERGY PROGRAM PARTICIPATION BASELINE



Electricity Key Observations:

■ Highest Savings Rate

1. Home Energy Squad
2. Refrigerator & Freezer Recycling
3. Insulation & Air Sealing
4. Single-Family Weatherization

■ Participation

- [same as for natural gas]

Natural Gas Key Observations:

■ Highest Savings Rate

1. Insulation & Air Sealing
2. Single-Family Weatherization
3. Residential HVAC
4. Home Energy Squad

■ Participation

- High participation for Resi. HVAC
- Low participation
 - Single-Family Weatherization
 - Home Energy Squad

Note: The graphs above only represent 2023 Xcel Energy program participation savings for Town of Erie.

RESIDENTIAL STRATEGIES & TARGETS

Draft Strategies

- Encourage single family residents to get a home energy audit through Town-led incentives and education
- Connect single family homeowners with information to support them along their electrification journey

Preliminary Targets

Short-term 2025 Target

- Continue Home Energy audit momentum targeting 45 audits in 2025 (5% increase).
- At least five homes install a heat pump (HVAC) or heat pump water heater

Medium-term 2030 Target

- Reduce residential natural gas use in existing buildings by 300,000 therms (~140 homes per year or ~700 total homes) through energy efficiency and efficient fuel switching.





EXISTING COMMERCIAL AND INSTITUTIONAL

INCLUDES ALL BUILDINGS IN ERIE THAT ARE NOT RESIDENTIAL

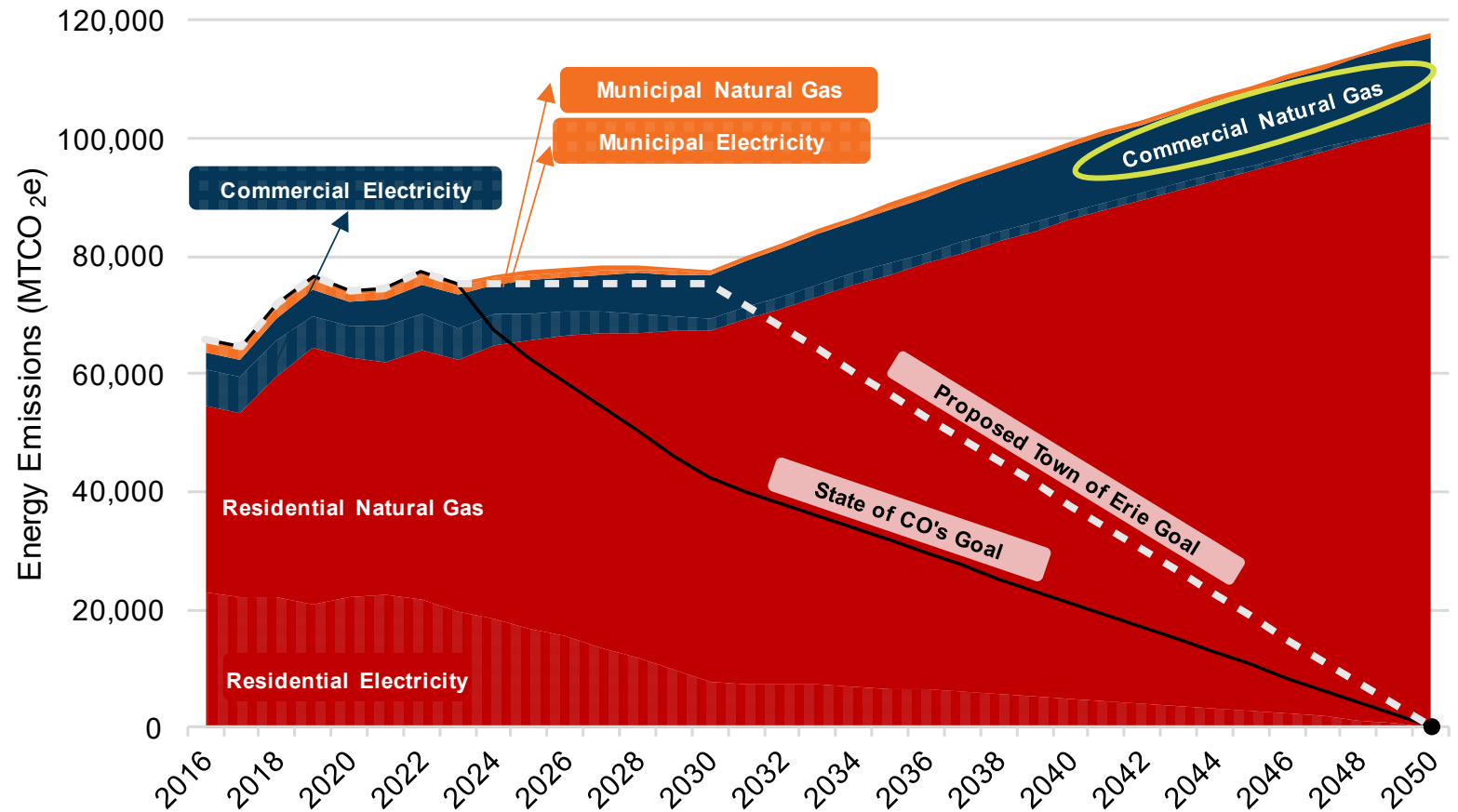
TYPICALLY INCLUDES LARGE MULTIFAMILY (OVER 4 UNITS).

GOAL SUPPORTED

Achieve no-net-increase in emissions by 2030 and 100% net-zero greenhouse gas emissions by 2050, compared to 2023 levels.

Other emissions will be addressed in the Climate Action Plan.

Town of Erie Energy Emissions Forecast

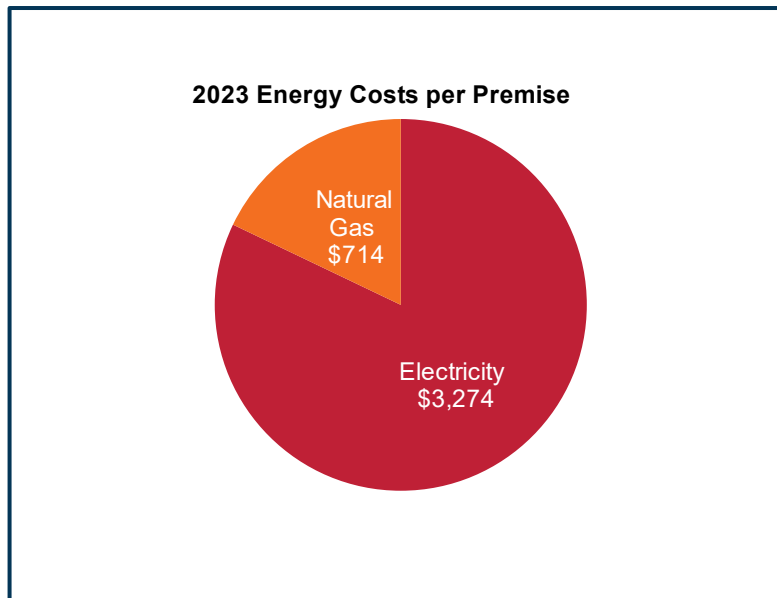
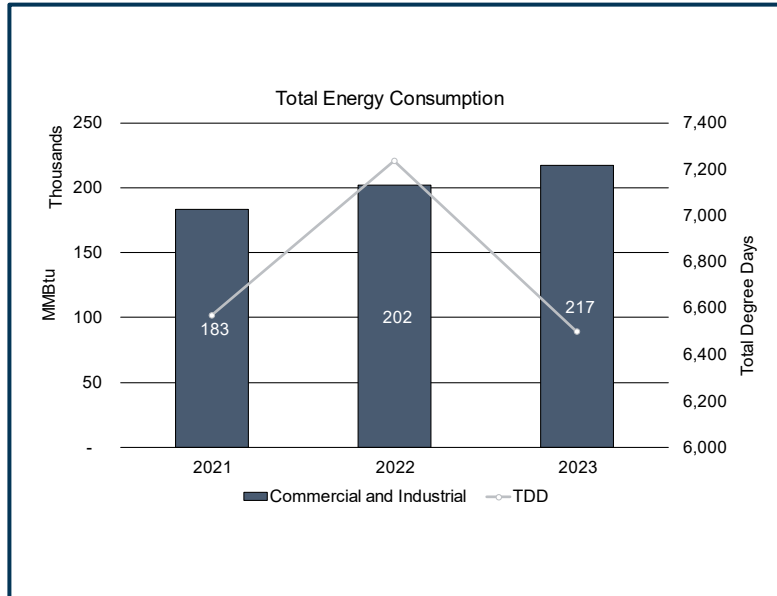


Energy Emissions graphed include buildings community-wide and town facilities

COMMERCIAL AND INSTITUTIONAL ENERGY USE BASELINE

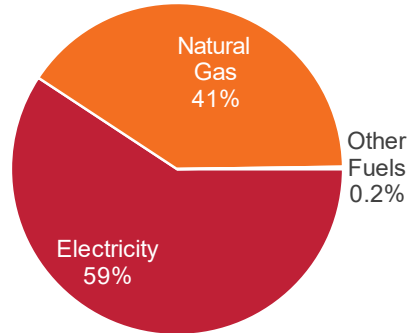
Key Observations:

- Despite a decline in premise count 2021-2023, total energy use has increased (not explained by weather). Does this present an energy efficiency opportunity?
- Electricity presents a higher average cost per business, which may make owners hesitant to electrify. Highlights the importance of pairing electrification and energy efficiency.

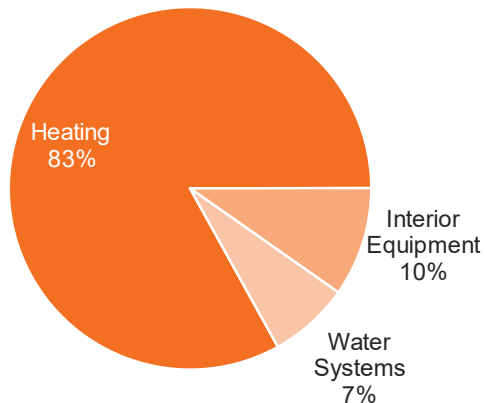


COMMERCIAL AND INSTITUTIONAL ENERGY END USE BREAKOUT BASELINE

Longmont City & Erie Town
Commercial Energy Use: 420 GWh



Longmont City & Erie Town
Natural Gas End Use Breakout: 170 GWh



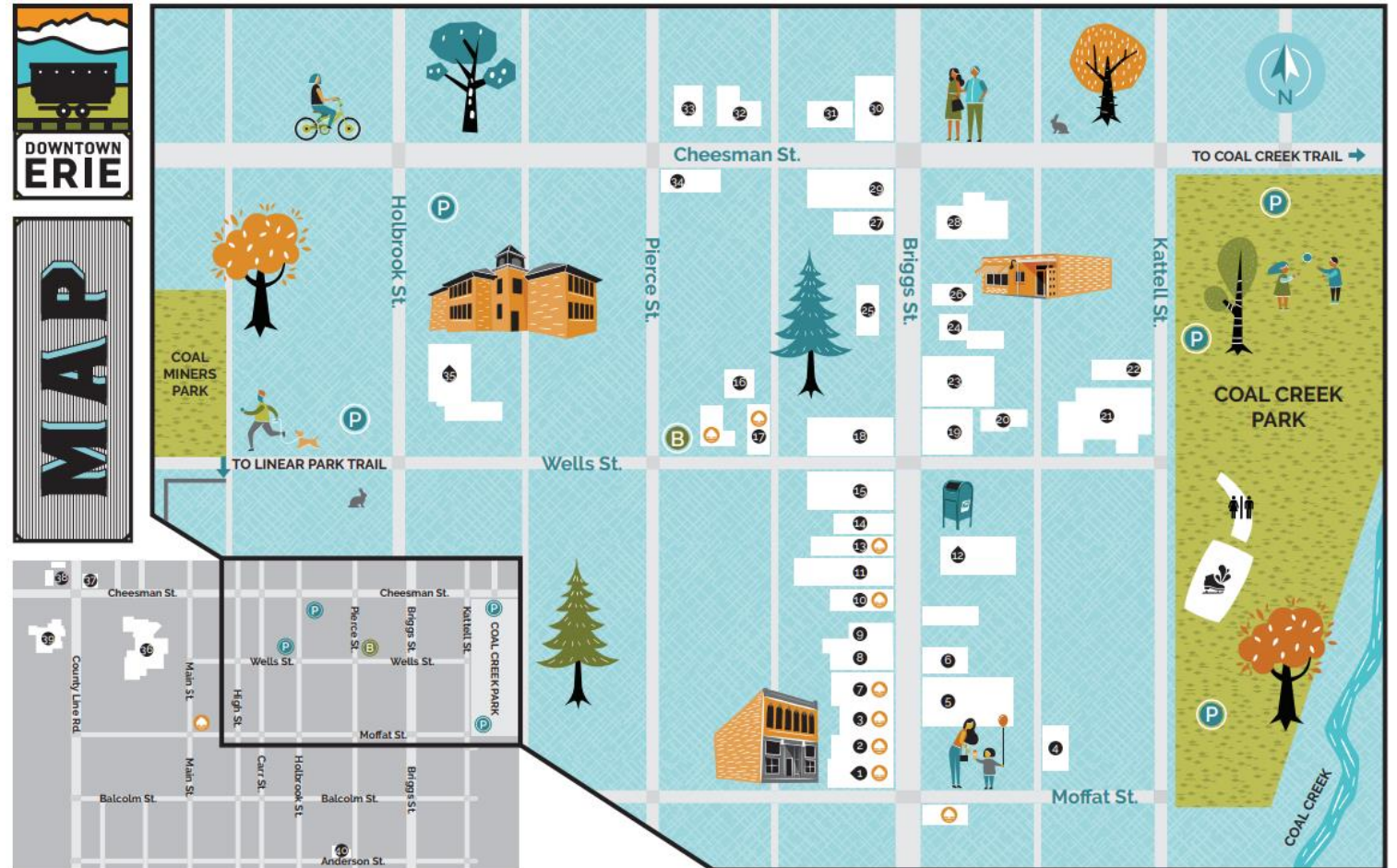
Key Observations:

- Space heating represents most of the natural gas use, so is the most impactful opportunity for beneficial electrification.

Note: This data is from an NREL dataset and not specific to Erie. Intended to provide typical end use breakout information

MAJOR COMMERCIAL OPPORTUNITIES

- Top Employers
 - St. Vrain Valley SD
 - Town of Erie
 - King Soopers
 - Safeway
 - Lowe's
- Briggs street



COMMERCIAL XCEL ENERGY REBATES/PROGRAMS FOR ELECTRIFICATION

Heat pumps

- Air Source Heat Pumps: Up to \$2,200 for cold climate, participating contractor-installed systems.
- Ground Source Heat Pumps: Up to \$1,100 per heating ton for participating contractor-installed retrofits

Heat pump water heater

- Up to \$2,000 for participating contractor-installed electric heat pump water heaters.

On-site solar incentives

- Net metering
- Solar*Rewards

EVSI rebates

- Infrastructure, Charger, New Construction rebates
- Standard rebates and enhanced rebates taking place in a Disproportionately Impacted Community (DIC)



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UNITED POWER COMMERCIAL REBATES



LED Lighting:

- 20% of cost for retrofitting existing fixtures (e.g., interior/exterior lights, grow lights). DLC/ENERGY STAR® certified only.

Industrial Electric Motors:

- \$4/hp for new/retrofit (min. 10 hp). \$1/hp for irrigation motor wiring replacing fossil-fuel engines.

Variable Speed Drives:

- 25% of cost for motors 25 hp+.

Electric Forklifts & Pallet Jacks:

- 50% of cost (Forklifts: max \$2,500, Pallet Jacks: max \$750).

Public EV Chargers:

- 50% of cost (max \$2,000). Must be public, network-capable, and code-compliant.

**\$10,000 annual rebate cap per member. Apply within 90 days of purchase/installation.*



COMMERCIAL BOULDER COUNTY AND TOWN OF ERIE REBATES

Town of Erie

- Energy Efficiency Rebates
 - Rebates for different types of heat pumps vary from \$150 - \$500
 - Heat pump water heater - \$200
 - Evaporative cooler - \$50
 - Photovoltaic solar - \$500

Boulder County PACE

- Standard and Equity rebate amounts
- HVAC – limits apply
 - Different types of heat pumps; standard: up to \$2,000/ton; equity: up to \$4,000/ton
- Hot Water – limits apply
 - Heat pump water heater – standard: up to \$1,500/ton; equity: up to \$3,000/ton
 - Electric Resistance water heater - standard: up to \$1,000/ton; equity: up to \$2,000/ton
- Insulation and Window Film rebates
- Engineering Design, Feasibility Plan, Infrastructure upgrades rebates

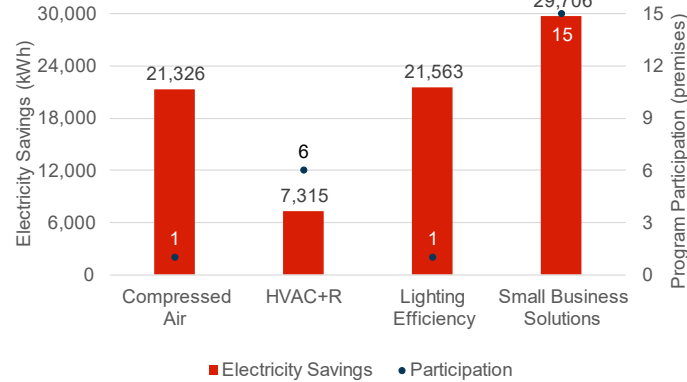


COMMERCIAL AND INSTITUTIONAL ENERGY PROGRAM PARTICIPATION BASELINE

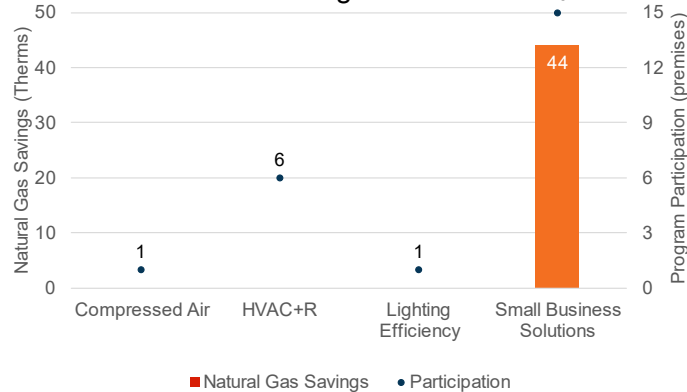
Key Observations:

- Small Business Solutions participation has been consistent the last 3 years.
- High electricity savings per participant for lighting efficiency and compressed air.
- There were 6 HVAC projects last year but no natural gas savings, so not likely heat pump projects.

Graph 1: 2023 Electricity Savings (kWh) and Program Participation by Business Program



Graph 2: 2023 Natural Gas Savings (Therms) and Program Participation by Business Program



Note: the graphs above only represent 2023 Xcel Energy program participation savings for Town of Erie

COMMERCIAL AND INSTITUTIONAL STRATEGIES & TARGETS

Draft Strategies

- Conduct foundational research to learn who are the actual building owners and who has power to pull the levers
- Explore opportunities to better connect all businesses with advising and financial resources to support them on electrification journey
- Partner with local institutions to support efficiency and electrification projects

Preliminary Targets

Short-Term 2025 Target

- At least 1 commercial property in Erie completes a space or water heating electrification pilot project in 2025.
 - Stretch goal: 5 commercial properties

Medium-term 2030 Target

- Complete energy efficiency projects with local businesses to maintain energy use at 1,000 MMBtu per premise.





By Dwight Burdette - Own work, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=16199934>

NEW CONSTRUCTION

NEW BUILDING CODE.

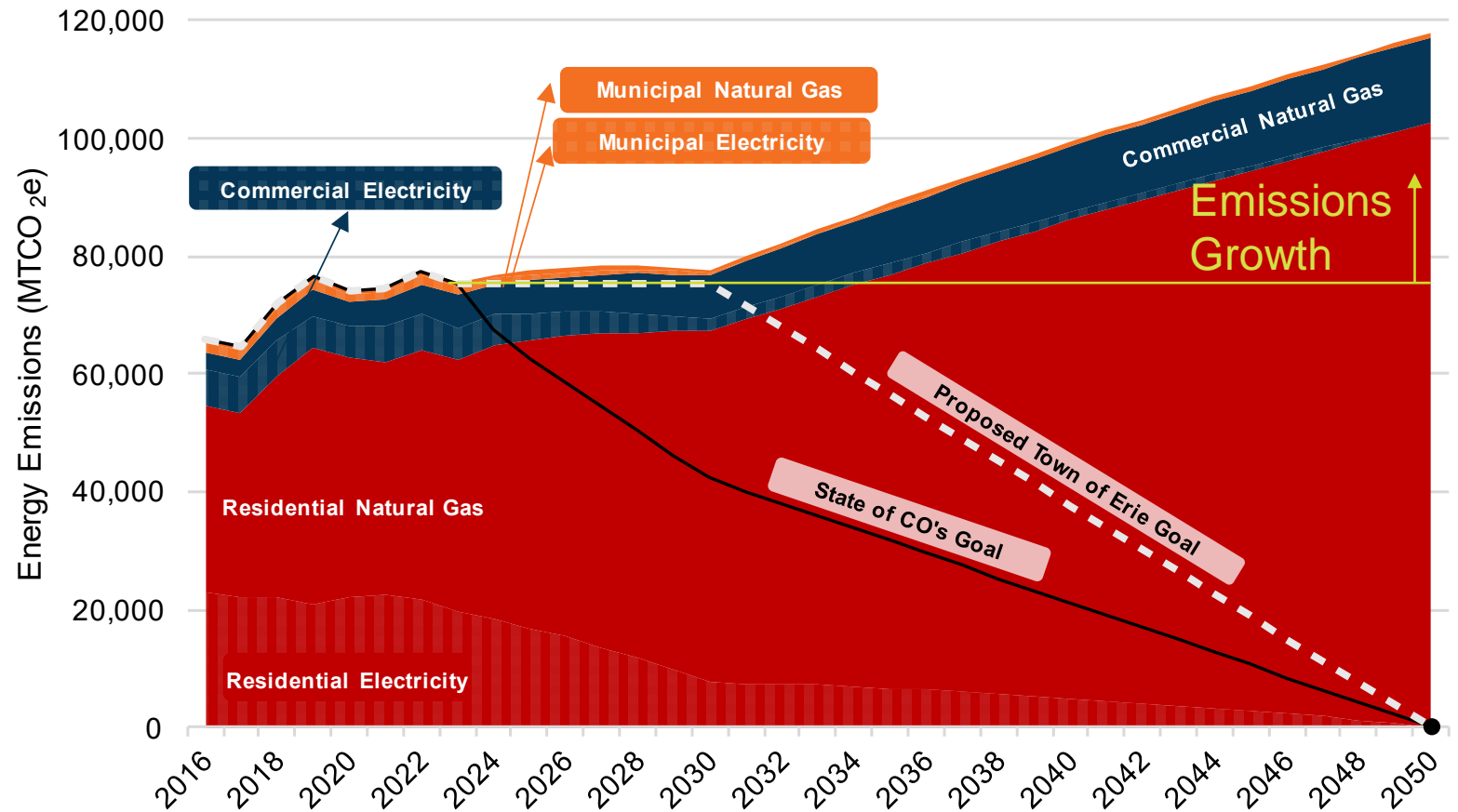
INCENTIVES FOR ABOVE CODE CONSTRUCTION.

GOAL SUPPORTED

Achieve no-net-increase in emissions by 2030 and 100% net-zero greenhouse gas emissions by 2050, compared to 2023 levels.

Other emissions will be addressed in the Climate Action Plan.

Town of Erie Energy Emissions Forecast



Energy Emissions graphed include buildings community-wide and town facilities

XCEL ENERGY RESIDENTIAL NEW HOME CONSTRUCTION PROGRAM

Bottom line:

- All-electric new homes that meet both ENERGY STAR® and Zero Energy Ready requirements **may lower energy bills by 18%** and **reduce energy use by 31%**.
- Increased comfort
- Lower energy bills
- Healthier indoor spaces
- Higher resale value
- Many rebates are available for high-performance appliances and building envelope upgrades

Program Requirements

- ✓ Meet ENERGY STAR® NexGen and Zero Energy Ready Homes standards including the following:
- ✓ Home Energy Rating System® (HERS) index verification
- ✓ ENERGY STAR v3.2 building envelope
- ✓ High performance, all-electric heating and appliances
- ✓ Prewiring for a Level 2 electric vehicle charger in the garage
- ✓ No need for natural gas service

Source: <https://co.my.xcelenergy.com/s/residential/home-services/energy-star-new-homes>



XCEL ENERGY COMMERCIAL NEW BUILDING PROGRAMS

■ What Programs Are Available

- Data Center Design Assistance program
- Energy Design Assistance (EDA) program of comprehensive energy modeling for construction/renovation >50,000 sq. ft.
- Energy Efficient Buildings (EEB) program to identify energy-saving opportunities in new construction/renovation <50,000 sq. ft.
- New Construction Lighting program to maximize lighting efficiency and rebates in new construction/renovation

■ How Much Does It Cost?

- Much/all is free

■ What Are the Benefits?

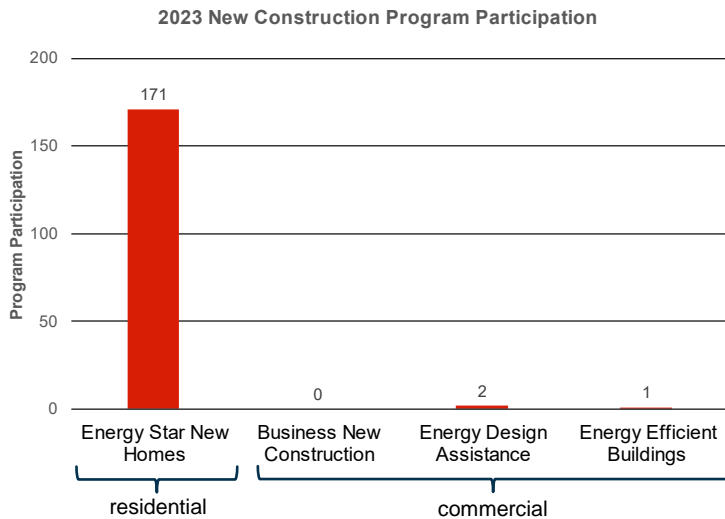
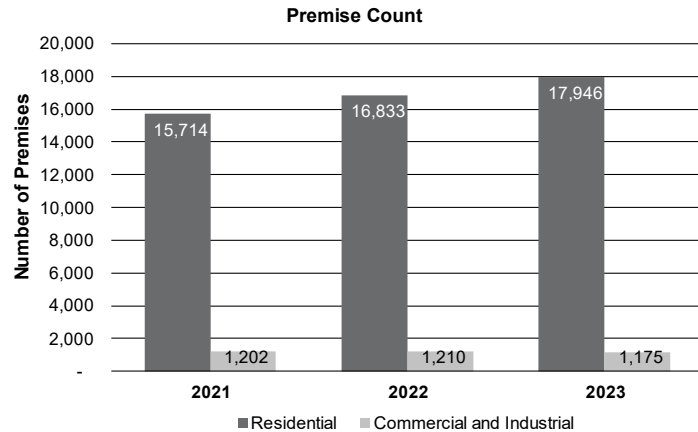
- Varies, but some examples include
 - \$30,000 of free energy modeling services (EDA)
 - \$500 per kW saved (EEB)

■ Want More Information?

- <https://co.my.xcelenergy.com/s/business/new-building-programs>



NEW CONSTRUCTION ENERGY USE BASELINE



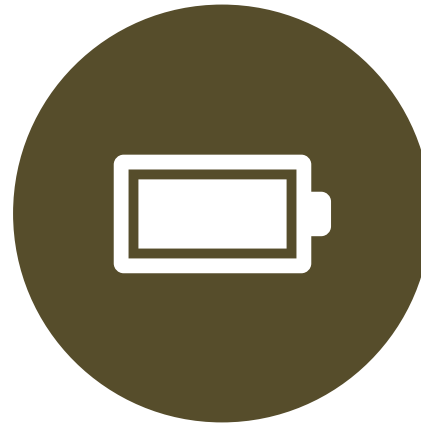
Key Observations:

- Growth only seen in the residential sector, so it presents the largest opportunity.
- The Energy Star new homes participation represents about 15% of the new residential premises.
- Limited participation in commercial programs aligns with no commercial premise growth.

NEW CONSTRUCTION POLICIES IN PLACE



IECC CODE WORK DONE TO
DATE



ELECTRIC PREFERRED



SUSTAINABILITY PLAN
COMMITMENT TO UPDATING
EVERY 3 YEARS

NEW CONSTRUCTION STRATEGIES & TARGETS

Draft Strategies

- Identify opportunities to update building codes to align with Erie's electrification goals
- Work with horizontal developers (e.g., no gas infrastructure) and/or builders to create pathways for offering energy efficient, all-electric buildings

Potential Targets

Short-term 2025 Target

- Connect at least 1 commercial and 1 residential new development with energy efficiency design assistance programs.

Medium-term 2030 Target

- Reduce residential natural gas use in new construction by 300,000 therms (~140 homes per year or ~700 total homes) through energy efficiency and efficient fuel switching.



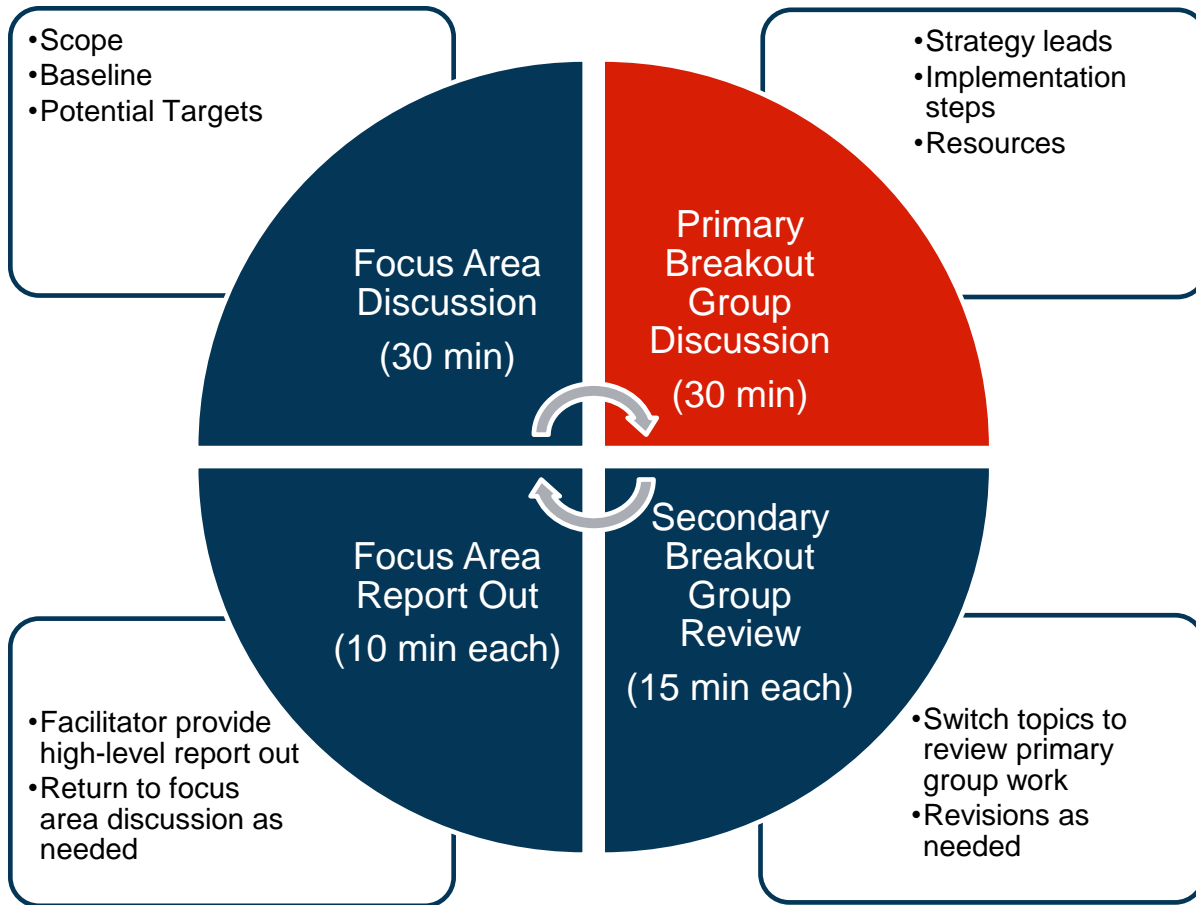


STRATEGY ACTION PLANNING

WHAT HAVE WE DONE SO FAR?



PRIMARY BREAKOUT GROUP DISCUSSION



Primary Breakout Groups

Existing Commercial & Institutional (Andrea)

- Dave Hatchimonji
- Ghita Carrall
- Curtis Leonard
- Dylan King
- Kevin Kildow

Existing Residential (Andrew)

- Miles Hoffman
- Emma Marino
- John Firouzi
- Eryka Thorley
- MJ Adams
- Nick Cole
- Tyler Bain

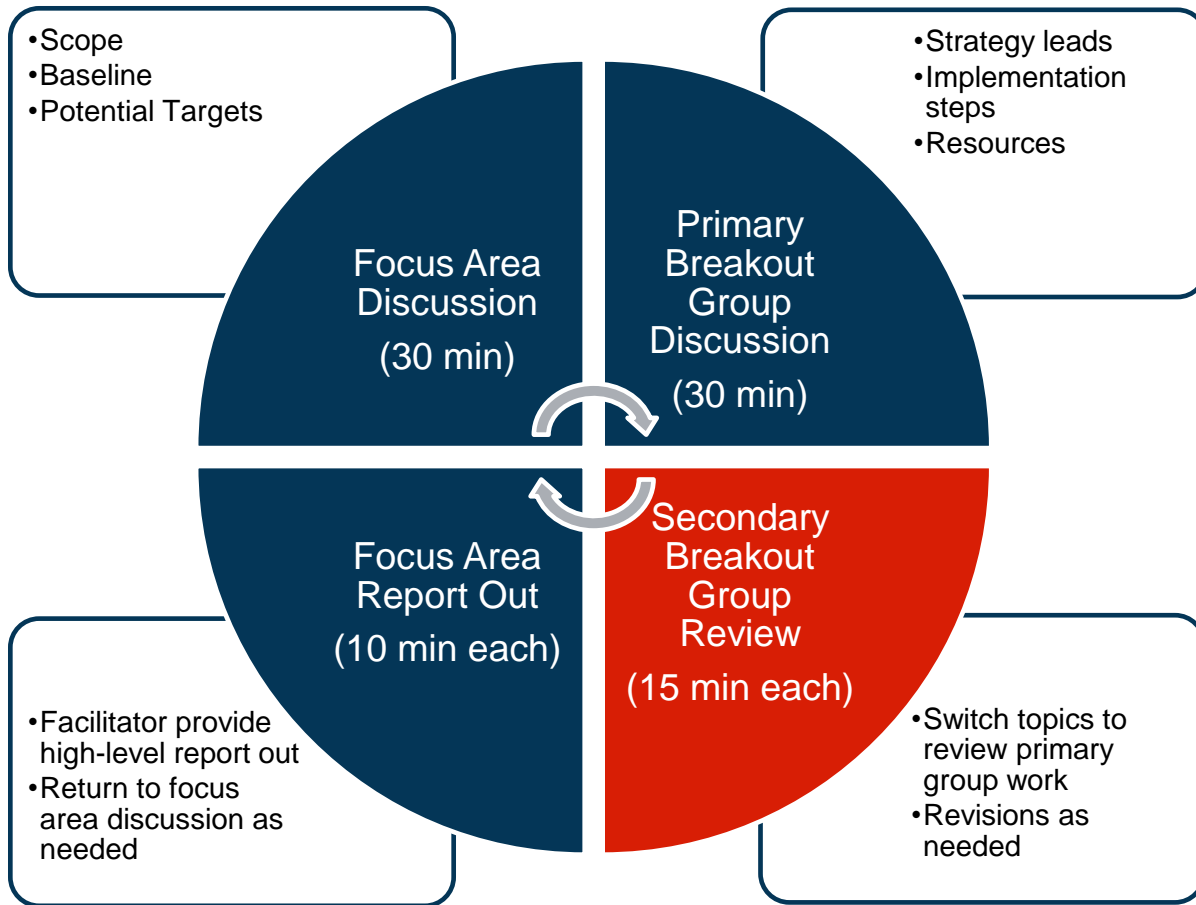
New Construction (Sarah)

- David Pasic
- Aly Burkhalter
- Josh Cambell
- Bill Meier



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SECONDARY BREAKOUT GROUP DISCUSSION

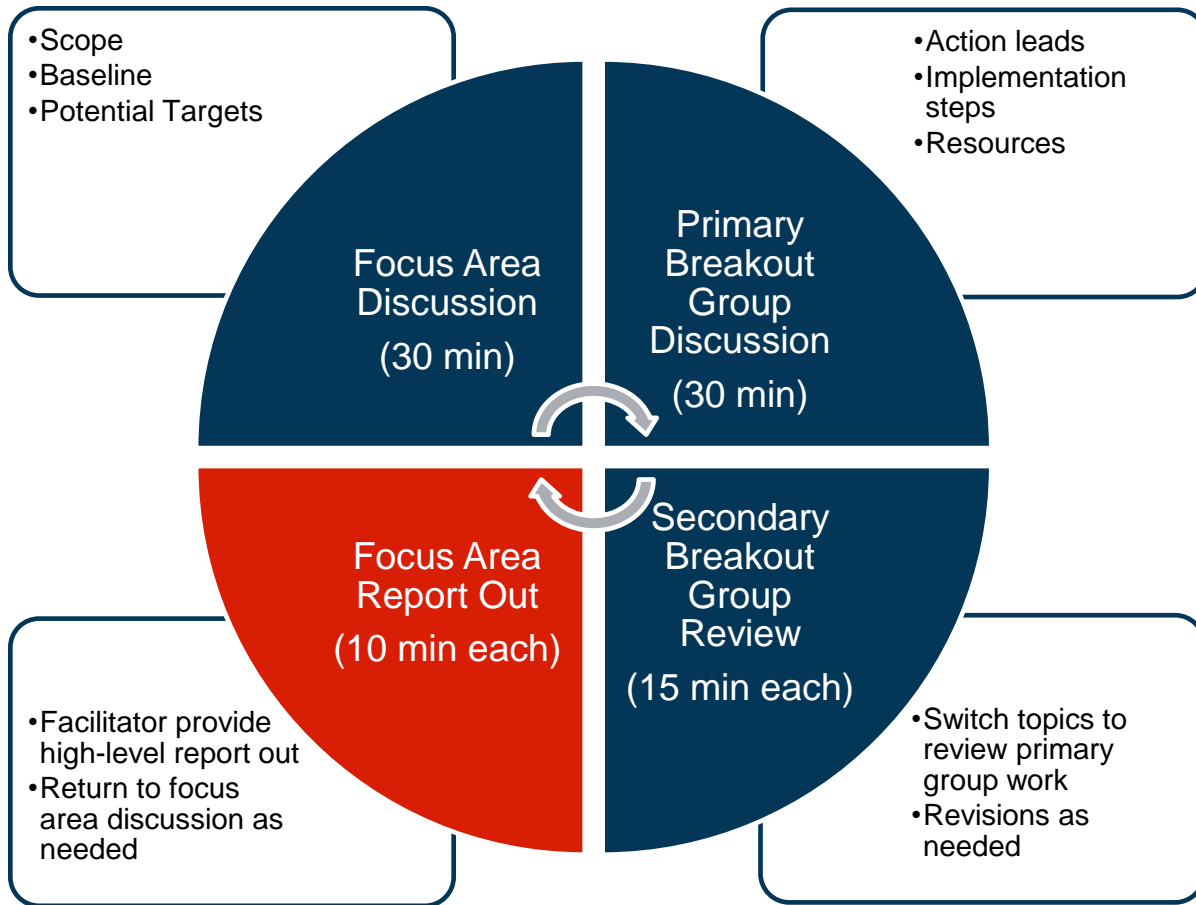


Secondary Breakout Groups

Facilitator stays

Participants rotate clockwise one station

PRIMARY BREAKOUT GROUP DISCUSSION



Group Facilitator:

1. For each strategy share:

- Lead/co-lead responsible
- Resources to leverage
- Key considerations

2. Make a target recommendation

- Either support target suggested at the beginning or recommend an adjustment.

WRAP UP AND NEXT STEPS

- Council Presentation: February 11th
- Plan Review Schedule

What	Due EOD
Plan shared for Xcel Energy Review	2/10
Xcel Energy Review Due	2/17
Plan shared for PM Team review	2/19
PM Team review due	2/26
Plan shared for Stakeholder team review	3/5
Stakeholder team review due	3/19
Final plan	3/26

Homework:

1. Attend Council presentation 2/11
2. Carve out time to review plan 3/5-3/15



BREAK!





By Dwight Burdette - Own work, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=16199934>

TOWN LED

TOWN-LED FOCUS AREA

Focus Area Discussion
(10 min)

- Scope
- Baseline
- Potential Targets

Group Discussion
(30 min)

- Strategy leads
- Implementation steps
- Resources

Focus Area Report Out
(5 min)

- Facilitator summarize outcomes
- Return to focus area discussion as needed



Full Group Welcome

Town Led (Sarah)



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TOWN-LED BACKGROUND: FACILITIES ELECTRIFICATION

Existing or Near Term

- What electric commitments have Town departments made?
- What is currently in planning for electrification?
- What electrification efforts have been funded?

Future Looking

- What electrification efforts could potentially be funded?
- What's not on the radar?
- What doesn't make sense?



TOWN LED BACKGROUND – FLEET ELECTRIFICATION

Fleet Electric Vehicles

- How many EVs are in the fleet currently
 - Leased 5 EVs in 2024
- Fleet EV procurement policy
 - Set goal of 30 new all electric vehicles by 2030
 - light-duty and heavy-duty - 100% of all vehicles to be electric by 2050.

Town-led Public Charging

- Town of Erie public charging goals
 - 25 x 2025 goal established, slated for 35 x 2025!
- Town of Erie public charging policy
- Town of Erie fleet-specific charging

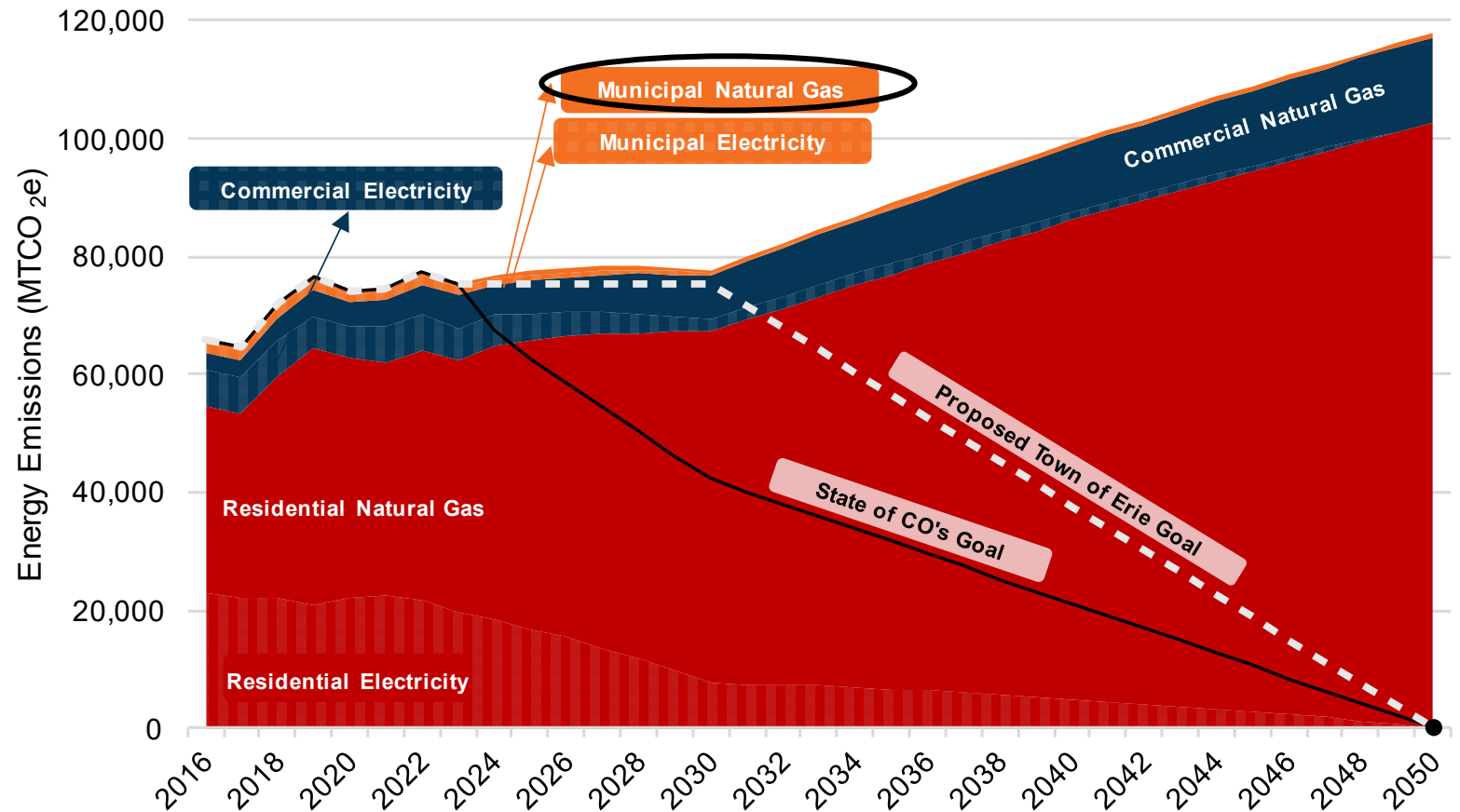


GOAL SUPPORTED

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Other emissions will be addressed in the Climate Action Plan.

Town of Erie Energy Emissions Forecast



Energy Emissions graphed include buildings community-wide and town facilities

TOWN LED STRATEGIES & TARGETS

Draft Strategies

- Serve as convener for information and resources
- Decarbonize town of Erie fleet
- Decarbonize Town of Erie Facilities
- Strategically invest in Town-owned public charging to fill gaps

Preliminary Targets

Short-Term 2025 Target

- One new electric facility
- 35 public chargers by 2025

Medium-term 2030 Target

- Net-zero energy use by 2030
- 50% of all new light duty vehicles electric by 2030

Long-term 2050 Target

- At least 95% renewable energy sourced "Implementing actions to ensure that, by 2050, renewable energy accounts for at least 95% of all energy use attributable to all sectors in the Town"



FACILITIES FULL TEAM DISCUSSION

Group Facilitator:

1. For each strategy share:

- Lead/co-lead responsible
- Resources to leverage
- Key considerations

2. Make a target recommendation

- Either support target suggested at the beginning or recommend an adjustment.





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