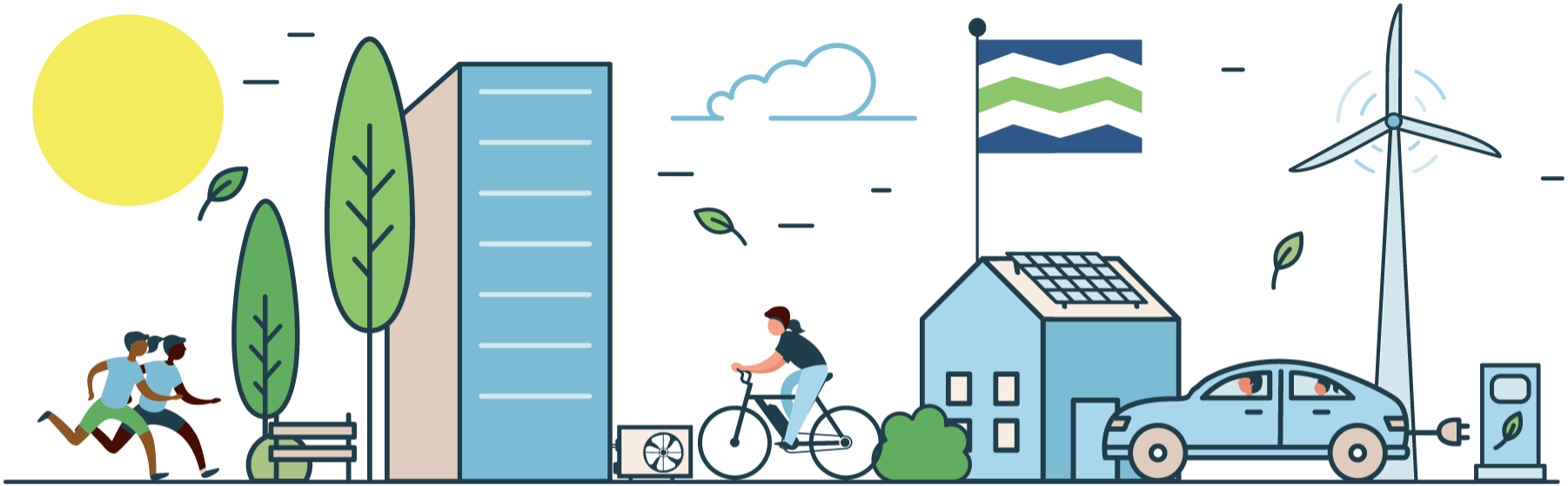

NET ZERO ENERGY

BURLINGTON VERMONT

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BURLINGTON VERMONT

About Burlington Electric Department (BED)

Burlington's municipal electric utility

- Public power since 1905
- 123 employees, including the McNeil Generating Station; 86 are IBEW members
- Third-largest electric utility in Vermont

21,800+ customers

- 17,800 residential, 4,000 commercial and industrial
- 5,500-6,000 residential accounts turn over each year

Electricity facts:

- Summer peak: ~65 MW; annual energy use: ~330,000 MWH
- 100% of power from renewable generation as of 2014

NET ZERO ENERGY
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2030 Vision: Make Burlington a Net Zero Energy city by eliminating fossil fuel usage across electric, thermal, and ground transportation sectors.

- The City Council adopted the Net Zero Roadmap in September 2019.
- Burlington's Net Zero goal is the most ambitious local climate change plan in the nation that BED is aware of, recognized by the Smart Electric Power Alliance as *the "first US Net-Zero 2030 plan."*
- All Departments of the City play a role in supporting implementation.
- Synapse Energy Economics updates the Roadmap progress data, drawn from BED, VGS, DMV, and Vermont and Chittenden County travel data.

www.burlingtonelectric.com/nze

Emery Nichols, Ms. Rochman Champlain Elementary

NET ZERO ENERGY
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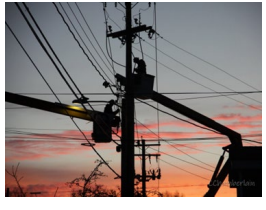
2025 Net Zero Energy Roadmap Update Highlights

- Burlington's greenhouse gas emissions in ground transportation and thermal/buildings sector **down 19% in 2024** relative to 2018 baseline. Emissions in these sectors are **2.8% lower in 2024** than updated 2023 emissions numbers.
- Comparatively, Vermont gasoline/diesel sales were up in 2024, and the State projected no significant change in overall thermal/transportation emissions from 2023-2024. U.S. overall emissions change 2023-2024 also projected to be flat.
- Burlington seeing fewer vehicle registrations, and higher percentage of EV/PHEV vehicles in fleet with 5.7% of all light duty vehicles registered.
- Reductions driven by thermal/buildings sector, with **natural gas consumption in 2024 at its lowest levels** since Roadmap tracking started in 2018.



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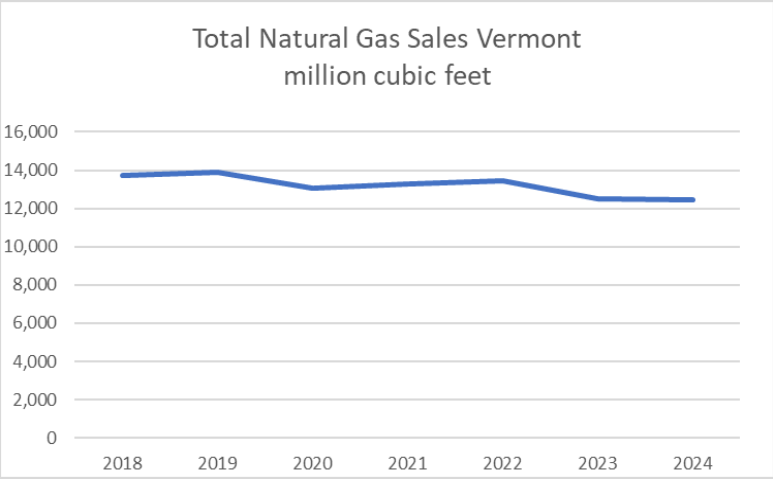
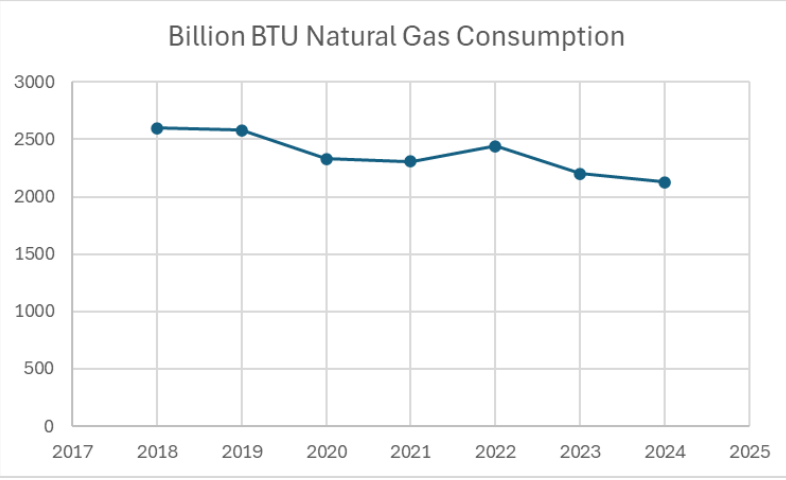
Burlington's progress on thermal sector/buildings is ahead of state pace

Vermont Natural Gas Sales
(not weather normalized)
9.4% reduction 2018-2024



Burlington Natural Gas Consumption (including RNG)
(not weather normalized)
18.1% reduction 2018-2024



https://eanvt.org/wp-content/uploads/2024/06/Thermal-fuels-research-paper-June-20-2024-1.pdf with updated 2024 data included in chart

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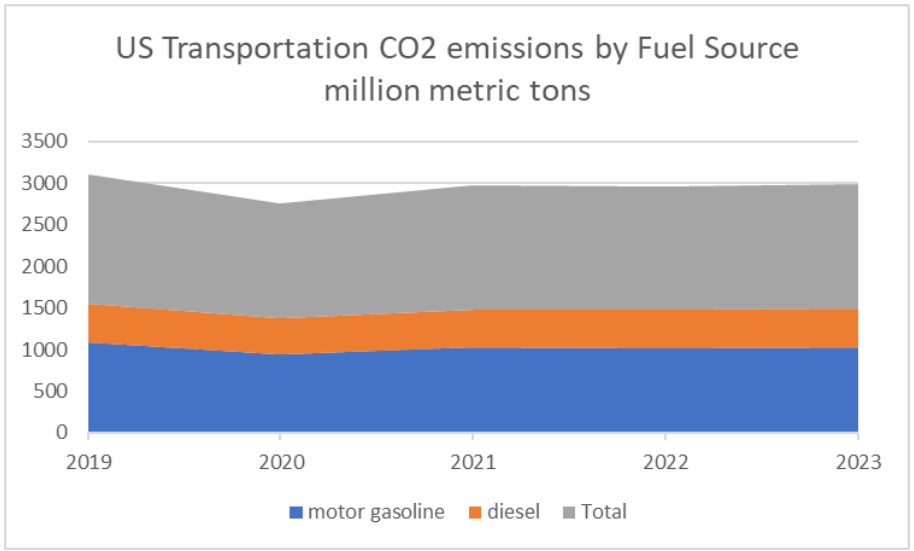
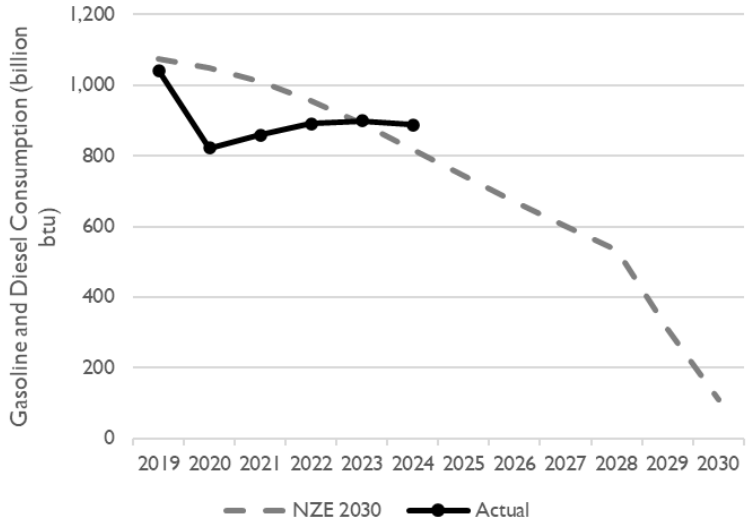
Burlington's progress on ground transportation is ahead of national pace

U.S. Motor Gasoline and Diesel CO_2 Emissions
4% reduction 2019-2023



https://www.eia.gov/environment/emissions/carbon/

Burlington Gasoline & Diesel Consumption
14.8% reduction 2019-2024



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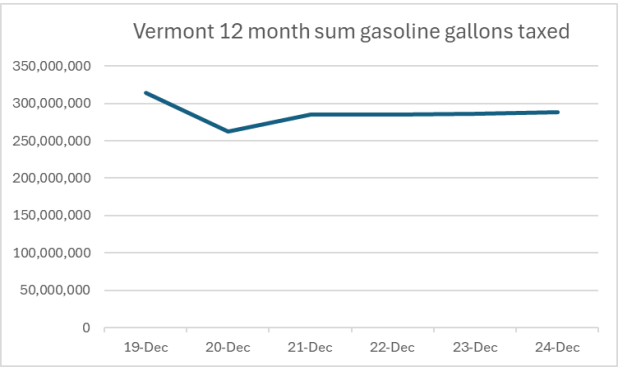
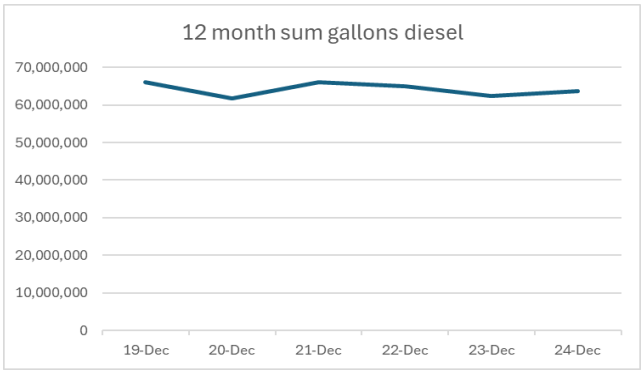
Burlington's progress on ground transportation is ahead of state pace

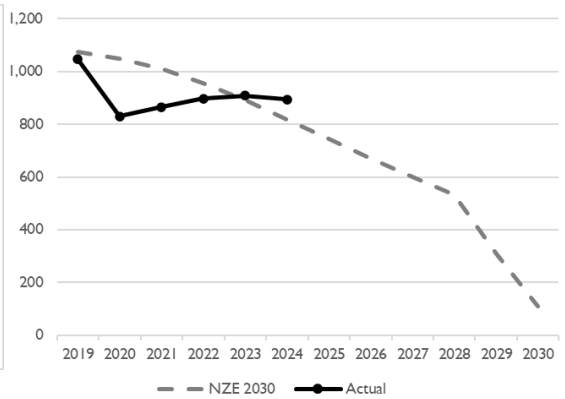
Vermont Gasoline Gallons Taxed
Estimated 8% reduction 2019-2024



Vermont Diesel Gallons Taxed
Estimated 4% reduction 2019-2024



Burlington Motor Gasoline and Diesel Consumption
14.8% reduction 2019-2024



https://anr.vermont.gov/content/preliminary-emissions-data-2024-show-little-change-2023-levels and
December 2024 Gasoline and Diesel gallons taxed JFO -
https://ljfo.vermont.gov/search/filter/keywords/gallons+taxed

NET ZERO ENERGY
BURLINGTON VERMONT

2025 Net Zero Energy Roadmap Update

Challenges and Context –

- **Revision to 2023 –** Synapse updates with most recent available data, and several updates (bus diesel, RNG, VMT) led to revision of initial 2023 numbers. Last year we reported emissions being down 18.2% in 2023, but current data indicates that 2023 represented a 17% reduction compared to 2018 levels.
- **Warmer Weather -** Heating Degree Day declines are a cause of at least a portion of thermal emissions reductions. EAN report attributed warmer weather as reason for approximately 50% of reduction in fossil heating fuel sales statewide - https://eanvt.org/wp-content/uploads/2024/06/Thermal-fuels-research-paper-June-20-2024-1.pdf. However, Burlington is seeing significantly larger natural gas reductions than the statewide percentage. A colder winter season would likely cause some rebound in thermal sector emissions. Important to continue to deploy heat pumps to reduce risk of rebound and reduce use of fossil fuels for heating.
- **Vehicle Miles Traveled -** While vehicle registrations are down in 2024, vehicle miles traveled have rebounded since pandemic (note: 2024 VMT based on statewide numbers; 2023 and prior are Chittenden County).
- **Impacts of Carbon Fee Ordinance -** Impact of carbon fee ordinance only began in 2024; will support continued reductions and help avoid increases in emissions from new construction going forward.
- **Rental Weatherization -** Additional progress needed on rental weatherization.
- **Federal -** Uncertainty on federal EV charging grant.

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BURLINGTON Electric DEPARTMENT

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Initiatives to-date that have supported progress –

- Carbon Fee/Rental Weatherization
- BED heat pump, EV, efficiency, and dozens of electrification incentives, with enhanced incentives for income-qualified customers
- State/federal/VGS incentives
- EV charging infrastructure – public charging, multi-family buildings, CarShare, home charging
- NZE revenue bond - $20 million investment
- Electrifying City fleet and GMT buses (10% of GMT fleet)
- BED Energy Assistance Program
- VMT reductions remote work; land use planning

For more info see new law journal article - One City's Journey to Net Zero Energy: A Burlington, VT Five-Year Retrospective :
https://drive.google.com/file/d/14CFjWmK9k_TmO-mZm5rF43DoM_5YUf7b/view

NET ZERO ENERGY
BURLINGTON VERMONT

BED Electrification/Efficiency Rebates To-Date (various program launch dates between 2017 and 2022)

Heat Pumps	2,960
EV/PHEVs	1,038
EV chargers	
▪ Home chargers	301
▪ Workplace chargers	35
▪ Multi-family building chargers	31
E-Bikes	786
E-Buses	7
E-Mowers	801
E-Trimmers	114
E- Leaf Blowers	108
Induction cook stoves	97
E-Chainsaws	26
E snow blowers	35

NET ZERO ENERGY
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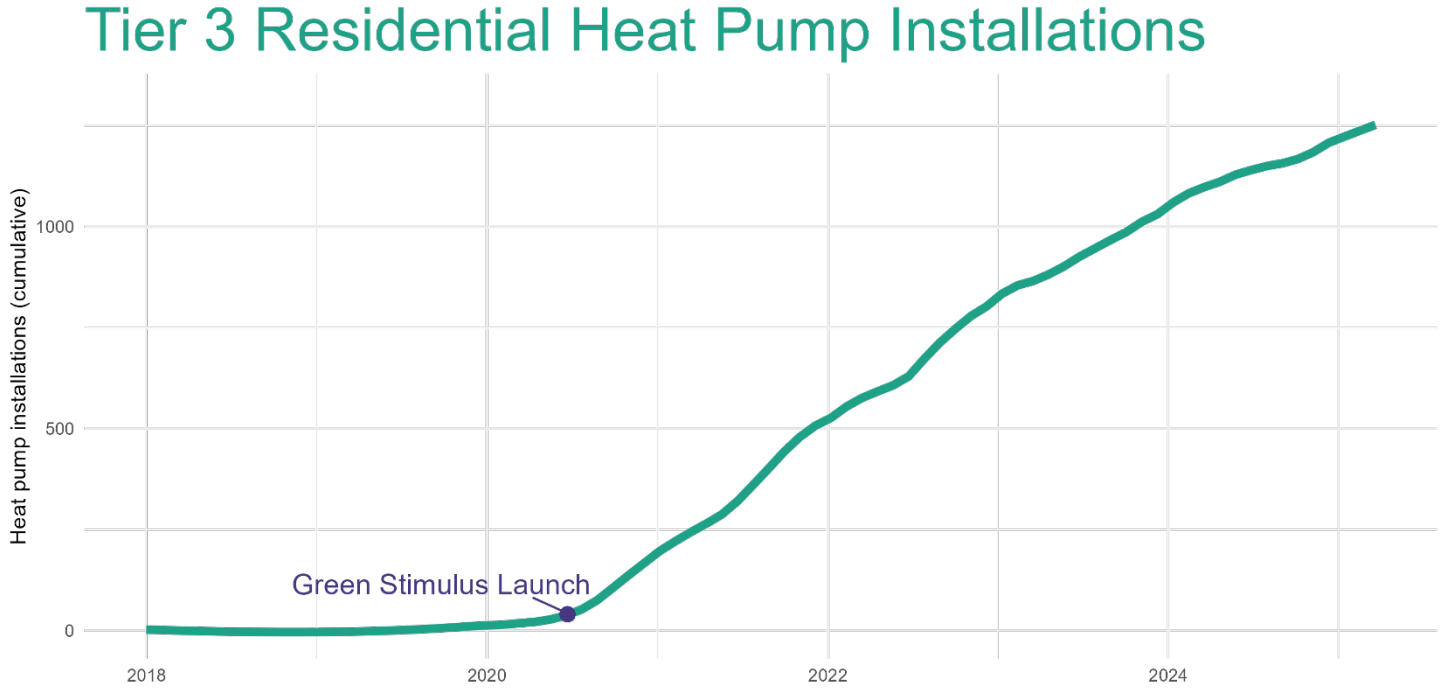
Over 2,900 heat pumps installed in Burlington to-date

Tier 3 incentives increased 30x since launch of Green Stimulus in June 2020



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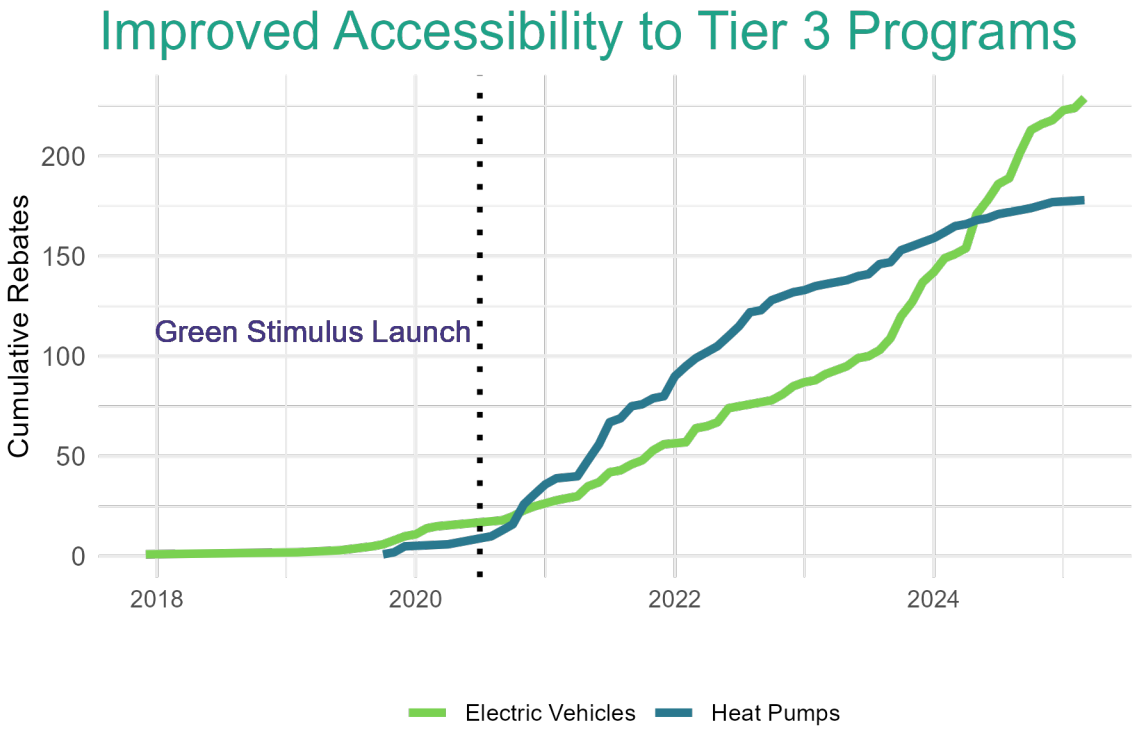
23% of BED's EV/PHEV rebates and **13%** of heat pump rebates have been enhanced rebates available to income-qualified customers, as of early 2025



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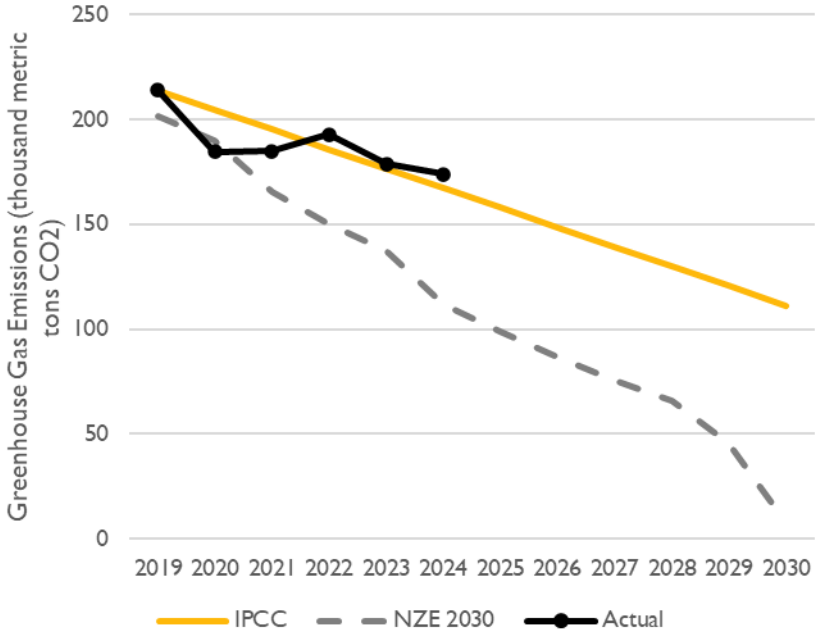
Burlington NZE data compared to IPCC targets

19% reduction in ground transportation/thermal GHG emissions since 2019



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Net Zero Energy Next Steps

- New BED programs launched in January, including improved e-bike incentives, and improved enhanced incentives for income-qualified customers for e-mowers and pre-owned EVs
- Continue to expand affordability work including upcoming expansion of Energy Assistance Program
- Heat pump bill credit pilot program supported by U.S. DOE GRIP grant
- Continued investment in public EV charging through revenue bond (3 fast chargers now deployed). Fight for EV charging grant award.
- Inflation Reduction Act incentives/rebates; awaiting income-qualified rebates from State
- Expanded EV residential rate hours
- Mayor's Climate Advisors
- Tracking progress on Carbon Fee Ordinance
- Benchmarking and building efficiency