



Town of Aurora Energy Conservation and Demand Management Plan

2024-2029 Update
June 4, 2024

WALTER FREDY

AURORA TOWN HALL

PROJECT & GOALS

PROJECT

- Develop a 2024-2029 update to the Town of Aurora's ECDMP (O.Reg. 25/23)

PROJECT TARGETS

Previous target: 80% reduction in GHG emissions by 2050

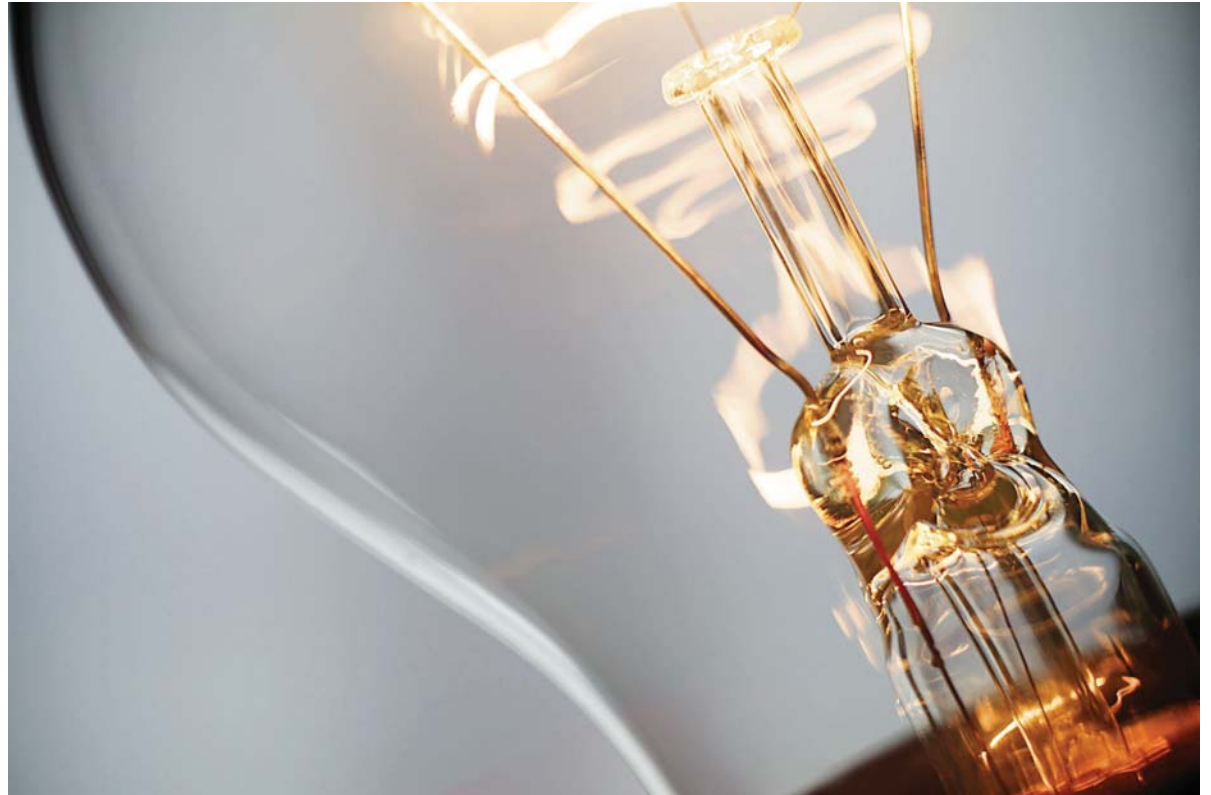
- Previous ECDMP goal: 16% reduction in GHG emissions from 2018 by 2023

New targets:

- Short term (2030): 20% reduction in GHG emissions from 2018
- Medium term (2035): 50% reduction
- Long term (2050): Net zero

OVERALL
ENERGY USE
AND GHG
EMISSIONS

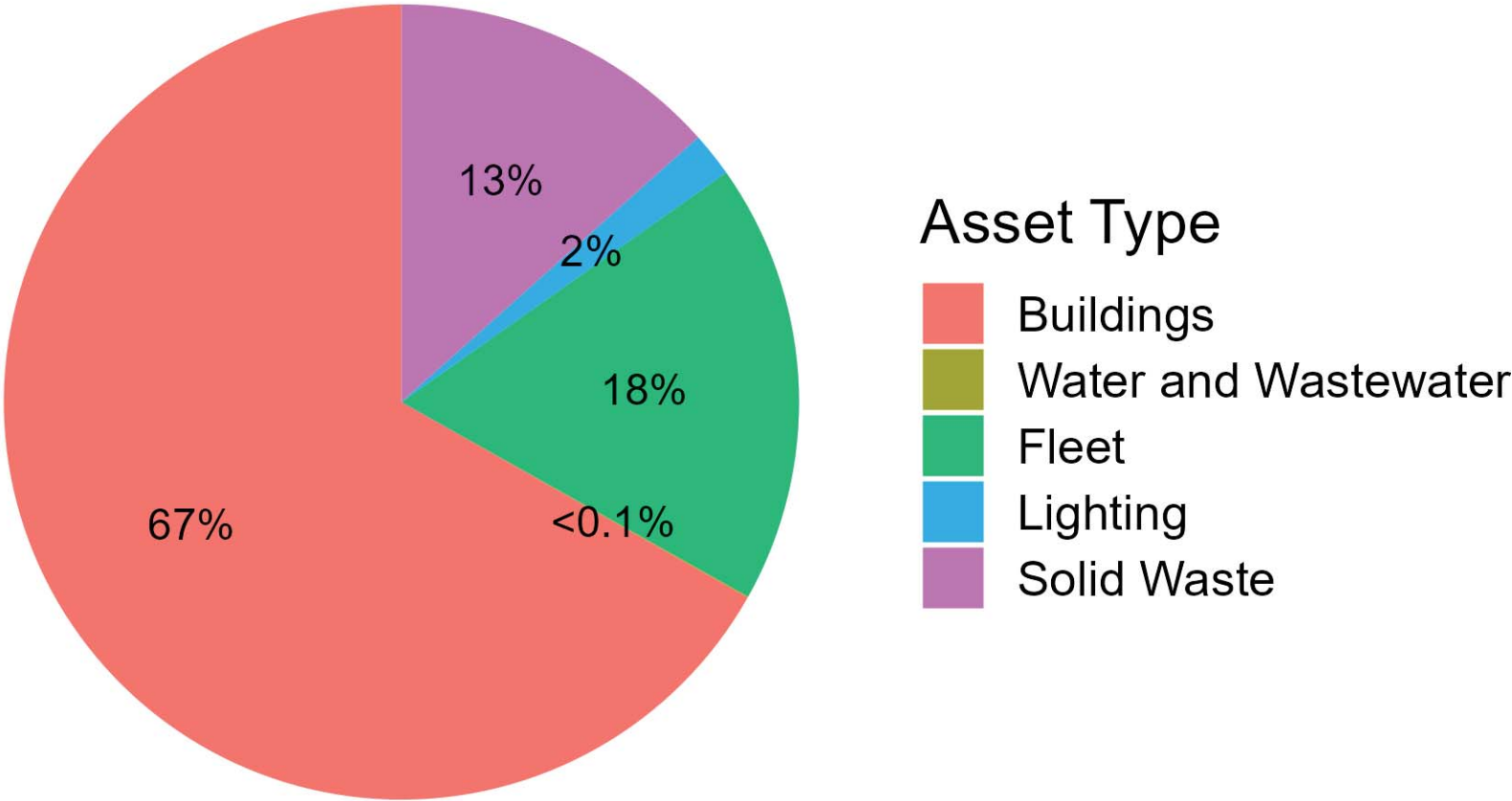
**Town of
Aurora**



2022 GHG EMISSIONS

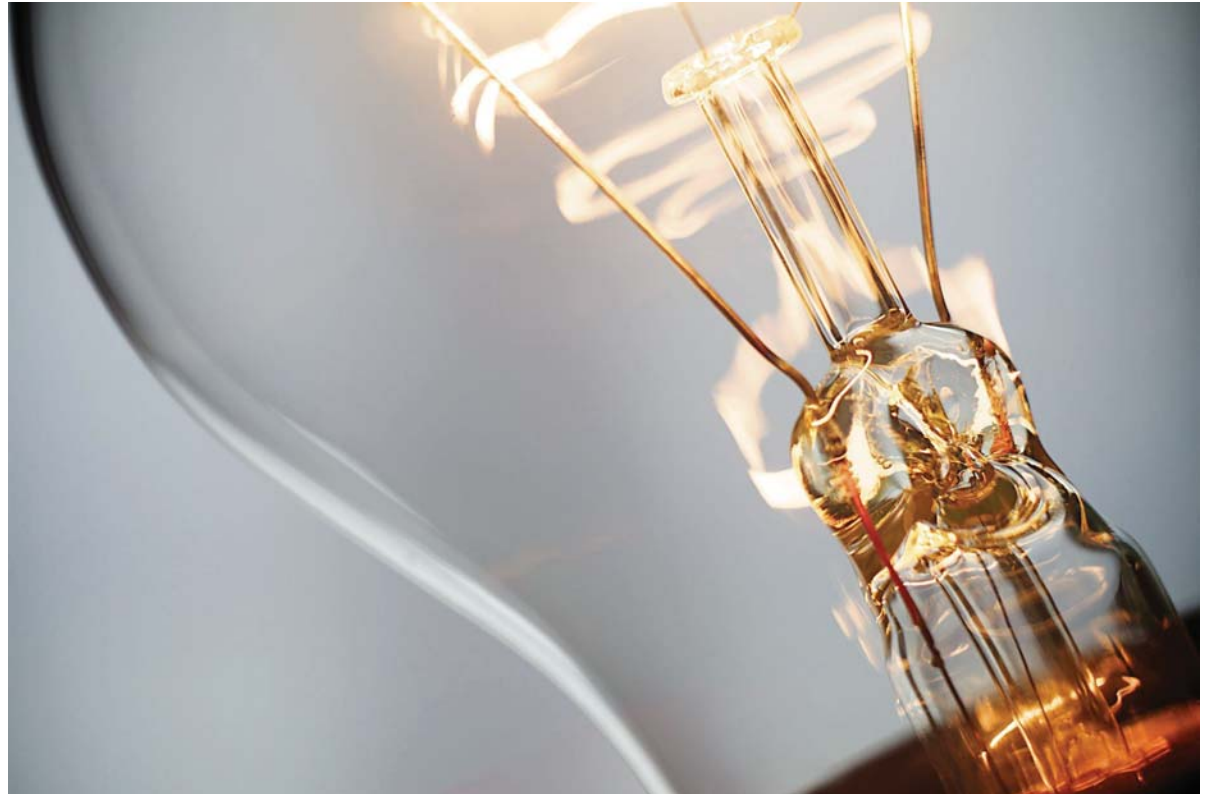
Asset type	2018 GHG Emissions	2022 GHG Emissions	Percentage Reduction
	[tCO2e/yr]	[tCO2e/yr]	[%]
Buildings	2,857	2,072	27
Corporate Fleet	556	556	0
Public Lighting	59	56	5
Pump Stations	1	1	11
Waste	416	416	0
Total	3,889	3,100	20

GHG EMISSIONS BY SECTOR (2022)



GHG
REDUCTION
PLAN

**Town of
Aurora**



SHORT TERM PLAN (2024-2029) - FACILITIES

Measure	GHG Reduction (tCO ₂ e/yr)	Utility Cost Reduction (\$/yr)
Investigate and implement demand control ventilation	6.0	1,715
Measures to be identified in feasibility studies	134.0	72,406
Remaining lights to LED	-1.0	14,376
Remaining measures from 2019 ECDMP	70.0	83,620
Remaining occupancy sensors	0.3	220
Remaining water fixtures to low-flow	1.0	1,971
BAS upgrade	64.0	46,824
Pool covers for rec centres	25.0	32,996
High efficiency boiler replacement	4.0	693
Optimum HVAC scheduling	4.0	1,954

ADDITIONAL RECOMMENDATIONS: FACILITIES

- Level 3 Energy Audits for each facility
- Net-zero pathway feasibility studies
 - Feasibility study on recommended measures
 - More detailed design and costing to prepare for larger measures within ten-year timeframe
 - FCM funding available
- Asset renewal consideration for roofs
- Staff training and capacity building
- BAS installation and upgrades
- In medium and long term: implement ECMs revealed by feasibility study

SHORT TERM PLAN – FLEET

Measure	GHG Reduction (tCO2e/yr)	Utility Cost Reduction (\$/yr)
Decarbonize two vehicles	18	10,874
Ice resurfacers vehicle decarbonization	1	282
Decarbonize 10 pieces of equipment	15	4,103

- Additional Recommendations
 - Increase renewable fuel content where feasible
 - Continue to implement actions from Green Fleet Action Plan
 - Fleet electrification feasibility study
 - Track additional fuel consumption

SHORT TERM PLAN – WASTE

- Perform regular solid waste audits
 - Better understand contributions and trends for solid waste
- Develop Waste Reduction Plan
- Incorporate mandatory green bin and recycling collection at all Town facilities
- Long term GHG reductions from this plan:
 - Medium term: 10% reductions; Long term: net zero

ADDITIONAL RECOMMENDATIONS: GENERAL

- Continue energy performance monitoring
- Train staff on energy efficiency and operation and maintenance of new technology implemented during ECMs
- Continue the implementation of the Green Procurement Policy
- Develop a Sustainable Building Standard for new and major renovations
- Develop a Carbon Offset Policy/Procedure to prepare for the purchase of carbon offsets in the medium and long term
- Investigate opportunities to reduce energy consumption from the lighting and water/wastewater sectors

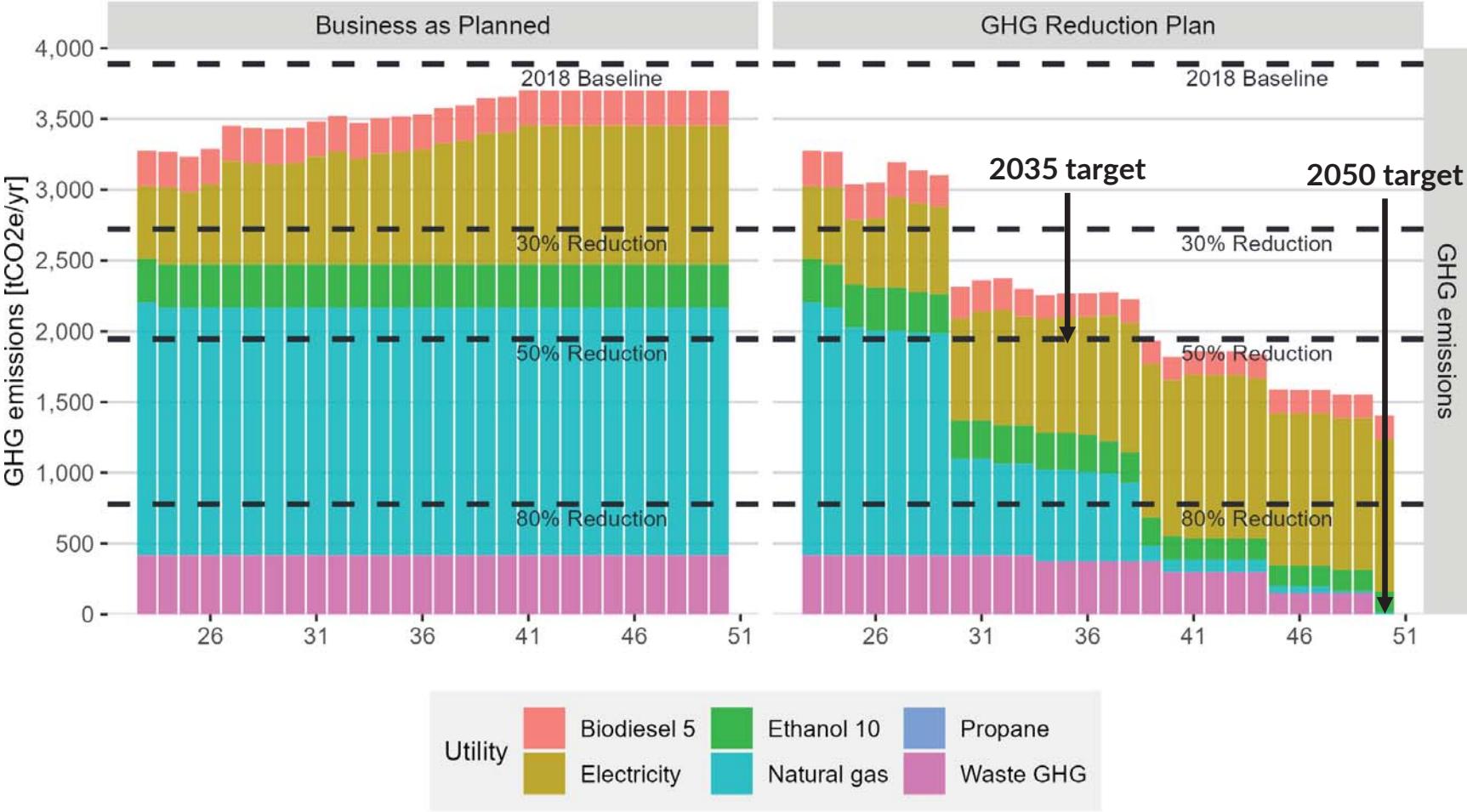
GHG REDUCTION PLAN RESULTS

Town of Aurora



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GHG EMISSIONS IMPACT



SHORT-TERM PROJECT COSTS

	Measure	Short-Term Cost	Available Grant Funding
Studies	Energy Audits (every 5 years)	\$254,500	
	Net-Zero Pathway Feasibility Study – Facilities	\$250,000	FCM: GHG reduction pathway retrofit grants
	Fleet Electrification Feasibility Study	\$250,000	FCM: Municipal fleet electrification
	Waste audits and waste reduction strategy	\$50,000	FCM: Waste reduction and diversion grants
	Total Proposed (Studies)	\$804,500	
Capital Projects	Facilities – retrofits	\$289,019	
	Fleet decarbonization	\$2,850,000	FCM: Municipal fleet electrification
	Employee training and capacity building	\$15,000	
	Energy performance monitoring	\$7,000	
	Total Proposed (Capital Projects)	\$3,161,019	
	TOTAL Proposed (Studies and Capital Projects)	\$3,965,519	

PROGRESS TOWARDS GOALS

Year	2030	2035	2050
Targeted reduction from 2018	20%	50%	Net zero
Projected reduction in GHG emissions	20%	42%	62%
Focus of measures	<ul style="list-style-type: none"> • Remaining low-hanging fruit capital and operational measures • Energy Audits • Net zero pathway planning • Electrification feasibility • Pilot new technologies 	<ul style="list-style-type: none"> • Decarbonization projects identified <ul style="list-style-type: none"> • Heat pump measures • Fleet decarbonization 	<ul style="list-style-type: none"> • Decarbonization projects identified <ul style="list-style-type: none"> • Heat pump measures • Renewable energy • Fleet decarbonization
Additional actions to reach target		<ul style="list-style-type: none"> • ECMs identified in feasibility studies • Carbon offsets 	<ul style="list-style-type: none"> • New technology <ul style="list-style-type: none"> • Fleet • Renewables • Carbon offsets



QUESTIONS



WALTER FEDY