Office of the Commissioner
Public Works
Memorandum
FOR INFORMATION

To:	Committee of the Whole
Meeting Date:	June 13, 2024
From:	Laura McDowell Commissioner of Public Works
Re:	**2024 Corporate Energy Update**

This memorandum provides a summary of the Region's annual corporate greenhouse gas emissions and energy costs in 2024. It also discusses initiatives undertaken by the Region to achieve emissions targets set out in the Corporate Energy Conservation and Demand Management Plan and supports climate change mitigation priorities in the 2022 Climate Change Action Plan.

Corporate emissions continue to increase but still trend below pre-pandemic levels

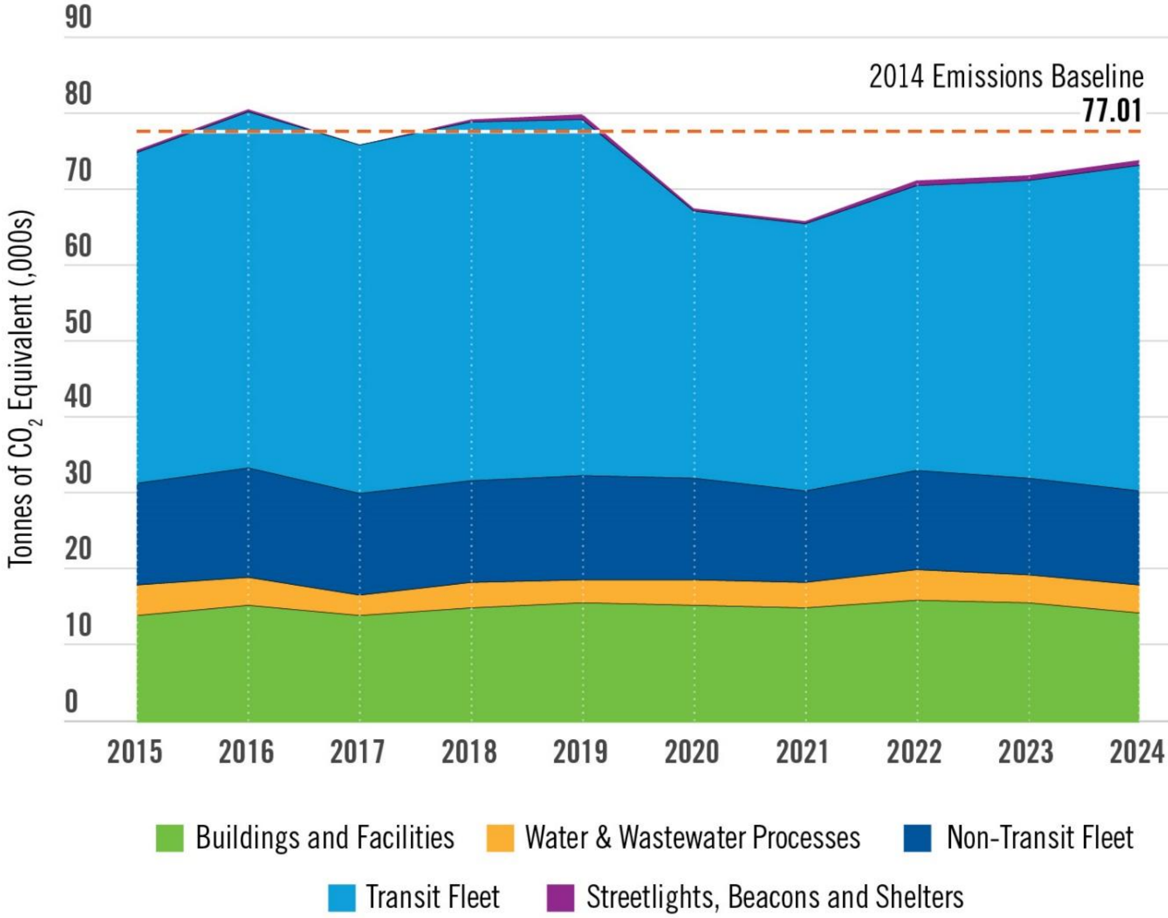
Corporate emissions totaled 75,000 tonnes in 2024, an increase of 3% or 2,200 tonnes driven largely by Transit services providing additional hours of service and routes in response to a 12% increase in ridership. Total emissions continue to trend below pre-pandemic levels and annual targets set by the Region. A complete list of mitigation initiatives accomplished in 2024 are provided in Appendix A and include:

- Electrification of 18 transit buses conserved 53,600 litres of diesel fuel in 2024. The Region expects to receive 75 additional electric buses in 2025 and another 25 in 2026, which will significantly reduce future diesel fuel consumption
- Implementation of the Region's Corporate Fleet Electrification Plan for non-transit fleet vehicles saved 115,000 litres of gasoline lowering net emissions by 229 tonnes

Reported emissions are direct emissions under the Region's control and excludes indirect emissions that result from third parties delivering services on behalf of the Region (e.g., contracted snowplows).

The Energy Conservation and Demand Management Plan sets out annual targets for corporate emissions to ensure the Region continues to move toward net-zero carbon emissions by 2050. Figure 1 illustrates the ten-year corporate emissions trend by operational category as compared to the 2014 emissions baseline.

Figure 1
Ten-Year Corporate Emissions Trend



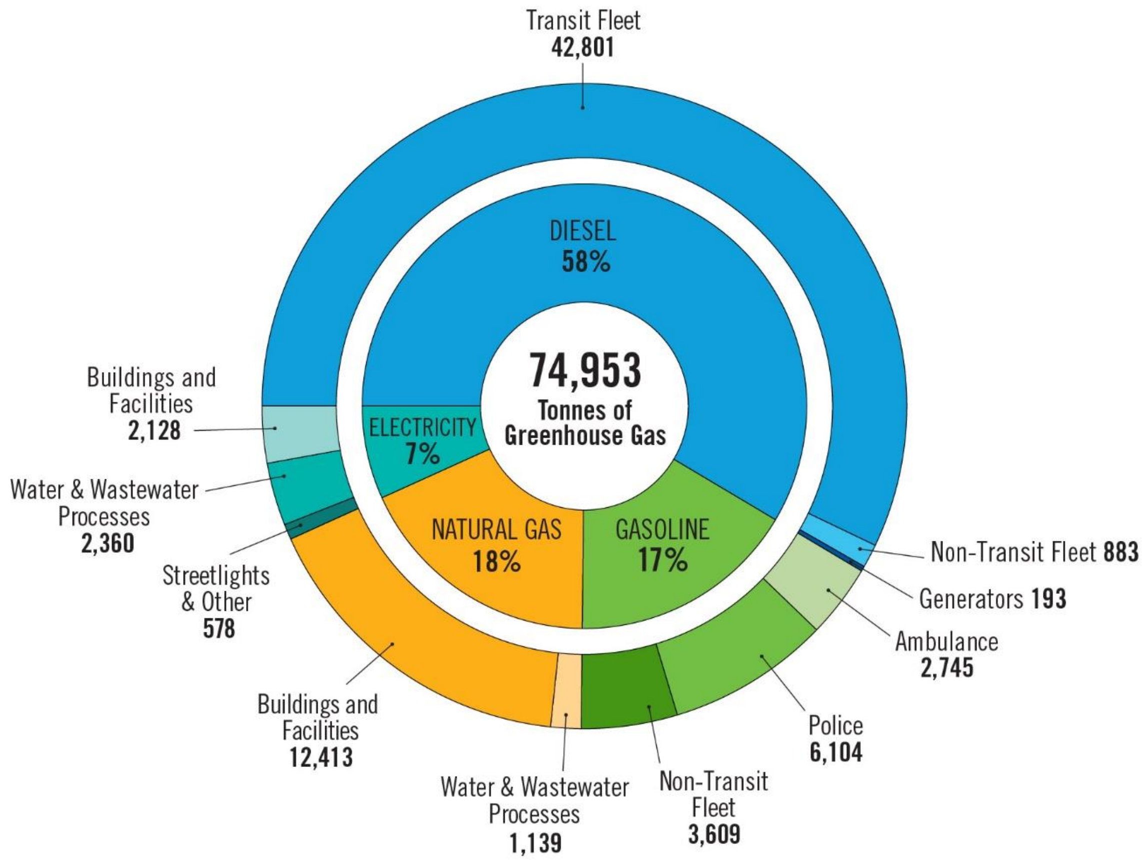
Per capita emissions in 2024 were 58.6 kilograms, which is an increase over 2023. Per capita emissions are a key performance indicator in the 2023 to 2027 Strategic Plan.

Diesel and gasoline continue to be single largest source of corporate emissions

Figure 2 illustrates corporate emissions by energy type and department. Diesel and gasoline consumption make up 75% of the Region's total emissions. Comparatively, Ontario generated electricity delivers equivalent energy with much lower emissions, which is the basis for the Region's fleet electrification strategies. In 2025 and 2026, we will receive 100 electric transit buses and add more electric vehicles to the vehicle fleet pool, further reducing emissions from diesel and gasoline.

Figure 2

2024 Corporate Greenhouse Gas Emissions (in Tonnes) by Fuel and Category



Total energy costs increased by 4% to $58.5 million due in large part to carbon pricing

Energy costs increased by 4% to $58.5 million due in large part to carbon pricing. Demand management strategies saved the Region $1.3 million on its five largest electricity accounts. Natural gas procurement strategies resulted in an additional cost of $140,000 in 2024. Fixed price contracts held the Region's cost above spot market prices which weakened with a drop in demand during warmer winters. Since joining the natural gas buying group in 2007, the Region's procurement strategies have saved it $300,000 overall. Appendix B summarizes the natural gas procurement group performance over the past five years.

Elimination of carbon price will reduce the Region's cost of energy and challenges business cases for climate change mitigation initiatives

The federal government cancelled Canada's Carbon Price legislation, which will lower the price of fossil fuel purchases in 2025. York Region paid $5.7 million in carbon prices in 2024, which was largely used to backstop federal grants and transfers to fund municipal climate change and adaptation initiatives. Short-term, it is anticipated prices may fall, but long-term, some form of carbon pricing may need to be implemented if Canada remains committed to achieving its Paris Accord commitments. Staff anticipate business cases for energy conservation and climate adaptation initiatives will be difficult to demonstrate financial justification without a carbon price to level the price between clean electricity and carbon emitting, but cheaper fossil fuels.

The Energy Conservation and Demand Management Plan initiatives deliver annual decreases in corporate greenhouse gas emissions toward an 81% reduction by 2050

Recent sustainability initiatives successfully implemented continue to deliver steady and consistent annual corporate greenhouse gas emissions reductions. The Plan considers the limits of current and available technologies along with funding and builds on existing capital budget allocations. Current challenges to sharply bending the corporate emissions curve include:

1. Supply chain and tariff issues impacting the delivery of vehicles that have already been approved for purchase

2. Technology advancements in key emissions categories such as medium/heavy-duty vehicles have not been fully developed

3. Information to guide budgets, reserves and asset management plans that support climate change are still in progress

4. Prematurely replacing existing assets with useful lives is not cost efficient

The Region has opportunities to invest in emissions reduction initiatives

Opportunities exist to reduce the Region's corporate emissions with investments in fleet electrification, sustainable building practices and continued expansion and maintenance of Regional forest properties. These opportunities align with Council-approved strategies and plans that encourage staff to make strategic capital and operating investments that yield financial returns and worthwhile carbon emissions reduction. Once investments in proven technologies have been exhausted, the Region can then consider the purchase of carbon credits to close the final gap towards net-zero carbon emissions.

Corporate Energy Report serves to continuously monitor and re-align the Region's approach towards climate change mitigation

The path to net-zero emissions by 2050 requires continuous monitoring and strategy re-alignment. This report serves as a tool to inform Council and residents about efforts, investments and progress towards climate change mitigation. At present, the Region is addressing its largest single source of corporate emissions, transportation, by electrifying its transit bus and vehicle fleets. Leveraging Ontario's clean electricity grid and efficiencies inherent with electric vehicle technologies, York Region will see its corporate emissions start a sharp decline as its electric fleets grow.

For more information on this memo, please contact David Szeptycki, Director, Sustainability, Communications and Innovation at 1-877-464-9675 ext. 75723. Accessible formats or communication support are available upon request.

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May 22, 2025
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Appendix A – Notable 2024 Climate Change Mitigation Accomplishments
Appendix B – Summary of Natural Gas Buying Group Performance

Notable 2024 Climate Change Mitigation Accomplishments

Initiatives (Service Area)

2024 Energy Conservation and Demand Management Plan

- Council approved an update to the Energy Conservation and Demand Management Plan setting new emissions targets and initiatives for 2024 through to 2050 that achieve an 81% reduction in corporate emissions by 2050 toward a goal of net-zero carbon

Fleet Charger Network (Public Works)

- 85% pre-work completed for ongoing installation of 56 charging heads for Corporate Fleet vehicles

Electric Cargo Vans and Light-Duty Pickup Trucks (Public Works)

- Region purchased 17 battery electric vehicles to pilot that are estimated to reduce corporate emissions by 13 tonnes per year per vehicle

Police District Office Lighting Upgrades (York Regional Police)

- Ongoing work to upgrade all pot lights and exit signs to energy efficient LED alternatives

Electric Transit Fleet Purchase (Public Works)

- Purchased 100 battery electric buses supported by federal government's Zero Emissions Transit Fund, scheduled to be delivered starting in 2025

Nitrous Oxide Emission Data (Public Works)

- Ongoing pilot project to capture Nitrous Oxide emission data by installing sensors at Nobleton Water Resource Recovery Facility which will enable comprehensive emission reporting and real-time operational changes

Engagement with Paramedic Staff (Public Works and Paramedics and Senior Services)

- Engaged with Paramedic Services to promote climate change and sustainability initiatives and support staff awareness related to climate change

Natural Gas Buying Group Performance Summary

- The Region has been purchasing its natural gas along with 176 Ontario municipalities and broader public sector organizations in a Buying Group led by the Association of Municipalities of Ontario since 2007
- Natural gas represents approximately 5% of the Region's total energy cost and 18% of its corporate greenhouse gas emissions
- The Region saved $611,000 since January 2020 (Table 1 below) through its procurement strategies compared to the Local Distribution Company (Enbridge Gas Ltd.) default rate

Table 1

Comparison of Natural Gas Commodity Costs

Year	Default Utility Cost	Buying Group Strategy Cost	Difference Cost / (Savings)
2020	$521,000	$502,000	($19,000)
2021	$563,000	$512,000	($51,000)
2022	$1,089,000	$743,000	($346,000)
2023	$1,050,000	$715,000	($335,000)
2024	$540,000	$680,000	$140,000
Total	**$3,763,000**	**$3,152,000**	**($611,000)**

- Buying Group procurement strategies provide a degree of financial stability by limiting exposure to market volatility that may occur based on supply and demand, weather, and global factors
- Natural gas procurement occurs continuously by Public Works
- Procurement strategies are in place for the next 48 months