

Corporate Energy Consumption and Activities Report

2020



London
CANADA

Executive Summary

This report provides information on energy consumption, greenhouse gas (GHG) emissions, and energy projects for Corporation of the City of London (City) buildings and operations in 2020. In addition to the reporting requirements mandated by the *Electricity Act and Ontario Regulation 507/18*, information on all energy-consuming infrastructure (e.g., street lighting, sports fields) as well as fleet fuel use has been included to provide a more complete picture of energy needs for municipal operations.

In this report, the 2020 energy consumption, cost, and associated emissions are compared to the following two years:

- 2007 – was the first year that City started measuring and monitoring its corporate energy consumption in a comprehensive system.
- 2018 – is the baseline year for the updated 2019-2023 Corporate Energy Conservation and Demand Management (CDM) Plan

The City logs its utility data within EnergyCap, the software system maintained by the Energy Management team in the City's Fleet and Facilities area. They use this system to monitor energy bills and analyze the corresponding data. The area also uses PetroVend fuel management software for tracking vehicle fuelling at operation centers. These systems are the primary source of the 2020 energy data.



2020 overview:



\$160,000 in incentives for energy initiatives in 2020

\$ ↓6%

City spent \$17.6 million on energy in 2020, a six percent reduction compared to 2019

↓29%

Water consumption reduced by 29 percent from 2007



Four Waste Collection trucks converted from diesel to compressed natural gas (CNG)

CO₂ ↓61%

Corporate GHG emissions were 17,500 tonnes in 2020, a 61% reduction from 2007 and in line with Net-zero target.

↓31%

Energy use per capita dropped by 31 percent from 2007

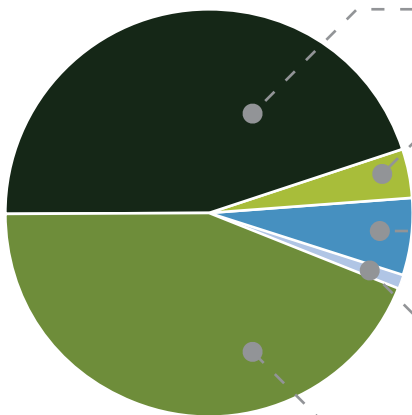
Energy cost per capita was **\$42 in 2020**

\$200,000

Total energy cost savings by energy projects



2020 Energy related greenhouse gas emissions by service area



Fleet
44%



Traffic Signals & Streetlights
4%



Wastewater Operations
6%

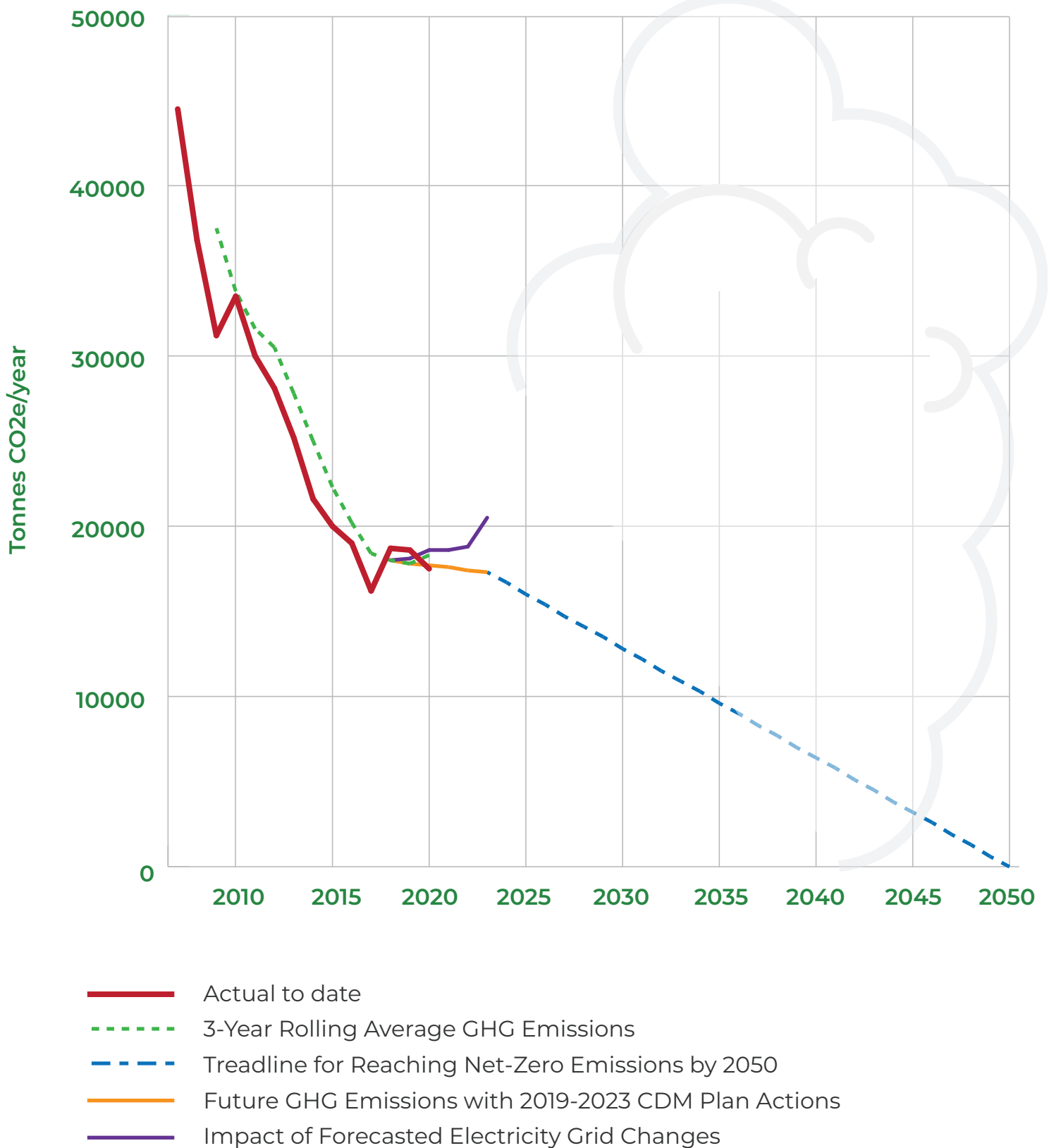


Water Supply Operations
1%

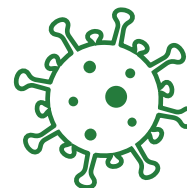


Buildings
45%

Proposed 2050 Net-Zero GHG Goal & Impact of 2019-2023 CDM Plan



COVID-19's Impact on Corporate Energy Use:



The impact of the COVID-19 pandemic on City's energy consumption was significant, where building-related energy commodities had a considerable drop while vehicle fuel use increased. This resulted in a seven percent decrease in energy consumption from 2019 overall. In particular:

- Due to most of the downtown City offices being vacant due to employees working from home, steam and chilled water consumption of these buildings dropped by 23 percent and 33 percent compared to 2019, while electricity use dropped by six percent.
- Buildings observed the highest greenhouse gas emissions reduction, with a 530 tonnes reduction from 2019 and 2020.
- Fleet's gasoline consumption increased by four percent due to an increase in the number of rental vehicles used in 2020 to follow COVID-19 protocols for physical distancing of City employees.

Greenhouse gas emissions associated with employee commuting was also reduced significantly. Given that about 870 City employees were working from home as of March 2020, it is estimated that commuting related emissions decreased by about 750 tonnes in 2020. Note that employee commuting emissions are not included within the City's corporate GHG emissions inventory but are provided here to illustrate the importance of managing the climate impact of employee commuting.

Further work is underway with respect to the future of work-from-home, potential changes to how staff may be commuting to and from work, continued use of on-line meeting resources, and other lessons learned during the pandemic with respect to sustainable actions.

