



REPORT FOR ACTION

Annual Corporate Energy Consumption and Greenhouse Gas Emissions (2015 and 2016)

Date: August 22, 2017

To: Parks and Environment Committee

From: Chief Corporate Officer

Wards: All

SUMMARY

The City of Toronto Annual Energy Consumption & Greenhouse Gas Emissions report was published in July 2017 to provide information on 2015 and 2016 energy consumption and greenhouse gas (GHG) emissions from a select group of City of Toronto operations. It contains information provided to the Ontario Ministry of Energy (OME) based on the requirements of the Ontario Green Energy Act, Regulation 397/1. Link to 2015 and 2016 Energy Consumption and GHG Emissions Reports:

<https://www1.toronto.ca/wps/portal/contentonly?vgnextoid=640cff67fd8a1410VgnVCM10000071d60f89RCRD&vgnextchannel=c9d0fbfa98491410VgnVCM10000071d60f89RCRD>

RECOMMENDATIONS

The Chief Corporate Officer recommends that:

1. The Parks and Environment Committee receive this report for information.

FINANCIAL IMPACT

There is no financial impact resulting from this report.

The Deputy City Manager & Chief Financial Officer has reviewed the report and agrees with the recommendations.

DECISION HISTORY

On September 9, 2016, the Parks and Environment Committee adopted the report "Annual Report - Energy Consumption and Greenhouse Gas Emissions in City Facilities", as amended:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PE13.3>

COMMENTS

This report includes information on:

- energy use and GHG generation for a variety of City operations, including corporate buildings, Parks, Forestry and Recreation facilities and libraries, among others ;
- energy used in industrial-type processes such as the pumping of water, and;
- energy used outdoors for lighting public spaces

The report does not include information on energy use or GHG emissions from gasoline, diesel and other fuels used for City-owned vehicles, or from Toronto Transit Commission, Exhibition Place, Toronto Zoo and other small agencies.

Regulation 397/11 of the Province's Green Energy Act requires public bodies in Ontario to publish the energy consumption of specified categories of buildings, and the resultant GHG emissions. Previous years' reports for the City of Toronto can be found at:

<https://www1.toronto.ca/wps/portal/contentonly?vgnextoid=640cff67fd8a1410VgnVCM10000071d60f89RCRD&vgnextchannel=c9d0fbfa98491410VgnVCM10000071d60f89RCRD>

The Regulation also requires public bodies to prepare and publish an Energy Conservation and Demand Management Plan for these buildings every five years. The City's current plan was published in 2014. Work has begun on the 2019 update, and will focus on implementing the recommendations in the TransformTO report (see below).

The publication requirement took effect in July 2013, and covered operations for the year 2011. As a result, the information that is published is more than one year out of date. In order to provide Council and the public with more up-to-date information about the City's energy use and GHG emissions, both the 2015 and 2016 reports are being submitted to the Parks and Environment Committee at this time. The 2017 report will be submitted in 2018.

2015 and 2016 Data:

The graphs below illustrate the City's energy consumption and GHG emissions by fuel type for the reported facilities, which amounts to 1,696,491,193 ekWh of energy and 153,320 tonnes of GHG emissions in 2015, and 1,625,260,704 ekWh and 141,652 tonnes in 2016. Of the reported facilities, electricity consumption far exceeds other energy sources at nearly 1,089,910,215 ekWh or 64% of the overall energy use (2015) and 1,072,687,682 ekWh or 66% (2016). Natural gas made up 549,964,470 ekWh or approximately 32% in 2015, and 487,467,639 ekWh and 30% in 2016.

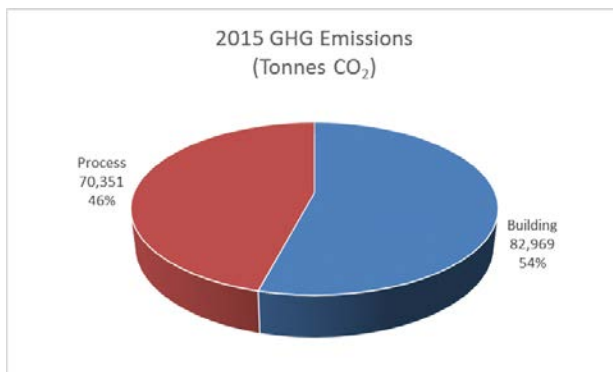
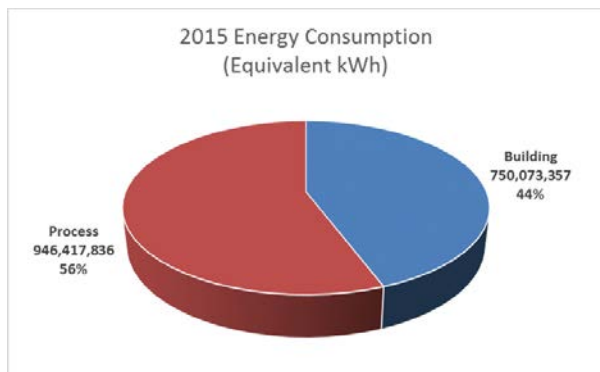
In terms of GHG emissions, in 2015 natural gas accounted for 98,462 tonnes (64%), while electricity accounted for 47,956 tonnes (32%). The corresponding figures for 2016 are 87,273 tonnes (62%) and 47,198 tonnes (33%). With the elimination of coal-fired electricity generation in Ontario, natural gas now accounts for substantially more GHG emissions from City buildings than electricity.

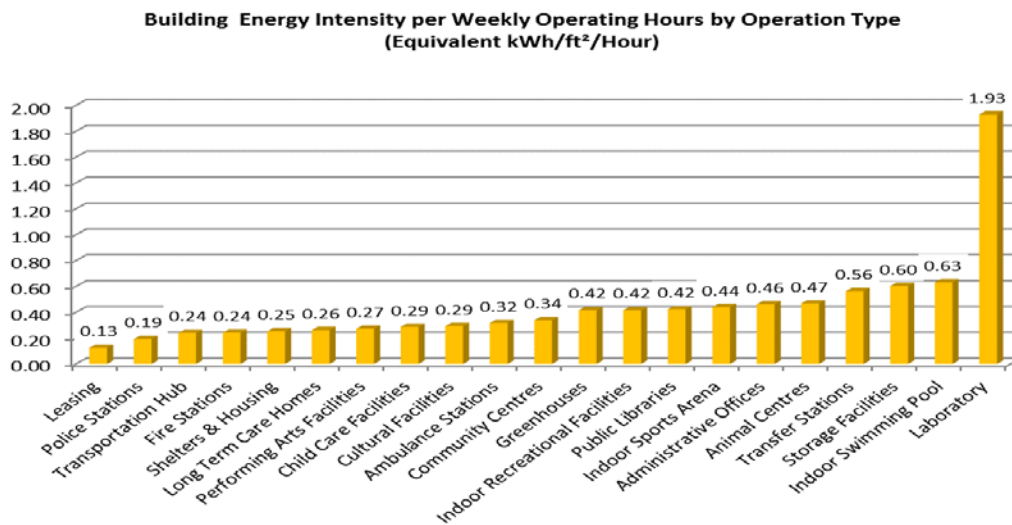
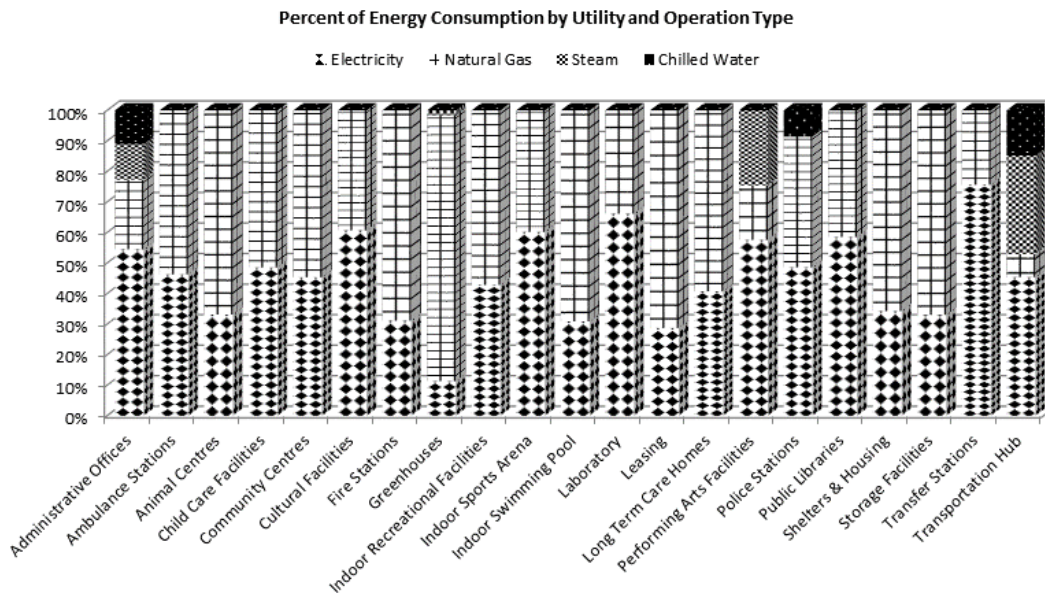
The figures in the pie graphs below distinguish between process and building energy. Process energy refers to energy used for industrial-type (e.g. water pumping) or outdoor (e.g. streetlighting) activities. Building energy is that which is used in the operation of a building and the activities which take place within it.

Toronto Water is by far the largest consumer of process energy, while Parks, Forestry and Recreation and Facilities Management sites are the two largest consumers of building energy. In both 2015 and 2016 buildings have a larger proportion of GHG emissions than processes, due to their greater use of natural gas.

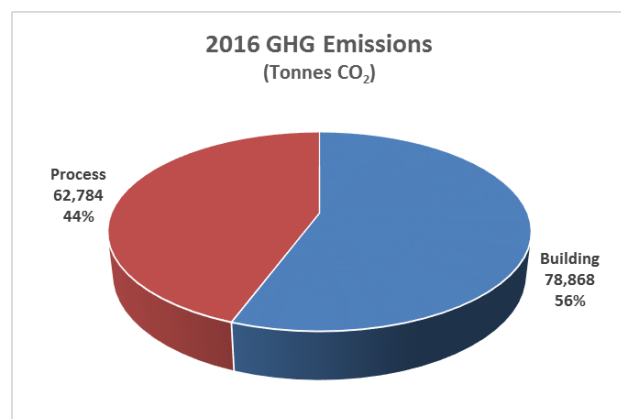
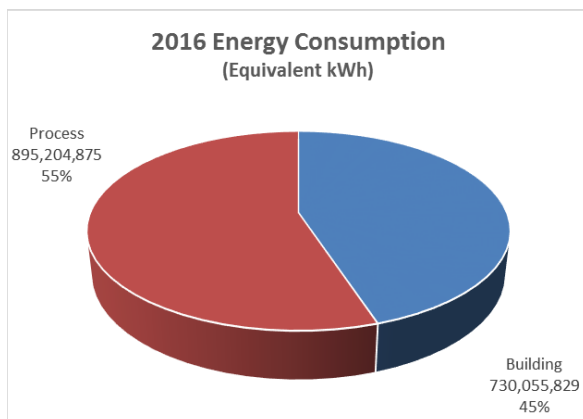
The attached reports present detailed information about energy consumption and GHG emissions for reported-on Divisions and Agencies.

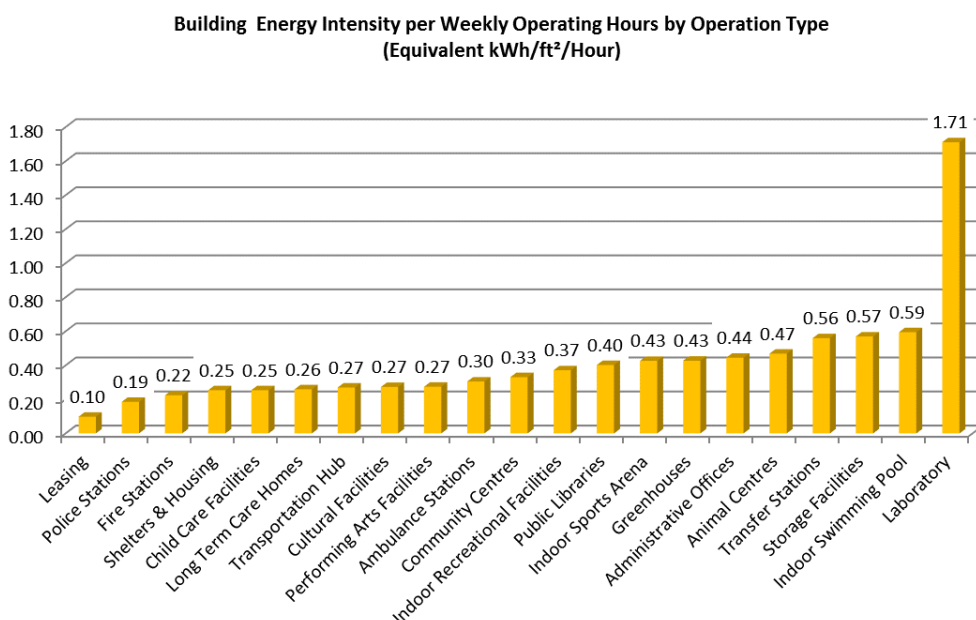
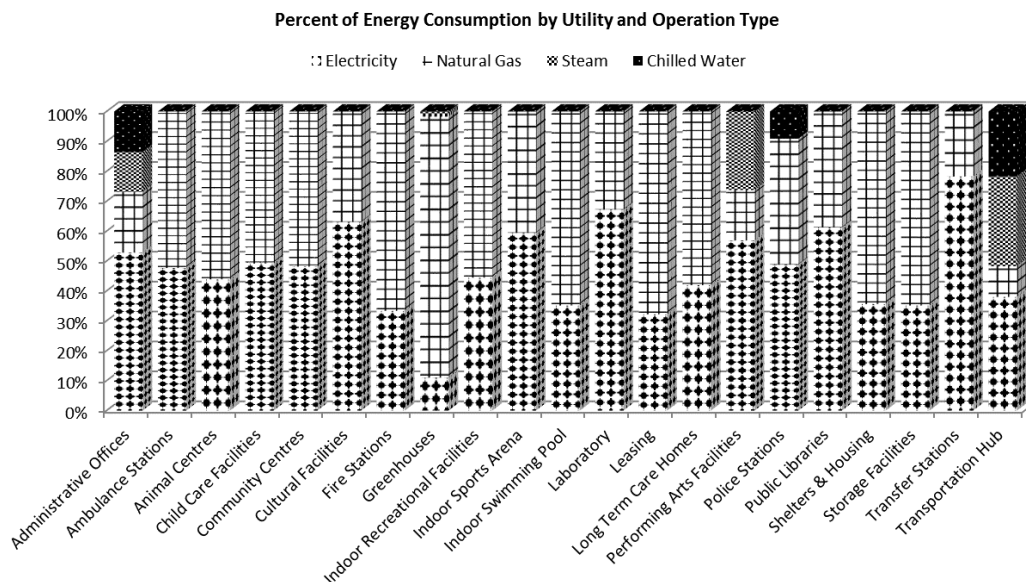
2015 Figures





2016 Figures





At its meeting of July 4-7 2017, City Council adopted the recommendations in the report "TransformTO: Climate Action for a Healthy, Equitable and Prosperous Toronto - Report 2 - The Pathway to a Low Carbon Future". These included recommendations on how the City should lead by example in reducing its energy consumption and greenhouse gas emissions. Business cases for plans to implement these recommendations are currently being prepared for submission as part of the 2018 Budget process.

City Council, at its meeting of May 24-26, 2017, adopted the recommendations in the report "City-wide Real Estate Transformation". The report recommended, in part, the creation of a centralized group within the City that would be responsible for day-to-day facilities management functions for City-owned facilities. This organizational realignment will allow for greater standardization of energy retrofit work within City buildings.

Staff of the Environment & Energy and Facilities Management Divisions, both within the Chief Corporate Officer's Organization, are collaborating on pilot projects designed to better integrate energy retrofit projects with the State of Good Repair Program within buildings under the Chief Corporate Officer's purview.

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SIGNATURE

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