

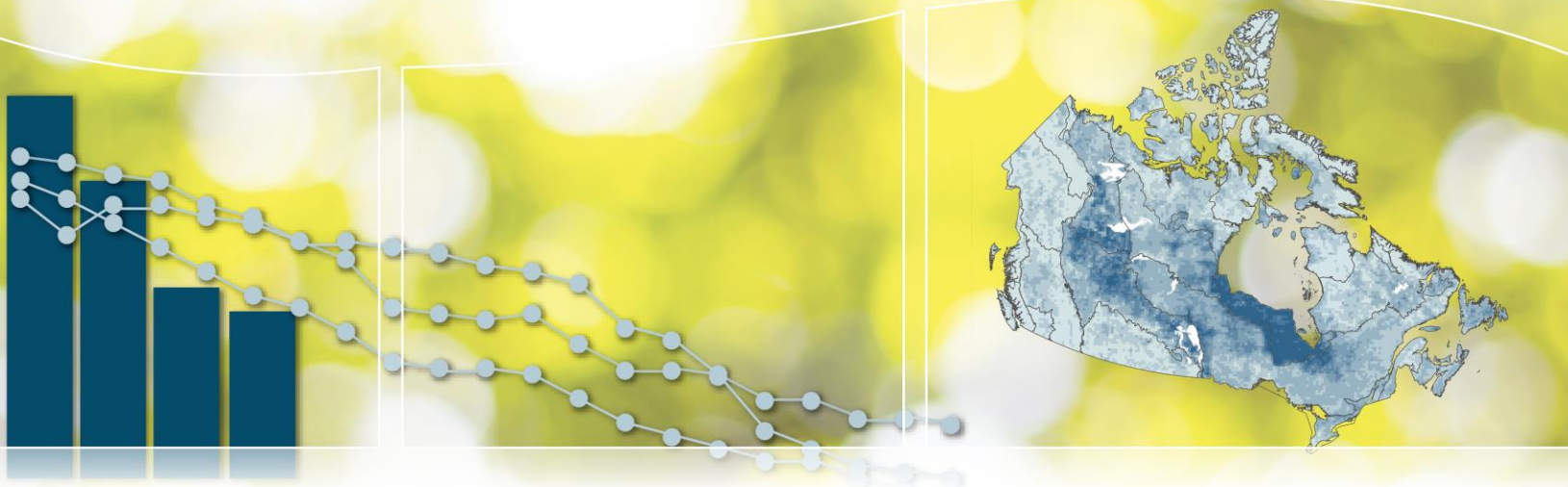


Environment and
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Canadian Environmental Sustainability Indicators

Greenhouse Gas Emissions from Large Facilities



Canada 

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Canadian Environmental Sustainability Indicators

Greenhouse Gas Emissions from Large Facilities

April 2016

Table of Contents

Part 1. Greenhouse Gas Emissions from Large Facilities Indicator	4
---	----------

Part 2. Data Sources and Methods for the Greenhouse Gas Emissions from Large Facilities Indicator	5
--	----------

Introduction.....	5
-------------------	---

Description and rationale of the Greenhouse Gas Emissions from Large Facilities indicator	5
---	---

Data	5
------------	---

Methods	6
---------------	---

Caveats and limitations	6
-------------------------------	---

Part 3. Annexes	7
------------------------------	----------

Annex A. References and additional information	7
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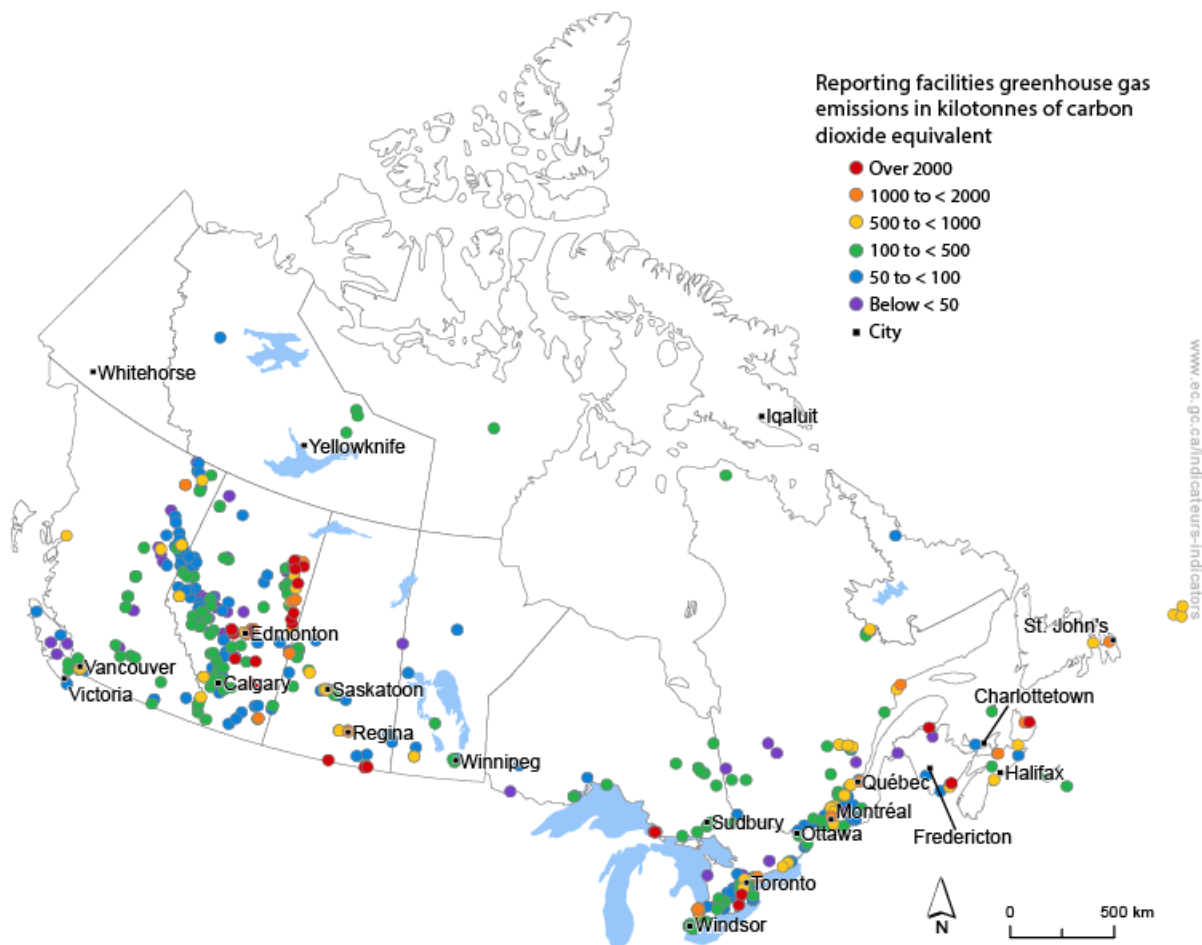
List of Figures

Figure 1. Greenhouse gas emissions from facilities, Canada, 2014	45
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Part 1. Greenhouse Gas Emissions from Large Facilities Indicator

In 2014, over one third (36%) of Canada's greenhouse gas (GHG) emissions came from 574 facilities. The total emissions reported by those facilities was 264 megatonnes of carbon dioxide equivalent (CO₂ eq).

Figure 1. Greenhouse gas emissions from facilities, Canada, 2014



Navigate results using the [Interactive Map](#) or an [Internet Earth Browser](#) (e.g., Google Earth) [View data for this map](#)

Source: Environment and Climate Change Canada (2016) [Greenhouse Gas Emissions Reporting Program – Overview of Reported 2014 Emissions](#).

The data for this indicator are collected under the federal [Greenhouse Gas Emissions Reporting Program](#) (GHGRP), to which all facilities that emit 50 kilotonnes of CO₂ eq of GHGs or more per year are required to submit their emissions.

Unlike Canada's National Inventory Report which compiles GHG emissions data at a national level, and is developed from national and provincial statistics, the federal GHGRP applies only to industrial and other types of facilities emitting the largest amounts of GHGs in Canada.

Part 2. Data Sources and Methods for the Greenhouse Gas Emissions from Large Facilities Indicator

Introduction

The [Greenhouse Gas Emissions from Large Facilities](#) indicator is part of the [Canadian Environmental Sustainability Indicators](#) (CESI) program, which provides data and information to track Canada's performance on key environmental sustainability issues.

Description and rationale of the Greenhouse Gas Emissions from Large Facilities indicator

Description

In March 2004, the Government of Canada announced the introduction of the [Greenhouse Gas Emissions Reporting Program](#) (GHGRP) for facilities. Unlike Canada's [National Inventory Report](#) (NIR), which compiles greenhouse gas (GHG) data at a national level and is developed from national and provincial statistics, the GHGRP applies only to the largest GHG emitters in Canada (industrial and other types of facilities). Through the GHGRP, all facilities that emit the equivalent of 50 000 tonnes (50 kilotonnes) or more of GHGs (in carbon dioxide equivalent units) per year are required to submit a report to Environment and Climate Change Canada. Mandatory reporting of GHG emissions by these facilities was established by the Minister of the Environment under the authority of sections 46 to 53 of the [Canadian Environmental Protection Act, 1999](#) (CEPA 1999).

Greenhouse gas emissions data reported through the GHGRP are used, where appropriate, to confirm the reasonableness of estimates in the NIR. The extent to which the facility reported GHG emissions data can be used for this purpose is dependent upon the level of detail and type of data available.

Rationale

The GHGRP ensures the mandatory reporting of GHG emissions by some of Canada's largest industrial emitters. Mandatory reporting of facility emissions provides a more precise picture of the sources and amounts of Canada's GHG emissions, thus contributing to the development, implementation and evaluation of climate change and energy policies and strategies in Canada.

Data

Data source

The Greenhouse Gas Emissions from Large Facilities indicator is based on greenhouse gas (GHG) emissions data taken from Environment and Climate Change Canada's [Greenhouse Gas Emissions Reporting Program](#) (GHGRP) for facilities.

Spatial coverage

The GHGRP provides local GHG emissions data from the largest industrial and other emitters in Canada (those emitting 50 kilotonnes of carbon dioxide equivalent or more per year). Facilities with emissions falling below the reporting threshold of 50 kilotonnes per year can voluntarily report their GHG emissions.

Temporal coverage

The indicator reports 2014 facility GHGRP data. The interactive map reports facilities for the years 2005 to 2014.

Data completeness

The total facility-reported GHG emissions for 2014 represent just over one third (36%) of Canada's total GHG emissions as reported in the 2014 National Inventory Report.

Data timeliness

The GHGRP data are collected on an annual basis. Facilities are required to report their GHG emissions to Environment and Climate Change Canada by June 1.

Methods

The quantity of greenhouse gases (GHGs) released by each facility is calculated by each reporting facility based on monitoring or direct measurement, mass balance, emission factors, engineering estimates and fuel and production data. Although estimation methods are not prescribed by Environment and Climate Change Canada, reporting facilities are advised to choose the quantification methodologies most appropriate for their particular industry or application. Facilities must use methods for estimating emissions that are consistent with the [guidelines](#) developed by the Intergovernmental Panel on Climate Change (IPCC) and adopted by the United Nations Framework Convention on Climate Change (UNFCCC), for the preparation of national GHG inventories.

Caveats and limitations

A facility is only required to report to the Greenhouse Gas Emissions Reporting Program if its emissions exceed the reporting threshold of 50 000 tonnes in carbon dioxide equivalent for a given year.

Comparisons among years may be made with the understanding that some facilities might not have been required to report in years for which they did not exceed the reporting threshold. Attention to consistency and comparability in the dataset is needed when comparing emissions from year to year.

Different facilities in a given type of industry may also use different methods for estimating emissions.

For a complete discussion of the caveats and limitations of the facility-reported greenhouse gas emissions data, refer to the [Overview of Reported 2014 Emissions](#).

Part 3. Annexes

Annex A. References and additional information

References and further reading

Environment and Climate Change Canada (2015) [Greenhouse Gas Emissions Quantification Guidance](#).

Environment and Climate Change Canada (2015) [Technical Guidance on Reporting Greenhouse Gas Emissions](#).

Environment and Climate Change Canada (2016) [Facility Greenhouse Gas Emissions Reporting Program](#).

Environment and Climate Change Canada (2016) [Facility Greenhouse Gas Emissions Reporting Program – Overview of Reported 2014 Emissions](#).

Related information

[Canada's Action on Climate Change](#)

[Drivers and Impacts of Greenhouse Gas Emissions](#)

[Environment and Climate Change Canada – Climate Change](#)

[Global Greenhouse Gas Emissions](#)

[Greenhouse Gas Emissions](#)

[Greenhouse Gas Emissions by Economic Sector](#)

[Greenhouse Gas Emissions by Province and Territory](#)

[Greenhouse Gas Emissions per Person and per Unit Gross Domestic Product](#)

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Additional information can be obtained at:

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