A collaborative project by:

ENVIRONMENTAL DEFENCE

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

PollutionWatch
www.PollutionWatch.org

PollutionWatch Fact Sheet
National Greenhouse Gas Pollution Highlights

Greenhouse Gas data for Canadian facilities available now on www.PollutionWatch.org

New Rankings: Facilities across Canada emitting greenhouse gases

- For the first time, Canadians have access to a ranking and analysis of the greenhouse gas emissions from large industrial facilities across the country. The PollutionWatch web site (**www.PollutionWatch.org**) uses the 2004 greenhouse gas data collected by the federal government.
- Facilities are required to report six greenhouse gases which contribute to global climate change: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); sulphur hexafluoride (SF_6); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs). Many facilities required to report their greenhouse gas emissions are also required to report releases and transfers of pollutants (causing smog, acid rain and contamination) under the federal government's national pollution reporting program, the National Pollutant Release Inventory (NPRI). The PollutionWatch web site also allows Canadians to analyze and rank facilities reporting to NPRI (1995-2003).

Top 10 Facilities Across Canada Reporting GHG Emissions in 2004 (total all gases)

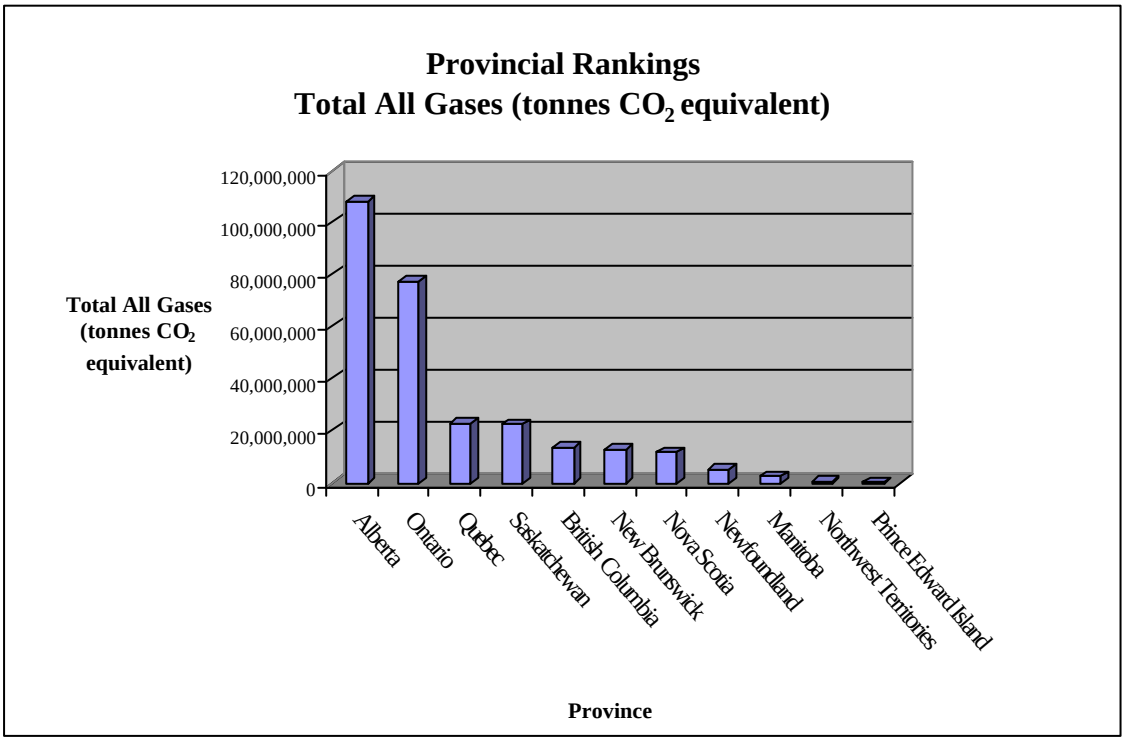
Rank	Facility	Sector	Company Name	Total all Gases (tonnes CO_2 equivalent)	Prov
1	Sundance Generating Plant	Fossil fuel electric power generation (coal)	Transalta Utilities Corporation	16,463,579	AB
2	Nanticoke Generating Station	Fossil fuel electric power generation (coal)	Ontario Power Generation	14,715,952	ON
3	Mildred Lake and Aurora North Plant Sites	Non-conventional oil extraction	Syncrude Canada Ltd.	10,367,463	AB
4	Suncor Energy Inc. Oil Sands	Non-conventional oil extraction	Suncor Energy Inc. Oil Sands	8,599,254	AB
5	Lambton Generating Station	Fossil fuel electric power generation (coal)	Ontario Power Generation	7,208,141	ON
6	Genesee Thermal Generating Station	Fossil fuel electric power generation (coal)	EPCOR Generation Inc.	6,792,442	AB
7	Sheerness Generating Station	Fossil fuel electric power generation (coal)	Alberta Power (2000) Ltd.	6,639,622	AB
8	Boundary Dam Power Station	Fossil fuel electric power generation (coal)	Saskatchewan Power Corporation	6,570,850	SK
9	Keephills Generating Plant	Fossil fuel electric power generation (coal)	Transalta Utilities Corporation	6,032,213	AB
10	Battle River Generating Station	Fossil fuel electric power generation (coal)	Alberta Power (2000) Ltd.	5,185,675	AB
	Total Top 10 Facilities			**88,575,191**	
	Total all gases from all sources (from National Greenhouse Gas Inventory)			**758,000,000**	

For facility rankings on all reported greenhouse gases, visit the "Who is Polluting" section of the PollutionWatch web site – **www.PollutionWatch.org**

Top 10 Companies Across Canada Reporting GHG Emissions in 2004 (total all gases)

Rank	**Company Name** (may have more than one facility reporting)	**Total all Gases** (tonnes CO_2 equivalent)	**Province**	**Percentage**
1	Ontario Power Generation	24,887,358	ON	8.97%
2	Transalta Utilities Corporation	22,672,480	AB	8.17%
3	Saskatchewan Power Corporation	13,669,500	SK	4.93%
4	Alberta Power (2000) Ltd.	11,957,574	AB	4.31%
5	Nova Scotia Power Incorporated	10,570,678	NS	3.81%
6	Syncrude Canada Ltd.	10,367,463	AB	3.74%
7	Suncor Energy Inc. Oil Sands	8,599,254	AB	3.10%
8	EPCOR Generation Inc.	6,898,565	AB	2.49%
9	Petro-Canada	5,731,121	AB	2.07%
10	Dofasco Inc	4,863,485	ON	1.75%
	Total Top 10 Companies	**120,217,478**		**43.34%**
	Total of All Companies Reporting	**278,890,313**		
	Total all gases from all sources (from National Greenhouse Gas Inventory)	**758,000,000**		

Provincial Rankings: Total emissions of greenhouse gases by province in 2004



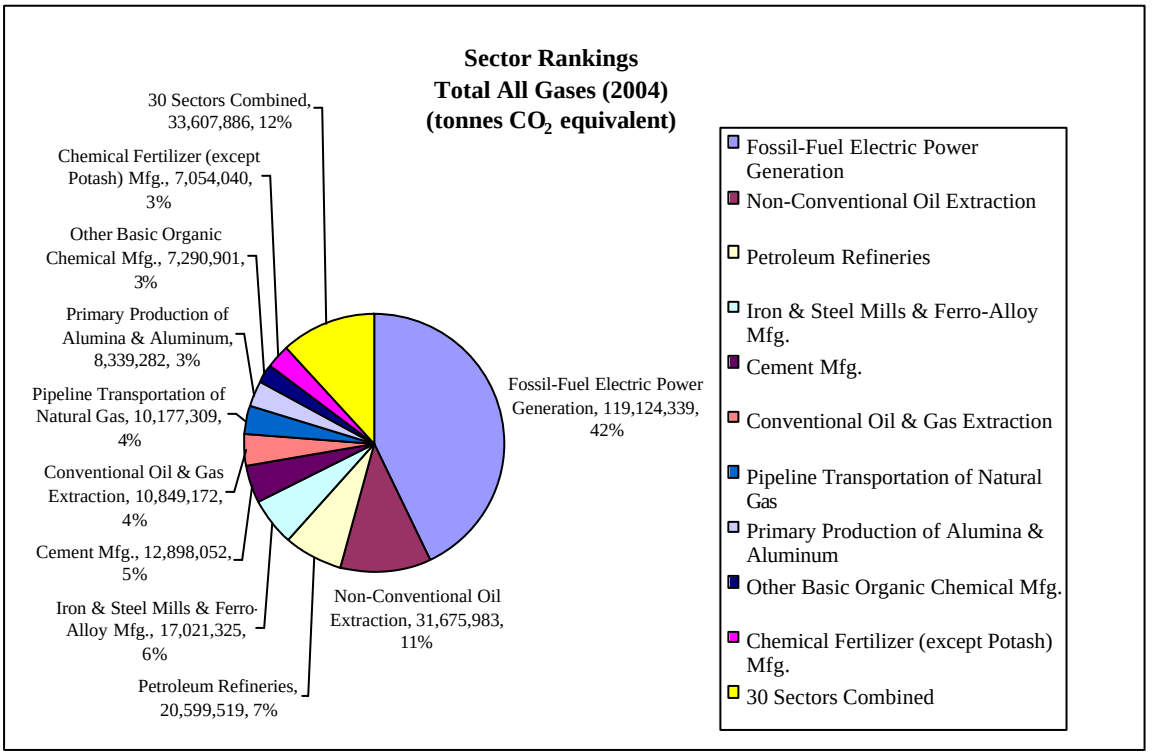
Greenhouse Gas (tonnes CO_2 equivalent)	**#1 Ranked Province**	**#2 Ranked Province**	**#3 Ranked Province**
Total all gases	Alberta **(109,503,697)**	Ontario **(77,273,825)**	Quebec **(22,904,613)**
Carbon dioxide (CO_2)	Alberta **(104,565,000)**	Ontario **(70,858,890)**	Sask. **(21,471,851)**
Methane (CH_4)	Alberta **(3,314,434)**	Ontario **(1,836,308)**	Sask. **(874,389)**
Nitrous oxide (N_2O)	Ontario **(3,528,124)**	Alberta **(1,619,112)**	Nova Scotia **(367,727)**
HFCs	Quebec **(14,510)**	Alberta **(5,151)**	Ontario **(3,917)**
PFCs	Quebec **(1,887,478)**	B.C. **(907,979)**	
Sulphur hexafluoride (SF_6)	Ontario **(1,046,485)**	Quebec **(979,243)**	Nova Scotia **(31,428)**

Source: www.PollutionWatch.org

Facilities in Alberta and Ontario contributed 66% of the total greenhouse gas emissions from all national facilities in 2004. Detailed facility and company information for all provinces and communities across Canada is available on the PollutionWatch web site – **www.PollutionWatch.org.**

Overall Results: Total emissions of greenhouse gases in 2004 from facilities across Canada

- 321 facilities reported more than 278 million tonnes CO_2 equivalent (278,890,313) of total greenhouse gas emissions.
- 318 facilities reported more than 260 million tonnes (260,213,496) of carbon dioxide (CO_2) emissions.
- 289 facilities reported more than 7.4 million tonnes CO_2 equivalent (7,455,024) of methane (CH_4) emissions.
- 280 facilities reported 6.3 million tonnes CO_2 equivalent (6,344,552) of nitrous oxide (N_2O) emissions.
- 34 facilities reported more than 24,000 tonnes CO_2 equivalent (24,504) of hydrofluorocarbons (HFCs) emissions.
- 11 facilities reported more than 2.7 million tonnes CO_2 equivalent (2,795,457) of perfluorocarbons (PFCs) emissions.
- 9 facilities reported 2 million tonnes CO_2 equivalent (2,057,181 tonnes) of sulphur hexafluoride (SF_6) emissions.



Sector Rankings: Total emissions of greenhouse gases by sector in 2004

Greenhouse Gas (tonnes CO_2 equivalent)	**#1 Ranked Sector**	**#2 Ranked Sector**	**#3 Ranked Sector**
Total all gases	Fossil Fuel electric power generation **(119,124,339)**	Non-conventional oil extraction **(31,675,983)**	Petroleum refineries **(20,599,519)**
Carbon dioxide (CO_2)	Fossil Fuel electric power generation **(118,160,610)**	Non-conventional oil extraction **(29,753,086)**	Petroleum refineries **(20,432,157)**
Methane (CH_4)	Pipeline transportation of natural gas **(1,789,121)**	Non-conventional oil extraction **(1,653,003)**	Waste treatment & disposal **(1,387,059)**
Nitrous oxide (N_2O)	Other basic organic chemical manufacturing **(3,130,483)**	Fossil Fuel electric power generation **(891,101)**	Chemical fertilizer (except potash) manufacturing **(840,113)**
HFCs	Non-ferrous (except Al) smelting and refining **(8,018)**	Primary production of alumina and aluminum (Al) **(6,464)**	Other basic organic chemical manufacturing **(4,259)**
PFCs	Primary production of alumina and aluminum **(2,795,457)**		
Sulphur hexafluoride (SF_6)	Non-ferrous (except Al) smelting and refining **(1,996,749)**	Fossil Fuel electric power generation **(31,429)**	Primary production of alumina and aluminum (Al) **(29,003)**

Source: www.PollutionWatch.org

Trends : greenhouse gas emissions

- Since only the 2004 facility-level federal greenhouse gas reporting data are currently available, it is not possible to analyze trends in greenhouse gas emissions over time.
- Other trends in greenhouse gas emissions are available through Canada's National Greenhouse Gas Inventory. The inventory includes all anthropogenic sources and sinks of greenhouse gases, but does not break the emissions down by facility. The National Greenhouse Gas Inventory includes emissions emitted by other sectors, including transportation and agriculture, which are not included on the PollutionWatch web site. The 2004 National Greenhouse Gas Inventory shows that total greenhouse gas emissions in Canada from all sources in 2004 were 758 million tonnes (CO_2 equivalent), a 0.6% increase over the 2003 total of 754 million tonnes (CO_2 equivalent) and a 26.6% increase over the 1990 total of 599 million tonnes (CO_2 equivalent). Canada's National Greenhouse Gas Inventory is available online at http://www.ec.gc.ca/pdb/ghg/ghg_home_e.cfm.

Recommendations

As matter of priority, Environment Canada should:

- Ensure Canada recommits to its obligations under the Kyoto Protocol and takes immediate action to reduce greenhouse gas emission levels.
- Establish regulated targets and timelines for greenhouse gases emitted by Canada's large final emitters such that the targets can apply beginning on January 1, 2008. These targets should be proportionate to this sector's contribution to Canada's total emissions.
- Require mandatory pollution prevention plans from all facilities reporting greenhouse gases, as well as those facilities reporting under the National Pollutant Rele ase Inventory (NPRI).
- Significantly reduce subsidies to fossil fuel energy sources.

- Recommit to initiatives and programs that support and promote alternative energy technology and energy saving devices.
- Require the public release of verified greenhouse gas emissions data within six months after the deadline for reporting.

Notes on PollutionWatch analysis

- Facilities that emit the equivalent of 100,000 tonnes (100 kt) or more of carbon dioxide (CO_2) per year are required to report their greenhouse gas emissions. Emissions were reported for the first time in June 2005, which covered greenhouse gas emissions for 2004.
- Greenhouse gas emissions ranked and analyzed on the PollutionWatch web site include only facility-level data reported by large industrial facilities across Canada. The greenhouse gas emissions are calculated and reported by industry.
- Facilities that emitted greenhouse gases below the federal government reporting threshold (100,000 tonnes CO_2 equivalent) are not included in the ranking and analysis on the PollutionWatch web site.
- Greenhouse gases are also emitted by other sectors, including transportation and agriculture, that are not included on the PollutionWatch web site. Estimates of the amounts from these sources can be found in Canada's National Greenhouse Gas Inventory (http://www.ec.gc.ca/pdb/ghg/ghg_home_e.cfm)
- The 6 reported greenhouse gases each have a different potential to contribute to global climate change. The data are therefore expressed as carbon dioxide equivalents (CO_2 equivalent), which takes into consideration the different global warming potentials of different gases. For a more detailed discussion of global warming potential, visit the "Understanding the Data" section of the PollutionWatch web site (http://www.pollutionwatch.org/tools/understandData.jsp)

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About PollutionWatch (www.PollutionWatch.org) is a collaborative project of Environmental Defence and the Canadian Environmental Law Association. The web site tracks releases and transfers of pollutants across Canada based on data collected by Environment Canada through the National Pollutant Release Inventory (NPRI) and emissions of greenhouse gases based on the federal government's Mandatory Greenhouse Gas Reporting program. NPRI and the Mandatory Greenhouse Gas Reporting program do not include data from all pollutants or sources. Visitors to the PollutionWatch web site can identify facilities in their home towns by searching by postal code, access "quick lists" of the facilities reporting the largest releases and transfers of pollutants and greenhouse gases in the country, or create their own ranked lists of facilities by province, industrial sector, or corporation.

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