

A report on Canada's largest greenhouse gas polluters in 2006

Overall GHG emissions

2006: 269,767,978 tonnes

2005: 276,373,018 tonnes

Decline from 2005 to 2006

2.4 per cent • 6,605,040 tonnes

Equivalent to taking

1.6 million cars

off the road

Bottom Line: Canada's 315 large industrial facilities (required to report GHG emissions by the Federal Government) reduced overall emissions by 2.4 per cent from 2005 to 2006. That's good news but may not hold going forward as the biggest decreases resulted from substituting coal for hydro, demand reduction for electricity, or regular maintenance, while the biggest increases came from the expanding tar sands, which is predicted to mushroom in the coming years. The best hope for continued future decreases will require decoupling the tar sands growth from emissions growth, making more efficient use of electricity and generating a greater portion of electricity from non-coal sources.

In the tar sands, three things will influence whether emissions bust a hole in any Canadian GHG reduction plan:

- **Burn or bury:** There are vast heaps of coke, the grit at the bottom of the barrel, stockpiled by major tar sands producers. The Alberta Government is considering whether to give the green light for companies to burn the coke to generate electricity or force them to bury it. The low-carbon path requires that companies are forced to bury the coke and that low-carbon energy is used instead to steam the oil out, such as hydro from northern Alberta and the Northwest Territories.
- **Capture or release:** The greenhouse gas emissions generated by the tar sands are set to increase because of increased production and the more GHG-intensive in situ steam operations coming on line. The low carbon path requires that companies and government put together the infrastructure and incentives to make burying the carbon economical.
- **Pay or free-load:** As long as carbon is free to emit it is an uphill battle getting companies to conserve on their emissions. A low carbon path requires a meaningful price on carbon emissions.

THE
CARBON

50

Canada's biggest greenhouse gas emitters in 2006

Company Name	Facilities in 2006	GHG 2006 (tonnes)	GHG 2005 (tonnes)	% incr.
Transalta Corporation	10	27,363,043	27,447,336	0%
Ontario Power Generation Inc.	6	25,227,360	30,599,929	-18%
Imperial Oil Limited	11	13,580,131	12,760,161	6%
Saskatchewan Power Corporation	4	12,919,755	13,155,502	-2%
CU Inc.	5	12,252,049	12,307,068	0%
Suncor Energy Inc.	2	9,879,820	8,524,582	16%
Epcor Power LP	2	9,779,679	8,985,848	9%
Emera Incorporated	5	9,745,368	10,648,422	-8%
Transcanada Corporation	12	9,638,634	9,832,260	-2%
Shell Canada Ltd.	11	7,879,488	7,952,566	-1%
Stelco Inc.	4	6,150,960	6,792,122	-9%
New Brunswick Power Holding Corporation	4	5,696,324	7,974,064	-29%
Petro-Canada	11	5,540,930	5,578,439	-1%
Alcan Inc.	11	5,327,140	5,724,925	-7%
4313267 Canada Inc *	1	4,793,356	--	--
Nova Chemicals Corporation	3	4,618,496	4,752,293	-3%
Canadian Oil Sands Trust (Syncrude)	1	4,543,276	3,314,346	37%
Duke Energy Field Services Canada	8	4,031,827	4,983,290	-19%
Lafarge Canada Inc	7	3,838,308	4,584,817	-16%
Algoma Steel Inc.	1	3,814,140	3,758,560	1%
Husky Energy Inc.	6	3,790,797	2,860,845	33%
Irving Oil Limited	2	3,686,677	3,845,946	-4%
Canadian Natural Resources Limited	4	2,751,669	2,005,388	37%
Alcoa	2	2,223,098	2,272,775	-2%
Agrium Inc.	3	2,177,788	2,100,654	4%
St. Marys Cement inc.	2	2,105,846	2,059,328	2%
St. Lawrence Cement Group Inc.	2	2,000,244	2,036,517	-2%
Lehigh Inland Cement Limited	2	1,958,613	1,976,162	-1%
Canadian Utilities Ltd.	2	1,700,731	1,809,415	-6%
INVISTA (Canada) Company	1	1,622,203	3,003,897	-46%
Dow Chemical Canada Inc.	2	1,579,910	1,606,870	-2%
Federated Co-operatives Limited	1	1,565,769	1,370,883	14%
Graymont Limited	7	1,419,658	1,527,704	-7%
Carmeuse Lime (Canada) Limited	3	1,352,676	1,233,760	10%
Timminco Limited	2	1,344,704	1,239,452	8%
Ultramar	1	1,309,323	1,144,960	14%
Essroc Canada Inc	1	1,125,660	1,273,739	-12%
Rio Tinto Canada Inc.	1	1,095,967	1,036,514	6%
Viking Energy Royalty Trust	1	1,032,879	336,550	207%
Alliance Pipeline Ltd.	2	1,030,931	1,006,177	2%
Westcoast Energy Inc.	3	1,012,963	880,019	15%
Maxim Power Corp.	1	948,687	919,675	3%
EnCana Corporation	6	940,044	1,246,976	-25%
Atco Ltd.	6	913,845	1,026,512	-11%
Dofasco Inc.	2	907,262	5,344,700	-83%
Calpine Power Income Fund	3	896,992	991,578	-10%
Ciment Québec inc.	1	867,718	763,413	14%
Teck Cominco Limited	5	844,912	772,589	9%
Abitibi-Consolidated Inc.	5	836,976	911,520	-8%
Chevron Canada Limited	4	794,477	788,739	1%

Data source: Government of Canada Greenhouse Gas Reporting, 2006.

GHG emissions refer to CO₂ equivalent (tonnes). GHG emissions were calculated for each company based on their percentage ownership of each individual reporting facility. All company names are spelled as reported in the government reporting database.

* 4313267 Canada Inc is a wholly-owned subsidiary of Arcelor, which is now Arcelor Mittal



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CARBON 50: The top 10 increasers & decreasers by facility (2005 to 2006)

top 10 increasers

plus 7,779,197.4 tonnes—Equivalent to putting two million new cars on the road

Tar sands=ballooning Canada's GHGs

Facility Name (increasers)	Province	Reporting Company Name	GHG 2006 (tonnes)	GHG 2005 (tonnes)	% Increase	Absolute Increase
Mildred Lake and Aurora North Plant Sites	AB	Syncrude Canada Ltd.	12,620,212	10,357,330	22%	2,262,881
Suncor Energy Inc. Oil Sands	AB	Suncor Energy Inc. Oil Sands	9,132,040	7,694,458	19%	1,437,582
White Rose FPSO	NL	Husky Oil Operations Limited	947,390	132,630	614%	814,760
Genesee Thermal Generating Station	AB	EPCOR Power Generation Services Inc.	9,743,312	8,949,492	9%	793,819
Wolf Lake/Primrose Thermal Operation	AB	Canadian Natural Resources Limited	2,474,618	1,880,603	32%	594,015
Cold Lake	AB	Imperial Oil Resources	4,619,666	4,128,065	12%	491,601
Edmonton Refinery	AB	Petro-Canada	2,002,247	1,533,512	31%	468,735
Shand Power Station	SK	Saskatchewan Power Corporation	2,232,924	1,851,462	21%	381,462
Burrard Generating Station	BC	BC Hydro and Power Authority	351,296	69,136	408%	282,160
Dofasco Hamilton	ON	Dofasco Inc	4,793,356	4,541,174	6%	252,182

An increase in tar sands production accounted for the majority (82 per cent) of the greenhouse gas emissions increase among the top ten industrial emissions increasers from 2005 to 2006. The other 18 per cent came from two power producers, a refinery, and a steel facility. Petro-Canada's Edmonton refinery showed that sometimes there is a trade off between greenhouse gases and other emissions. The Petro-Canada refinery experienced a 31 per cent emissions increase as a result of changes made to meet the new Ultra Low Sulfur Diesel regulations (which bring allowable sulfur content down from 500 ppm to 15 ppm).

top 10 decreasers

minus 10,575,239.3 tonnes—Equivalent to taking 2.8 million cars off the road

Less coal=less emissions

Facility Name (increasers)	Province	Reporting Company Name	GHG 2006 (tonnes)	GHG 2005 (tonnes)	% Decrease	Absolute Decrease
Lambton Generating Station	ON	Ontario Power Generation	6,485,616	8,738,072	-26%	2,252,456
Coleson Cove Generating Station	NB	NB Power Coleson Cove Corporation	1,037,629	2,918,154	-64%	1,880,525
INVISTA (Canada) Company- Maitland Site	ON	INVISTA (Canada) Company	1,622,203	3,003,897	-46%	1,381,694
Nanticoke Generating Station	ON	Ontario Power Generation	16,271,466	17,629,437	-8%	1,357,971
Poplar River Power Station	SK	Saskatchewan Power Corporation	3,248,190	4,117,314	-21%	869,124
Tufts Cove Generating Station	NS	Nova Scotia Power Incorporated	554,704	1,286,456	-57%	731,752
Lennox Generating Station	ON	Ontario Power Generation	305,106	986,676	-69%	681,570
Terra Nova	NL	Petro-Canada	374,235	881,443	-58%	507,208
Hamilton Steel (formerly Stelco Hamilton)	ON	Stelco Inc	2,693,632	3,166,622	-15%	472,991
Holyrood Thermal Generating Station	NL	Newfoundland and Labrador Hydro	629,263	1,069,212	-41%	439,948

Just 10 facilities, including eight power producers, a chemical company and a steel company, accounted for a combined greenhouse gas reduction of over 10 million tonnes from 2005 to 2006. This amount is equivalent to taking 2.8 million passenger cars and trucks off of Canadian roads for an entire year. How did they do it? Innovation? Efficiency investments? Nope. Except for a minute portion of the reductions that came from efficiency improvements at Ontario Power Generation's Nanticoke Generating Station and Newfoundland and Labrador Hydro substituting one per cent sulfur coal for two per cent sulphur coal at their Holyrood Thermal Generating Station, the main explanations were less demand for energy, substitution for low-carbon energy like hydro, and shutdowns for maintenance.

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