

PRIVATE AND PUBLIC ENVIRONMENTAL PROTECTION

EXPENDITURE IN CANADA, 2022 EDITION:

COMPARISONS BY INDUSTRY AND BY PROVINCE

Overview: Environmental spending in Canada

This Fact Sheet details spending on environmental protection by Canada's oil and gas sector, other industries, and provincial governments. The comparisons are made using the most recent data from Statistics Canada. For provincial government spending, data are available from 2008 to 2020 on an annual basis.

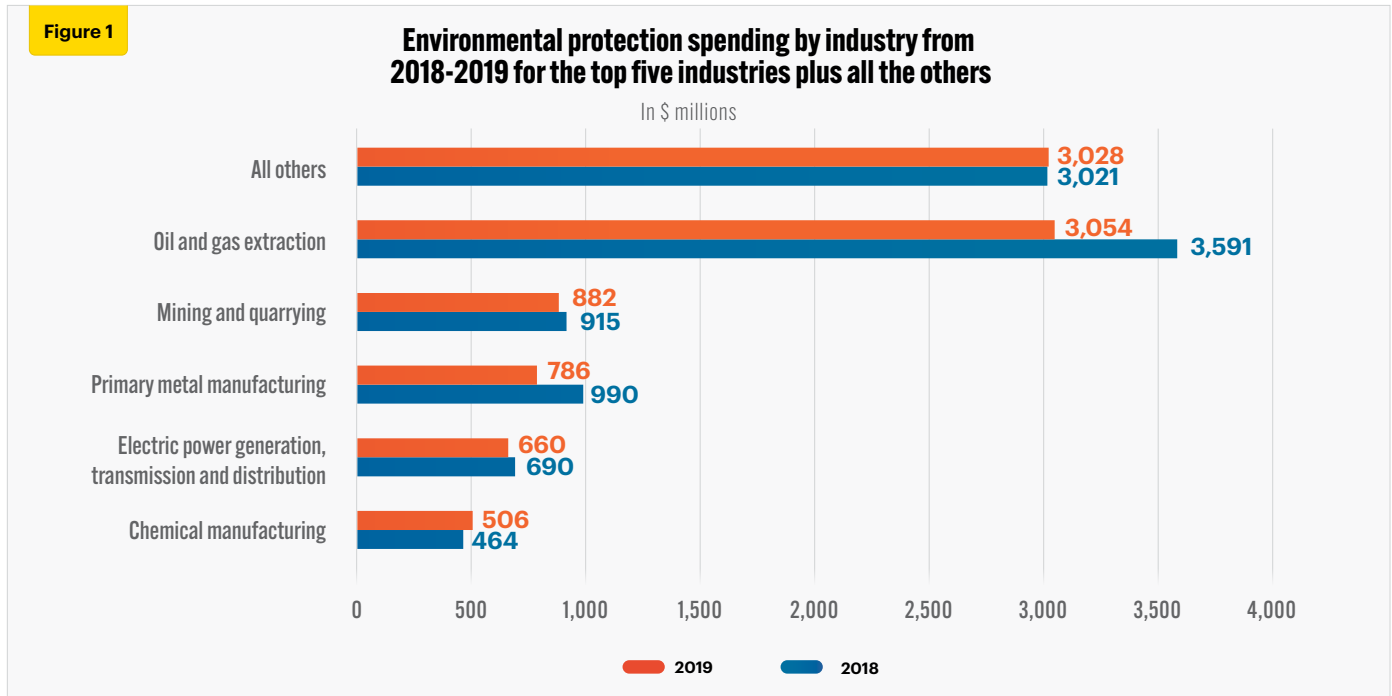
As the data make clear, Canada's oil and gas sector spent the most of any industry in the country on environmental protection—\$6.6 billion during 2018 and 2019, accounting for 34 percent of total environmental protection expenditures made by business across Canada in those years.

As for governments, Alberta spent \$21.4 billion on environmental protection between 2008 and 2020. Measured per capita, Alberta's spending on environmental protection was higher than the average of the other nine provinces every year, regardless of the party in power. For example, in 2020, the most recent year for which data are available, Alberta spent \$327 per capita on environmental protection—112 percent of the nine-province average of \$293 per capita.

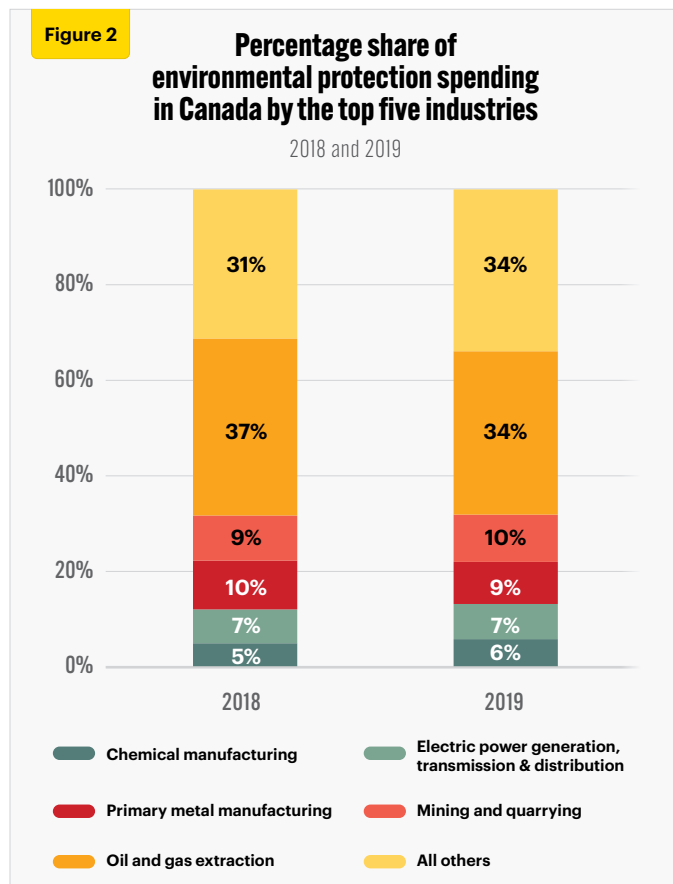
Comparison One: Environmental protection spending by industry

Figures 1 and 2 show that Canadian business spent \$18.6 billion on environmental protection in 2018 and 2019.

- For total spending, i.e., when capital and operating expenses on environmental protection are combined, out of the \$18.6 billion spent between 2018 and 2019:
 - In 2019, the oil and gas sector spent \$3 billion in environmental protection expenditure, which constituted 34 percent of all Canadian business environmental spending that year (See Figure 2).
 - Over the two years 2018 and 2019, the oil and gas sector spent \$6.6 billion or 34 percent of the total over both years, while all other industries combined spent \$11.9 billion or 64 percent of the total during both 2018 and 2019 (see Figure 1).
 - Those other major industries include mining and quarrying and primary metal manufacturing (each about \$1.7 billion), electric power generation, transmission and distribution (\$1.3 billion) and chemical manufacturing (\$0.9 billion).



Source: Statistics Canada, Table 38-10-0130-01.



Source: Statistics Canada, Table 38-10-0130-01.

Historically, the oil and gas sector has spent a significant amount on environmental protection. Businesses in Canada spent \$67.7 billion in total between 2006 and 2018 on capital and operating expenses on environmental protection. In that same period, the oil and gas sector alone spent \$28.1 billion or 41 percent on environmental protection, while all other industries combined spent \$39.6 billion or 59 percent.

Breakdowns by capital and operating

- *Capital expenditure.*² In 2018, the oil and gas sector was responsible for 41 percent (\$1.5 billion) of all capital spending on environmental protection compared with 59 percent for all other industries (\$2.2 billion). In 2019, the oil and gas sector spent \$1.8 billion, accounting for 48 percent of the all the industry spending on environmental protection (see Table 1); and
- *Operating expenses.*³ In 2018, the oil and gas sector was responsible for 34 percent (\$2 billion) of all operating expenditures for environmental protection compared with 66 percent for all other industries combined (\$3.8 billion).

From 2006 to 2018, the oil and gas sector was responsible for 51 percent (\$15.2 billion) of all capital spending for environmental protection compared with 49 percent for all other industries (\$14.7 billion). Meanwhile, in that period the oil and gas sector was responsible for 34 percent (\$12.9 billion) of all operating expenditures for environmental protection compared with 66 percent for all other industries (\$24.9 billion).

Comparison Two: Environmental spending by the provinces, 2008-2020

Not only industries but governments spend money on environmental protection. Table 2 shows that total provincial government spending on environmental protection between 2008 and 2020 was nearly \$128.8 billion. (The federal government and the territories are excluded from this comparison.) Alberta spent \$21.4 billion or 16.6 percent of all provincial expenditures on the environment, while its proportion of the (10-province) population was 11.7 percent as of 2020.

Table 1

Industry expenditures on environmental protection

\$ millions

	Capital expenditures		Operating expenses	
	2018	2019	2018	2019
Total, all industries	3740.5	3736.6	5930.5	5177.4
Oil and gas extraction	1518.6	1805.5	2072.5	*
Mining and quarrying	465.3	306.7	449.6	574.9
Electric power generation, transmission and distribution	240.3	282.7	449.4	376.9
Chemical manufacturing	193.1	180.4	271.2	325.1
Primary metal manufacturing	489.1	379	500.7	407

*Not available

Source: Statistics Canada, Table 38-10-0130-01.

- Ontario spent \$51.5 billion or 40 percent of all provincial expenditures, while its proportion of the population was 38.9 percent as of 2020.
- Nova Scotia and Saskatchewan also spent a higher proportion on the environment relative to their populations.
- Six provinces spent less on the environment than their share of the population: Quebec, British Columbia, Manitoba, New Brunswick, and Newfoundland & Labrador. Quebec's government incurred just 18.6 percent of all provincial environmental expenditures between 2008 and 2020, significantly below its 22.6 percent share of the province's population in 2020.

¹ Statistics Canada surveys companies only every second year, i.e., 2006, 2008, and so forth. This leads to an underestimate of environmental spending by companies, possibly by as much as 50 percent, given that data for every second year is absent.

² Capital expenditure includes outlays on machinery and equipment and for the construction of non-residential facilities, among other expenditures.

³ Operating expenses include expenses incurred for labour, materials and supplies, and maintenance and repair, among others.

Table 2

Environmental spending by provincial governments

2008-2020

Province	Total 2008-2020 environment spending		Share of 10-province population totals (2020)
	\$ billions	% of total	%
Newfoundland & Labrador	1.3	1.0%	1.4%
Prince Edward Island	0.5	0.4%	0.4%
Nova Scotia	3.8	3.0%	2.6%
New Brunswick	1.9	1.5%	2.1%
Quebec	23.9	18.6%	22.6%
Ontario	51.5	40.0%	38.9%
Manitoba	3.7	2.9%	3.6%
Saskatchewan	4.2	3.3%	3.1%
Alberta	21.4	16.6%	11.7%
British Columbia	16.5	12.8%	13.6%
All provinces	128.8	100.0%	100.0%

Source: Statistics Canada, Tables 10-10-0005-01 and 17-10-0005-01; and authors' calculations.

A per capita look at provincial spending on the environment

Table 3 lists all provincial spending on environmental protection between 2008 and 2020 inclusive.

Of note:

- Alberta spent more per capita on environmental protection than any other province in 2020, except for Manitoba and Prince Edward Island.
- When the annual average of the other nine provinces is compared, Alberta spent substantially more than the annual average of the other provinces on environmental protection every year.

Table 3 and Figure 3 also show the following:

- In 2020, Alberta's spending on the environment at \$327 per capita was 102 percent of the amount spent by Ontario (\$320); 105 percent of that spent by British Columbia (\$310); 112 percent of the nine-province average (\$293); and 127 percent of what Quebec spent (\$257).⁴

Table 3

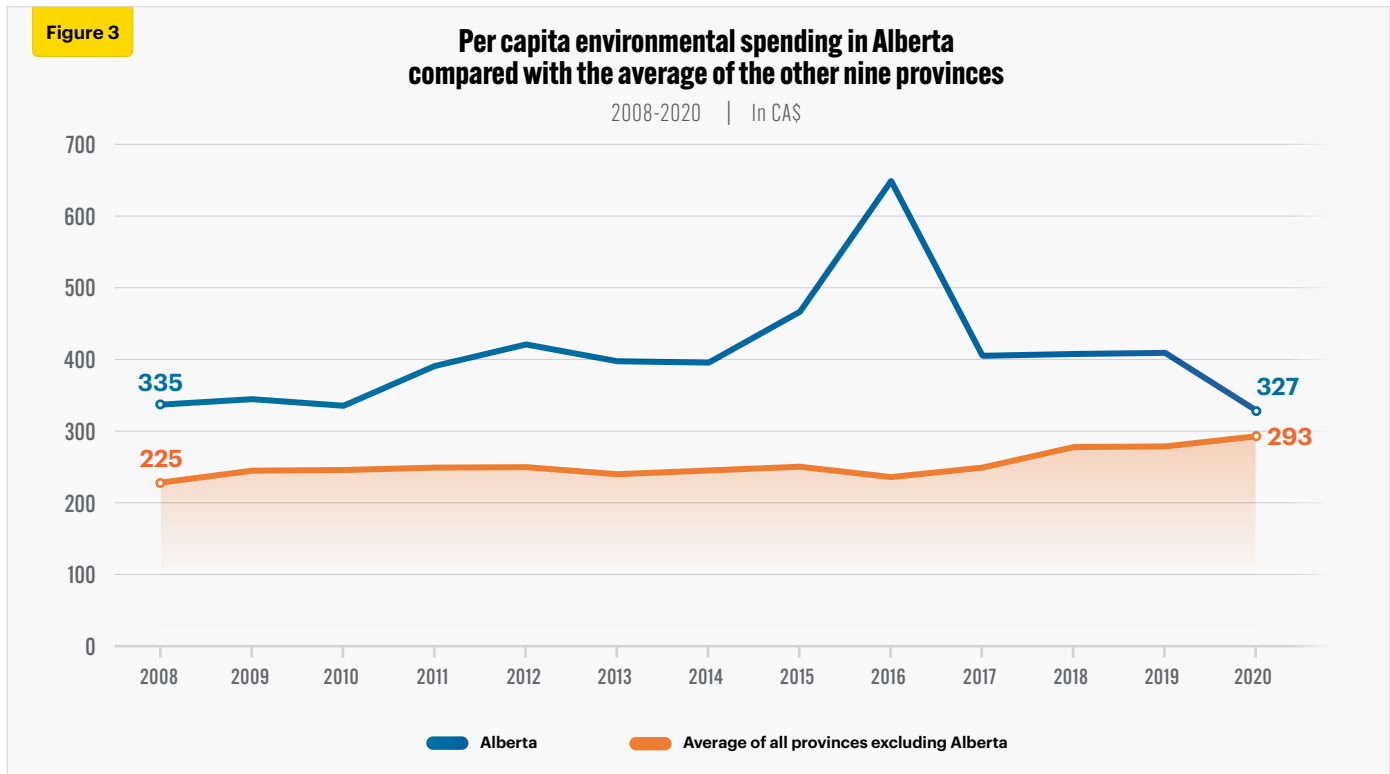
Provincial government expenditures on environmental protection per capita

2008-2020 | In CA\$

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Newfoundland & Labrador	145	190	192	190	182	190	199	214	196	189	181	185	190
Prince Edward Island	259	250	247	222	221	229	222	228	231	233	359	438	440
Nova Scotia	303	353	333	343	336	297	330	324	267	265	328	265	268
New Brunswick	214	239	234	232	231	187	159	184	156	159	166	184	195
Quebec	179	196	204	196	208	212	220	225	218	265	272	269	257
Ontario	234	270	292	271	277	271	278	282	303	313	325	312	320
Manitoba	181	189	186	206	198	190	200	197	200	223	287	250	359
Saskatchewan	259	260	262	307	320	314	316	318	265	297	279	293	298
Alberta	335	343	334	390	421	397	395	467	653	404	407	408	327
British Columbia	253	238	243	257	256	249	263	264	264	279	299	307	310
Average of all provinces excluding Alberta	225	243	244	247	248	238	243	248	233	247	277	278	293
Alberta relative to nine-province average	149%	141%	137%	158%	170%	167%	162%	188%	280%	164%	147%	147%	112%

Source: Statistics Canada, Tables 10-10-0005-01 and 17-10-0005-01.

⁴ The spike in environmental spending in Alberta in 2016 was due to \$1.1 billion in new spending from the province's Climate Leadership Plan (Statistics Canada 2018.)



Source: Statistics Canada, Tables 10-10-0005-01 and 17-10-0005-01; and authors' calculations.

Conclusion: Environmental spending highest by oil and gas industry, and highest by Alberta

In 2018 and 2019, the oil and gas sector spent \$6.6 billion, or 34 percent, of the amount spent by businesses on environmental protection.

Historically, when measured as a proportion of the \$67.6 billion in all-industry spending on environmental protection between 2006 and 2018, not including years where there were "gaps" in Statistics Canada data, Canada's oil and gas sector spent \$28.1 billion, or 41 percent. All other industries in Canada were responsible for \$39.6 billion or 59 percent of such spending.

When provincial government spending is examined using data available from 2008 to 2020, Alberta spent significantly more than its share of Canada's population (\$21.4 billion or 16.6 percent of all provincial spending with a population at 11.7 percent of provincial totals). This is also true of per capita spending: Alberta's spending on environmental protection was significantly higher than the average of the other nine provinces for the entire 2008-2020 period.

Notes

This CEC Fact Sheet was compiled by Ven Venkatachalam and Lennie Kaplan at the Canadian Energy Centre: www.canadianenergycentre.ca. The authors and the Canadian Energy Centre would like to thank and acknowledge the assistance of two anonymous reviewers in reviewing the data and research for this Fact Sheet. All percentages in this report are calculated from the original data, which can run to multiple decimal points. They are not calculated using the rounded figures that may appear in charts and in the text, which are more reader friendly. Thus, calculations made from the rounded figures (and not the more precise source data) will differ from the more statistically precise percentages we arrive at using source data. Image credits: [Bryce Adams](#) from Unsplash.com

References (all links live as of Sept 5, 2022)

Statistics Canada (2022), Table 38-10-0130-01 <<https://bit.ly/3OERIKi>>; Table 10-10-0005-01 <<https://bit.ly/2ZEkp2W>>; and Table 17-10-0005-01 <<https://bit.ly/3d03wV5>>; Statistics Canada (2018), Government Expenditures in Alberta: A presentation to deputy ministers in Alberta by Anil Arora (February 12) <<https://bit.ly/3svYAYp>>; Statistics Canada (2020), Table 38-10-0042-01 <<https://bit.ly/2Y65iQi>>.

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