

\$9 BILLION AND 55,000 JOBS: THE IMPACT OF OIL AND GAS (AND ALBERTA) ON BC'S ECONOMY

Overview

Canada's oil and natural gas sector has had a positive impact on many parts of the Canadian economy, not only in Alberta and Saskatchewan where the industry is a relatively large proportion of the economy, but across the country. The economies of all the provinces, especially Ontario, Quebec, and British Columbia, benefit from Canada's oil and gas sector, particularly when it is healthy, but even in "slump" years such as 2018 when oil and gas prices were relatively depressed.

The impact of the oil and gas sector on these province's GDP, jobs, outputs, exports, and other key economic sectors is a bit more difficult to determine, but no less relevant to current discussions about the performance of the oil and gas sector.

In this CEC Fact Sheet, we examine the impact that the oil and gas sector has had on British Columbia's economy. Two points to note:

- First, the analysis presented here includes not only the direct impact of Canada's oil and gas sector on BC's economy in terms of nominal GDP, output, jobs, and exports, but also the indirect impact that such activities have on other sectors in the province.
- Second, given that the largest proportion of oil and gas activity in Canada occurs in Alberta, we also profile the impact of Alberta's purchases on various sectors of BC's economy. For this measurement, we look at the period from 2007 to 2018 and show the significant role Alberta plays in BC's interprovincial and international trade flows.

Analysis One: The impact of the oil and gas sector on British Columbia's economy

Using customized data from Statistics Canada (see Table 1), in 2018, the oil and gas sector

- Was responsible for adding \$9 billion in nominal GDP to the BC economy;
- Generated \$17.8 billion in outputs, consisting primarily of the value of goods and services produced by various sectors in the BC economy;
- Supported over 55,000 direct and indirect jobs in BC's economy; and
- Paid over \$2.9 billion in wages and salaries to workers in BC.

Table 1

The oil and gas sector's impact on BC's economy

2018

	Output (in \$ billions)	GDP (in \$ billions)	Jobs
Direct impact	10.7	5.1	18,697
Indirect impact	7.1	3.9	36,590
Total impact	17.8	9.0	55,288

Source: Derived from Statistics Canada, Supply and Use tables, custom tabulation.

¹ For a discussion of Statistics Canada's use of Input/Output models and equilibrium models, see the addendum in [Fact Sheet #17](#). The latest available year for the customized data from Statistics Canada is 2018.

More than \$6 billion impact from oil and gas on key BC industries

To examine the impact of the oil and gas sector on BC's economy in more detail, consider that, in 2018, the oil and gas sector purchased nearly \$6.3 billion worth of goods and services from other sectors in BC (see Table 2). The \$6.3 billion in purchases of goods and services included

- \$652.6 million from BC's finance and insurance sector;
- \$861.3 million from BC's professional services; and
- Nearly \$3.2 billion from BC's manufacturing sector.

Analysis Two: The value of Alberta's purchases from BC

Given that the largest proportion of oil and gas activity in Canada occurs in Alberta, we have expanded the analysis to include all purchases by Alberta's consumers, businesses, and governments of BC's goods and services—that is, we measure the value of Alberta's interprovincial trade with BC.

The impact of Alberta's purchases on BC's interprovincial trade in 2018: \$16.7 billion

Albertans spent a substantial amount on British Columbia's goods and services. Alberta is BC's biggest interprovincial trade market (see Table 3). In total, in 2018, interprovincial exports from BC to Alberta were worth \$16.7 billion, or 39 percent of British Columbia's total interprovincial trade. Ontario came second at \$14.4 billion (33.6 percent) and Quebec third at \$4.8 billion (11.8 percent).

Across all the interprovincial exports from all of BC's sectors, Alberta-based consumers, businesses, and governments made an average of 39% of purchases. That was significantly higher than Alberta's 11.6% proportion of Canada's population in 2018 (see Figure 1).

Table 2 Purchases in BC by the oil and natural gas sector from other industries
2018

Sector	Value of purchases (in \$ millions)
Manufacturing	3,155.0
Professional, scientific and technical services	861.3
Finance and insurance	652.6
Administrative and support, waste management and remediation services	444.3
Construction	231.4
Management of companies and enterprises	198.4
Real estate and rental and leasing	168.8
Transportation and warehousing	167.3
Utilities	158.3
Information and cultural industries	86.2
Other services (except public administration)	83.7
Accommodation and food services	50.2
Educational services	20.3
Wholesale and retail trade	15.0
Total	6,293

Source: Authors' calculation derived from Supply and Use Tables, Statistics Canada catalogue 15-602-x_2017.

Table 3

BC's total interprovincial trade in goods and services, by province or territory

2018

	\$ billions	% of all BC interprovincial trade
Alberta	16.7	39.0%
Ontario	14.4	33.6%
Quebec	4.8	11.3%
Saskatchewan	2.3	5.3%
Manitoba	1.8	4.3%
Nova Scotia	0.7	1.7%
New Brunswick	0.5	1.2%
Yukon	0.5	1.1%
Northwest Territories	0.4	0.9%
Nunavut	0.3	0.7%
Newfoundland and Labrador	0.3	0.7%
Prince Edward Island	0.1	0.3%

Source: Statistics Canada, Table 12-10-0088-01.

Alberta is British Columbia's second largest export market after the United States

A look at BC's international and interprovincial trade export data shows that, at \$16.7 billion in 2018, BC's trade with Alberta was second behind only its trade with the United States (\$22.7 billion) and ahead of all other markets including Ontario (\$14.4 billion), China (\$7 billion), Japan (\$5.1 billion), and South Korea (\$3 billion) (see Figure 2).

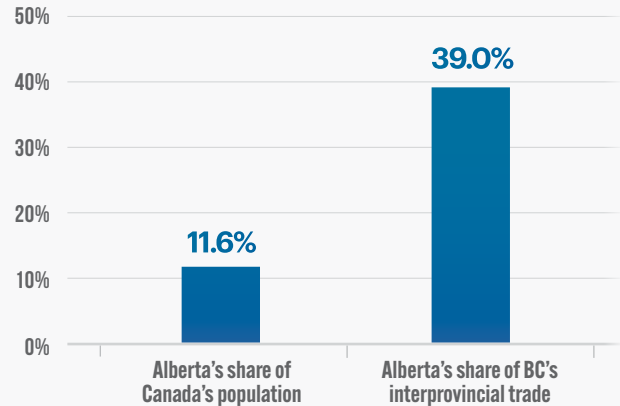
Alberta's 2007-2018 impact on British Columbia's interprovincial exports: \$177 billion

Residents and local businesses from other provinces benefit when they supply Alberta with labour, goods, services, and technology. Between 2007 and 2018, Alberta imported nearly \$177 billion worth of goods and services from British Columbia. This total included \$41 billion in manufacturing, \$10.9 billion each in accommodation and food services, and \$10.1 billion in agriculture and forestry (see Table 4).

Figure 1

Alberta's share of BC's interprovincial trade compared with Alberta's share of Canada's population

2018

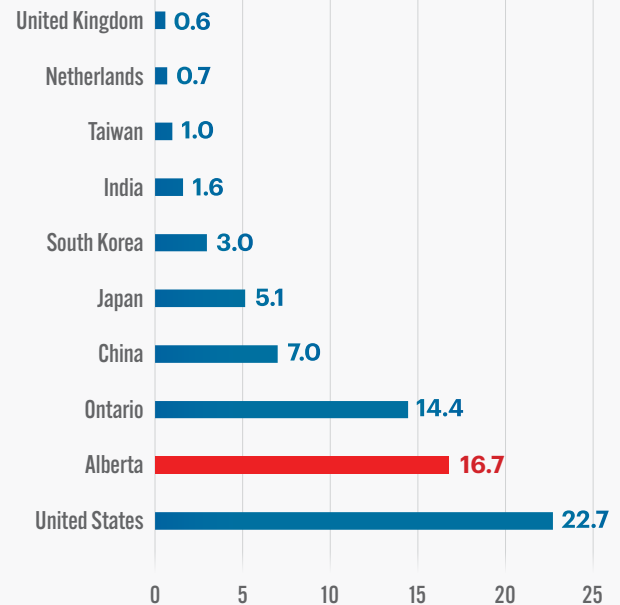


Source: Statistics Canada, Table 12-10-0088-01; 2016 Census.

Figure 2

Top 10 destinations for BC's international and interprovincial exports

2018 | In \$ billions



Source: Government of Canada trade data online; and authors' calculation derived from Statistics Canada, Table 12-10-0088-01.

Table 4

BC's interprovincial exports to Alberta

2007 to 2018

Sector	\$ billions	Sector	\$ billions
Mineral fuels	24.9	Grains and other crop products	2.0
Transportation and related services	19.8	Information and cultural services	2.0
Professional services (except software and research and development)	14.3	Primary metallic products	1.9
Accommodation and food services	10.9	Furniture and related products	1.8
Food and non-alcoholic beverages	10.8	Chemical products	1.6
Administrative and support, head office, waste management and remediation services	10.7	Utilities	1.6
Wood products	5.9	Forestry products and services	1.3
Other finance and insurance	4.7	Other manufactured products and custom work	1.2
Retail margins, sales of used goods and commissions	4.2	Health and social assistance services	1.1
Real estate, rental and leasing and rights to non-financial intangible assets	3.8	Support services related to farming and forestry	1.1
Other farm products	3.7	Non-metallic minerals	0.8
Fabricated metallic products	3.0	Telecommunications, broadcasting distribution and related services	0.8
Depository credit intermediation	2.9	Electrical equipment, appliances and components	0.6
Other services	2.8	Printed products and services	0.6
Arts, entertainment and recreation services	2.7	Refined petroleum products (except petrochemicals)	0.5
Software	2.5	Education services	0.5
Live animals	2.3	Motor vehicle parts	0.5
Transportation equipment	2.2	Oil and gas and mineral exploration	0.4
Plastic and rubber products	2.2	Published products and recorded media (except software)	0.4
Industrial machinery	2.2	Mining and oil and gas support services	0.3
Wood pulp, paper and paper products and paper stock	2.1	Computers and electronic products	0.3
Non-metallic mineral products	2.0	Fish, crustaceans, shellfish and other fishery products	0.3
Alcoholic beverages and tobacco products	2.0	Textile products, clothing, and products of leather and similar materials	0.3
		Research and development	0.1

Source: Authors' calculations from Statistics Canada, Table 12-10-0088-01.

Conclusion

Canada's oil and gas sector has a significant impact on BC's export sectors, both direct and indirect, as does the purchase of goods and services by Alberta's citizens, businesses, and governments in the province where the sector is concentrated.

The oil and gas sector provides substantial economic benefits to BC in the form of GDP, jobs, output, and exports. In 2018 alone, the economic benefits included \$9 billion in nominal GDP, \$17.8 billion in outputs in the BC economy, over 55,000 jobs, and over \$2.9 billion in wages and salaries to workers in the province.

Notes

This CEC Fact Sheet was compiled by Ven Venkatachalam and Lennie Kaplan at the Canadian Energy Centre (www.canadianenergycentre.ca). 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. 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 the initial edition of this Fact Sheet. Image credits: [Matt Wang](#) from Unsplash.com

References (all links live as of October 12, 2022)

Statistics Canada (2022a), Supply and Use Tables, custom tabulation; Statistics Canada (2022b), Table 12-10-0088-01: Interprovincial and international trade flows, basic prices, summary level <<https://bit.ly/3ENOaTR>>; Statistics Canada (2021c), Table 17-10-0057-01: Population estimates, quarterly <<https://bit.ly/2GXAbi7>>; Statistics Canada (2021), Supply and Use Tables, 2018, Catalogue 15-602-X_2017 <<https://bit.ly/2XHbDUe>>; American Petroleum Institute (2017), *Impacts of the Natural Gas and Oil Industry on the US Economy in 2015* <<https://bit.ly/2EKrJTT>>; Government of Canada, Trade Data Online (June 2022) <<https://bit.ly/2EMswnj>>.

Definitions

The **oil and gas sector** is defined as the sum of oil and gas extraction and oil and gas investment. Oil and gas extraction is defined by NAICS subsector 211. It comprises establishments primarily engaged in operating oil and gas field properties. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This subsector includes the production of oil, the mining and extraction of oil from oil shale and oil sands, and the production of gas and hydrocarbon liquids through gasification. Oil and gas investment includes capital expenditures on construction, machinery and equipment, and exploration by the oil and gas extraction industry. **GDP**, or Gross Domestic Product, also referred to as gross value added at basic prices, is the sum of the market values, or prices, of all final goods and services produced in an economy. **Output** consists primarily of the value of goods and services produced by an industry. Jobs include employee jobs (full-time, part-time, and seasonal) and self-employed jobs. The **direct impact** of oil and gas extraction is the effects directly attributed to the industry's production. The direct impact of oil and gas investment is the deliveries by domestic industries to satisfy capital expenditures by the oil and gas extraction industry. Direct impact is measured in terms of GDP, output, and jobs within the oil and gas sector. The **indirect impact** covers upstream economic activities associated with supplying intermediate inputs (the current expenditures on goods and services used in the production process) to the directly affected industries. The indirect impact is measured in terms of GDP, output, and jobs through the oil and gas sector supply chain, including other key sectors of an economy—in the case of this paper, British Columbia's economy. We use the American Petroleum Institute definition of the oil and natural gas sector to quantify the goods and services purchased by the sector and the wages paid by the sector. The sector includes conventional oil and gas extraction and non-conventional oil extraction. Support activities for oil and gas extraction include oil and gas engineering construction, petroleum refineries, petroleum and coal product manufacturing (except petroleum refineries); petroleum product wholesaler-distributors, gasoline stations, crude oil and other pipeline transportation, and pipeline transportation of natural gas. The **manufacturing** sector includes food and non-alcoholic beverages; alcoholic beverages and tobacco products; textile products, clothing, and products of leather and similar materials; wood products; wood pulp, paper, paper products, and paper stock; printed products and services; refined petroleum products (except petrochemicals); chemical products; plastic and rubber products; non-metal mineral products; primary metal products; fabricated metal products; industrial machinery; computers and electronic products; electrical equipment, appliances, and components; transportation equipment; motor vehicle parts; furniture and related products; and other manufactured products.

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