

## 20,000 JOBS AND \$3.5 BILLION:

## THE IMPACT OF OIL AND GAS

## (AND ALBERTA) ON QUEBEC'S ECONOMY

### Overview

Canada's oil and natural gas sector has positive impacts on many aspects of the Canadian economy, not only in Alberta, where the industry is a relatively large proportion of the economy, but right across the country. Canada's oil and gas sector benefits the economies of all the provinces, including Atlantic Canada, Ontario, Quebec, and British Columbia, not only when the industry is healthy, as it is proving to be in 2022, but also in a slump year, such as 2017, when oil and gas prices were relatively depressed.

The impact of the sector on jobs, labour income, Gross Domestic Product (GDP), outputs<sup>1</sup>, and trade on provinces outside Western Canada and on other vital economic sectors in those provinces is not well-known, but is highly relevant to current discussions about the role of oil and gas in Canada's future.

In this CEC Fact Sheet, we examine the direct impact that the oil and gas sector has on Quebec's economy in terms of jobs, labour income, GDP, outputs, and exports and the indirect impact such activities have on other sectors in Quebec. Given that most oil and gas activity occurs in Alberta, we look at interprovincial trade exports from Quebec to Alberta for 2018 (a slump year), as well as the entire 2007 to 2018 period. Finally, we show the significant role Alberta plays in Quebec's interprovincial and international trade.

### Oil and gas and Quebec

Many people in Canada think that Quebec has nothing to do with the oil and gas sector. While there is virtually no oil and gas production in Quebec itself, oil and gas does play a role in the functioning of Quebec's economy.

Quebec's total [energy consumption](#) in 2018 was 1,770 petajoules<sup>2</sup>. Fifty-four percent of Quebec's energy demand comes from refined petroleum products (RRP)<sup>3</sup> and natural gas. At 20 percent of Canada's RRP demand, Quebec is the second-largest market for RRP in Canada after Ontario. In 2018, Quebec's demand for gasoline was 180 thousand barrels per day; for diesel, it was 85 thousand barrels per day; and for natural gas, it was 591 million cubic feet per day. Most of the gasoline consumed in Quebec comes from two large refineries that operate in the province that have a combined capacity of [372 thousand barrels per day](#).

Quebec also plays an integral part in the trade and transportation of oil and gas. The province receives crude oil by pipeline, rail, and tanker. Enbridge Line 3 delivers crude oil from Ontario to Montreal. Quebec also receives crude oil from the Portland, Maine to Montreal Pipeline, connecting the U.S. to a refinery in Quebec. Quebec also has three rail facilities capable of receiving [123 thousand barrels](#) per day of crude oil. In addition, Quebec receives crude oil by tanker arriving at Montreal and Levis.

<sup>1</sup> Output consists primarily of the value of goods and services produced by an industry.

<sup>2</sup> Energy sources are measured according to their energy content. The "joule" is the standard unit of energy in general scientific applications. Petajoule means one million gigajoules.

<sup>3</sup> Products refined from crude oil, such as gasoline, diesel, heating oil, and jet fuel, among others.

## Direct and indirect impacts of the oil and gas sector on Quebec's economy

Using customized data from Statistics Canada, in 2017, the oil and gas sector:

- Supported over 20,000 jobs directly and indirectly in Quebec.
- Added nearly \$1.8 billion to Quebec's nominal GDP; and
- Generated over \$3.5 billion in outputs,<sup>4</sup> consisting primarily of the value of goods and services produced by sectors in the Quebec economy (see Table 1).

Table 1 The Oil and Gas Sector's Impact on Quebec's Economy 2017			
	Output	GDP	Employment
	\$ millions		number
Direct impact	66	36	373
Indirect impact	3,507	1,810	19,982
Total impact	3,573	1,846	20,356

**Source:** Derived from Statistics Canada, Supply and Use Tables, custom tabulation. Totals may not add exactly due to rounding.

## In 2018 Alberta purchased over \$9.7 billion of goods and services from Quebec

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

Albertans spent a substantial amount on Quebec's goods and services in 2018. The purchases ranged from relatively small amounts in accommodation and food services (\$29 million) to considerably more trade in manufactured goods (\$4.1 billion), finance and insurance (\$1.5 billion), and professional services (including software and research and development) (\$1.2 billion) (see Table 2). In 2018 alone, interprovincial exports by Quebec to Alberta were worth over \$9.7 billion.

Table 2

### Quebec's Interprovincial Exports to Alberta, by Sector

2018

Sectors	Value (\$ millions)
Manufacturing	4,095
Finance and insurance	1,497
Professional services (including software, research, and development)	1,229
Wholesale and retail trade	847
Transportation and related services	670
Information and cultural industries	478
Administrative and support, head office, waste management, and remediation services	468
Real estate, rental, and leasing	138
Arts, entertainment, and recreation services	82
Agriculture, forestry, fishing, and hunting	82
Other services	39
Accommodation and food services	29
Mining, quarrying, and oil and gas extraction	14
Education services	6
Health and social assistance services	4

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

<sup>4</sup> For a discussion of Statistics Canada's use of both input/output models and equilibrium models, see the addendum in [Fact Sheet #17](#). The latest available year for customized data from Statistics Canada is 2017.

## Between 2007 and 2018, the value of Quebec's exports to Alberta was almost \$104 billion

Between 2007 and 2018, Quebec exported nearly \$103.8 billion worth of goods and services to Alberta, ranging from the relatively little \$79 million in education services to the greater \$9.4 billion in professional services (including software, and research, and development), to \$16.9 billion in finance and insurance, and nearly \$49 billion in manufacturing (see Table 3).

Table 3

### Quebec's Interprovincial Exports to Alberta

2007 to 2018

Sectors	Value (\$ billions)
Manufacturing	48.9
Finance and insurance	16.9
Professional services (includes software and research and development)	9.4
Wholesale & Retail Trade	7.4
Transportation and related services	5.6
Information and cultural industries	5.3
Administrative and support, head office, waste management and remediation services	4.3
Real estate and rental and leasing	1.1
Arts, entertainment and recreation services	0.8
Agriculture, forestry, fishing and hunting	0.8
Accommodation and food services	0.5
Other services	0.4
Mining, quarrying, and oil and gas extraction	0.2
Health and social assistance services	0.1
Education services	0.1

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

## Alberta was one of Quebec's largest exports markets in 2018

In 2018, Alberta was the third-largest export market for Quebec (at \$9.7 billion), behind only the United States (\$64.4 billion) and Ontario (\$45.9 billion). Quebec exported more to Alberta than it did to international markets such as China (\$3.6 billion), Mexico (\$2.1 billion), and France, Germany, and Japan (\$1.6 billion each) (see Table 4).

Table 4

### Markets for Quebec's International Exports and Interprovincial Trade

2018

	Value of trade and exports (in \$ billions)
United States	64.4
Ontario	45.9
Alberta	9.7
China	3.6
Mexico	2.1
France	1.6
Germany	1.6
Japan	1.6
Netherlands	1.5
United Kingdom	1.2
Korea, South	1.2
Switzerland	1.1

Source: Government of Canada, Trade Data Online, and authors' calculation derived from Statistics Canada, Table 12-10-0088-01.

## Conclusion

The oil and gas sector has a significant direct and indirect impact on Quebec's export sectors, as does the purchase of Quebec's goods and services by consumers, businesses, and governments in Alberta where the oil and gas sector is concentrated. The purchase of goods and services from Quebec by Alberta totalled over \$9.7 billion in 2018 alone and nearly \$103.8 billion between 2007 and 2018.

The oil and gas sector also provides substantial economic benefits to Quebec in terms of jobs, GDP, and output. More specifically, those benefits include 20,000 jobs, \$1.8 billion in nominal GDP, and \$3.5 billion in output.

## Notes

This CEC Fact Sheet was compiled by Ven Venkatachalam and Lennie Kaplan at the Canadian Energy Centre ([www.canadianenergycentre.ca](http://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 Dennis Sundgaard and an anonymous reviewer for reviewing the data and research of this Fact Sheet. Image credits: [Austin Wehrwein](#) from Unsplash.com

## References (all links live as of February 21, 2021)

Canada Energy Regulator (undated), *Provincial and Territorial Energy Profiles – Quebec* <<https://bit.ly/3xCG7EB>>; Statistics Canada (2021), *Supply and Use Tables*, Custom Tabulation; Statistics Canada (2021b), Table 12-10-0088-01: Interprovincial and international trade flows, basic prices, summary level <<https://bit.ly/3EN0aTR>>; Government of Canada (2021), Trade Data Online <<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, Quebec's economy. 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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