

THE OIL AND GAS SECTOR'S CONTRIBUTION TO CANADA'S ECONOMY

Overview

The broad oil and gas sector¹ has been and continues to be a significant contributor to Canada's economy. Compared to the narrower oil and gas extraction sector, which comprised about 3.1% of GDP in 2017, the broad oil and gas sector includes both the direct and indirect impacts of oil and gas extraction and oil and gas investment on the economy.

The impact of the broad oil and gas sector on GDP, jobs, and output (the production of goods and services) on key sectors of the Canadian economy is not well known outside that sector or outside regions and provinces where such resource activity occurs but is relevant to current discussions about the sector's importance to Canada's future.

In this Fact Sheet, we examine the impact that the broad oil and gas sector had on the Canadian economy in 2017. We chose the year 2017 due to the availability of Statistics Canada Supply and Use data. The Supply and Use tables provide a detailed accounting of the Canadian economy and give information by industry, products, provinces, sectors, and components of final use.

The analysis presented here includes not only the oil and gas sector's direct impact on the overall Canadian economy in nominal GDP, jobs, and output, but also the indirect impact that such activities have on other key Canadian industries.

As the data show, despite the severe decline in oil and natural gas prices between 2014 and 2017 and the resulting decline in economic activity, at 6.4% in 2017, the oil and gas sector's direct and indirect share of Canada's GDP still produced the following effects on Canada's economy.

Top line impacts

The Canadian oil and gas sector has both direct and indirect impacts on the national and provincial economies, including on GDP, jobs, and output generated in other key industries.

¹ See "Definitions" at the end of this Fact Sheet for what is included in this sectoral measurement.

GDP and output

In 2017, the GDP associated with Canada's oil and gas sector totaled \$128 billion, or 6.4% of the total Canadian economy.

In 2017, the output, or value of goods and services produced by the Canadian oil and gas sector and its supply chain, was \$241 billion, representing about 6.4% of Canada's total output, (see Table 1).

Table 1

Impact of the oil and gas sector on Canada's economy

2017

Direct	Indirect	Total	Total economy	Oil and gas sector's share of the total economy
GDP impact (in \$ billions)				
79.3	48.8	128.1	1,991.5	6.40%
Output (purchases of goods and services) impact (in \$ billions)				
153.6	88.5	241.1	3,757.5	6.40%

Source: Derived from Statistics Canada, Custom Tabulation of the Supply and Use Tables, 2017.

Jobs

In 2017, there was a total of 611,362 jobs associated with the Canadian oil and gas sector – 216,285 direct and 395,077 indirect – representing about 3.2% of all jobs across Canada (see Table 2).

In 2017, the total compensation paid to oil and gas extraction sector workers alone was over \$13.3 billion (Statistics Canada, 2021f).

Table 2

Number of jobs in Canada associated with the oil and gas sector

2017

Direct jobs	Indirect jobs	Total jobs	Total employment (all industries)	Share of oil and gas sector jobs to total employment
216,285	395,077	611,362	18,817,335	3.20%

Source: Derived from Statistics Canada, Custom Tabulation of the Supply and Use Tables, 2017.

A detailed breakdown: The oil and gas sector's impact on key sectors of the Canadian economy

GDP

The activities of the Canadian oil and gas sector are responsible for significant portions of GDP in key industries across Canada. They range from approximately \$370 million in GDP in Statistics Canada's North American Industry Classification System (NAICS) sector categorized as office administrative services, or 4.1% of that sector's GDP, to nearly \$3.2 billion, or 11.4% of GDP for machinery, equipment, and supplies merchant wholesalers (see Table 3).

Table 3

Impact of Canada's oil and gas sector on the GDP of key Canadian industries

2017

Industry	Oil and gas extraction (direct impact)	Oil and gas investment (indirect impact)	Total oil and gas sector	Percent of industry GDP from oil and gas sector
	\$ millions			(%)
Architectural engineering and related services	2,004	288	2,293	9.7
Machinery, equipment, and supplies merchant wholesalers	1,631	1,550	3,181	11.4
Banking and other deposit credit intermediation	1,680	450	2,130	3.1
Computer system design and related services	1,215	379	1,594	5.0
Repair construction	918	110	1,027	4.0
Truck transportation	628	305	933	4.3
Employment services	739	160	899	10.6
Financial investment services, funds, and other financial vehicles	544	0	544	2.8
Waste management and remediation services	526	110	636	9.5
Support activities for transportation	453	143	596	3.3
Telecommunications	445	144	589	1.6
Office administrative services	370	0	370	4.1
Agricultural, construction, and mining machinery manufacturing	342	288	630	17.7

Source: Derived from Statistics Canada Custom Tabulation of the Supply and Use Tables, 2017.
Totals of extraction + investment may not equal "Total" column due to prior rounding of first two categories.

Output (value of goods and services produced)

The oil and gas industry and its supply chain purchased nearly \$139 million worth of goods and services from Canada's NAICS general merchandise stores sector, or 0.8% of that sector's total output. Oil and gas producers and suppliers also purchased over \$7.1 billion of goods and services from the architectural engineering and related services sector in Canada, or 19% of that industry's total output (see Table 4).

Table 4

Oil and gas industry's purchases of goods and services ("output") from key industries

2017

	Oil and gas extraction	Oil and gas investment	Total oil and gas sector	Percent of industry output to oil and gas sector
Key industry	\$ millions			(%)
Architectural engineering and related services	3,316	3,808	7,124	19.0
Machinery, equipment, and supplies merchant wholesalers	2,291	2,180	4,471	11.2
Computer system design and related services	2,028	630	2,659	2.6
Truck transportation	1,694	825	2,519	4.2
Repair construction	1,990	228	2,219	5.0
Management, scientific, and technical consulting services	1,194	388	1,582	7.3
Manufacturing of agriculture, construction, and mining machinery	906	764	1,671	18.0
Rental and leasing services	756	646	1,402	10.8
Waste management and remediation services	1,024	212	1,236	10.1
Steel product manufacturing (from purchased steel)	533	285	818	14.9
Miscellaneous merchant wholesalers	471	232	703	3.5
Services to buildings and dwellings	646	146	791	4.1
Repair and maintenance	498	217	715	6.3
Basic chemical manufacturing	462	160	622	3.6
Food services and drinking places	440	151	590	0.8
Plastic product manufacturing	251	187	438	1.7
Motor vehicle and parts dealers	277	84	361	1.4
Travellers accommodation	374	127	501	2.7
Health and personal care stores	111	85	196	1.1
Warehousing and storage	158	57	215	4.2
General merchandise stores	90	49	139	0.8

Source: Derived from Statistics Canada Custom Tabulation of the Supply and Use Tables, 2017.
Totals of extraction + investment may not equal "Total" column due to prior rounding of first two categories.

Jobs

In 2017, the Canadian oil and gas sector was responsible for jobs created in other sectors ranging from just over 1,658 jobs in the telecommunications sector (or 1.3% of all jobs in that industry) to 33,467, or 15.2% of all jobs in the architectural engineering and related services sector (see Table 5).

Table 5

The oil and gas sector's indirect impact on employment in key industries

2017

Key industry	Oil and gas extraction	Oil and gas investment	Total oil and gas sector impact on sector	Percent of industry employment from oil and gas sector
	Number			(%)
Architectural engineering and related services	15,378	18,089	33,467	15.2
Machinery, equipment, and supplies merchant wholesalers	11,744	11,264	23,008	10.6
Employment services	13,946	3,048	16,994	9.0
Computer system design and related services	10,390	3,234	13,624	4.8
Banking and other deposit credit intermediation	8,764	2,337	11,101	2.8
Services to buildings and dwellings	8,729	2,010	10,739	3.5
Repair construction	9,464	1,149	10,613	3.6
Management, scientific, and technical	6,850	2,256	9,106	6.4
Truck transportation	6,636	3,252	9,888	3.8
Food services and drinking places	6,459	2,217	8,676	0.8
Building materials and supplies	2,678	3,771	6,449	4.4
Financial investment services, funds, and other financial vehicles	5,324	709	6,033	3.1
Other professional, scientific, and technical	4,119	1,000	5,119	4.9
Manufacturing of agriculture, construction, and mining machinery	2,650	2,224	4,874	16.2
Office administrative services	3,219	725	3,944	4.2
Support activities for transportation	3,940	1,244	5,184	3.7
Rental and leasing services	2,526	2,179	4,705	6.5
Waste management and remediation services	3,214	682	3,896	8.0
Repair and maintenance	3,219	1,390	4,609	1.9
Travellers accommodation	3,456	1,174	4,630	2.7
Motor vehicle and parts dealers	2,180	663	2,843	1.2
Health and personal care stores	1,176	896	2,072	1.0
General merchandise stores	1,132	621	1,753	0.8
Warehousing and storage	1,373	510	1,883	3.7
Telecommunications	1,246	412	1,658	1.3
Electrical power, generation, transmission, and distribution	4,085	582	4,667	4.8

Source: Derived from Statistics Canada Custom Tabulation of the Supply and Use Tables, 2017.
Totals of extraction + investment may not equal "Total" column due to prior rounding of first two categories.

Conclusion

The activities of the broad Canadian oil and gas sector are indirectly responsible for sizeable portions of GDP, employment, and output in key industries across Canada. The impact on the Canadian economy of the broad Canadian oil and gas sector, which includes both the direct and indirect impacts of oil and gas extraction and oil and gas investment, is significant — even with the energy price

decrease of 2017. The impact of the broad sector amounted to 3.2% of all direct and indirect jobs across Canada that year, and made a direct and indirect contribution of 6.4% to Canada's total GDP and total output, or purchase of goods and services. The narrower, direct oil and gas extraction sector was responsible for about 3.2% of GDP in 2017.

Notes

This CEC Fact Sheet was compiled by 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 an anonymous reviewer in reviewing the original data and research for this Fact Sheet.

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References (All links live as of November 1, 2021)

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Methodology

The estimates presented in this paper are the result of a Statistics Canada custom tabulation of the Canadian oil and gas sector taken from the Supply and Use Tables (SUTs). The SUTs capture and present the production of products by domestic industries, imports of products as well as their use, either as inputs, final consumption, investment or exports. The latest SUTs are for the 2017 calendar year. The total (direct and indirect) impact of the oil and gas industry on the Canadian economy can be quantified using input-output multipliers derived from the SUTs. According to Statistics Canada (2018), these multipliers “provide a measure of the interdependence between an industry and the rest of the economy” (Statistics Canada, 2018, *National and Provincial Multipliers, Surveys and statistical programs, Documentation: 15F0046X*). As Statistics Canada notes, although there is a lag from the 2017 data, the structure of the Canadian economy evolves slowly, so the lag should have a minimal impact on the estimates of GDP, jobs, and output (Statistics Canada, Economic Insights, 11-626-X, No. 109, *The Decline in Production and Investment in Canada's Oil and Gas Sector and its Impact on the Economy*, July 2020). This fact sheet applies the same concepts and definitions of oil and gas extraction activities as used by the [North American Industry Classification System \(NAICS\), Canada 2012](#). The Canadian SUTs use the Supply and Use Product Classification (SUPC) system, a variant based on the North American Product Classification System (NAPCS), to classify products within the economy.

Definitions

Using Statistics Canada terminology, we define the broad Canadian oil and gas sector as the sum of **oil and gas extraction** (NAICS 211) and **oil and gas investment**. For the purposes of NAICS and NAPCS, **oil and gas extraction** comprise 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; operating separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum; 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, liquefaction, and pyrolysis of coal at the mine site. **Oil and gas investment** includes capital expenditures on construction, machinery and equipment, and exploration by the oil and gas extraction industry. **GDP** is defined as the unduplicated value of the goods and services produced in the 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 this 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. The **indirect impact** covers upstream economic activities associated with supplying intermediate inputs (the current expenditures on goods and services used up in the production process) to the directly affected industries. (Excerpts taken from Statistics Canada, *Contribution of the Oil and Gas Sector to the Canadian Economy in 2016, 2020*, custom tabulation.)

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