



CANADA'S
OIL AND GAS
WORKFORCE:

DISTRIBUTION, WORK PATTERNS AND INCOME



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INTRODUCTION

Between 2010 and 2014, Canada's oil and gas industry benefited from rapid and sustained growth. As oil prices surged, so too did industry spending, production and employment. Oil and gas companies and service providers alike experienced labour and skill shortages for many occupations and operating regions. Companies intensified their attraction and retention strategies and tactics, escalated their labour costs and found alternative worker arrangements to cope with worker shortages.

The protracted oil price slump began in late 2014 and triggered a structural shift in Canada's oil and gas industry. There have been significant job losses and changes to the workforce.

This report draws on data from Statistics Canada's 2016 Census, the 2011 National Household Survey (NHS) and 2006 Census releases to provide a profile of the oil and gas industry's workforce¹ as of 2016. It overviews the sectoral, occupational and geographic distribution of the workforce,

as well as worker commuting trends, work patterns and earnings. Where possible, the report examines changes in these variables over a five- or 10-year period.

Workforce data focuses on the oil and gas industry and its sub-sectors: exploration and production (E&P) (including oil sands), oil and gas services, and pipeline.² Where possible, comparisons are also made with Canada's total workforce and other comparable trade-intensive industries in Canada.

THE REPORT CONTAINS:

- Analysis of the oil and gas industry's workforce distribution across sub-sectors, occupations and regions in Canada
- Quantitative and graphical descriptions of worker mobility, work patterns and income, including comparisons to Canada's total workforce and other comparable trade-intensive industries in Canada
- Spotlights providing additional information related to the industry's workforce concentration and the oil sands



¹ The workforce, also known as the labour force, refers to all persons who are either employed, or unemployed and actively seeking work.

² Sectors such as oil and gas engineering and construction, manufacturing, construction, etc. are excluded from the oil and gas industry analysis and form part of the other trade-intensive industries analyzed in this report.

DISTRIBUTION

Canada’s direct oil and gas workforce grew 15% in 10 years, from 165,000 in 2006 to nearly 190,000 in 2016 (Figure 1). This occurred despite employment declines during downturns.

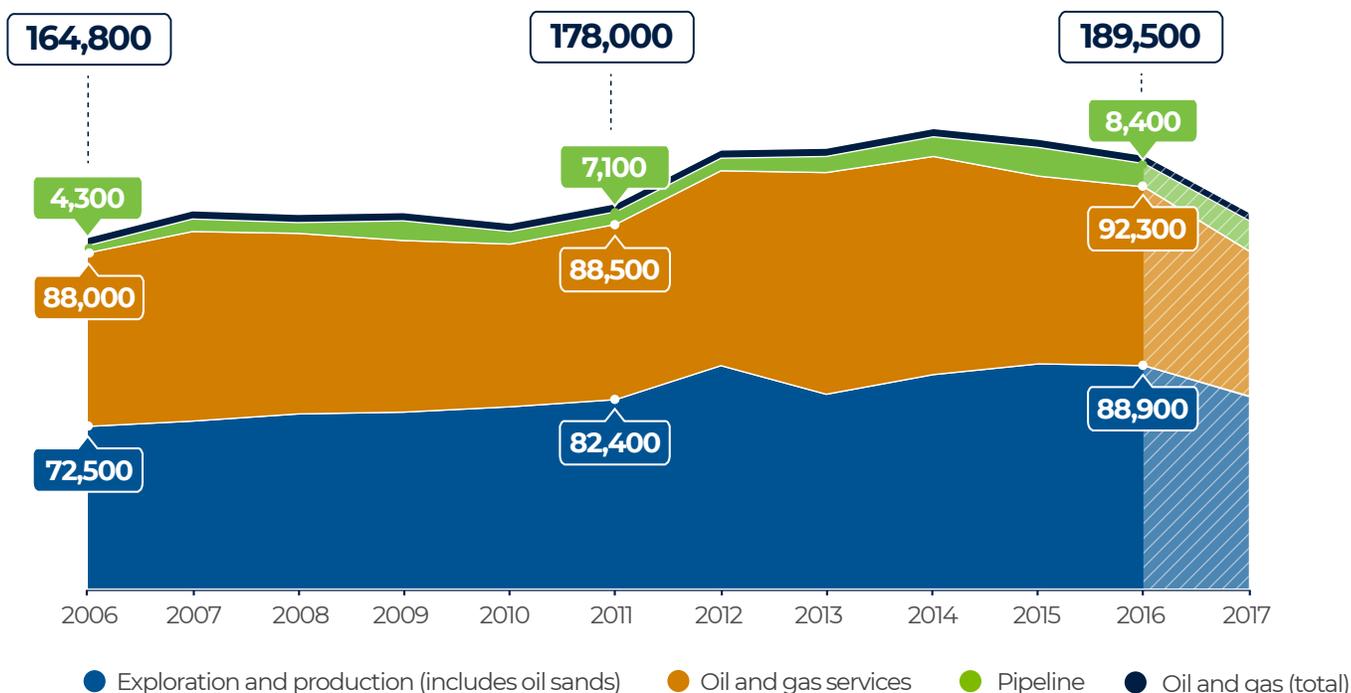
Sectoral: Industry’s sub-sectors diverge

The industry’s sub-sectors experienced divergent trends in workforce growth during the 10-year period. Rising oil and gas production resulted in 23% growth in the exploration and production (E&P) sub-sector’s workforce, from 72,500 workers in 2006 to 88,900 in 2016. The pipeline sub-sector experienced even stronger growth as its workforce nearly doubled, increasing 95% from 4,300 workers to 8,400 during the period. Meanwhile, the number of oil and gas service workers grew by just 5%, from 88,000 to 92,300, in part due to downturns³ during the period that affected this sector more than others. The recent economic downturn resulted in capped expansion that also constrained growth in the oil and gas services sub-sector.

Beyond these economic trends, technological and process improvements impacted workforce growth in the industry. Companies were focused on efficiency-enhancing technologies as part of a strategy to manage labour costs and improve productivity. Notably, the number of workers required to produce and transport 10,000 barrels of oil equivalent per day (BOE/d) was nearly 20% lower in 2016 compared to 2010.⁴

While oil and gas services remained the largest sub-sector employer, its share of the total oil and gas workforce declined from 53% in 2006 to 49% in 2016. Growth in pipelines and in unconventional resources, including oil sands, shifted the industry’s workforce towards the E&P and pipeline sub-sectors.

Figure 1: Canada’s oil and gas labour force, by year and sub-sector



Note: Sub-sector sums may differ from total industry workforce data due to rounding.

³ The services sub-sector’s workforce tends to be more strongly affected by industry cyclical, which can lead to volatility in workforce trends. Beginning in late 2016, improvements in oil prices and industry activity resulted in reported hiring difficulties for some oil and gas service companies.

⁴ [PetroLMI Labour Productivity in Canada’s Oil and Gas Industry: A Discussion of Historical Trends and Future Implications. September 2017.](#)

SPOTLIGHT: Significant growth in oil sands workforce

Wood Buffalo-Cold Lake, an economic region in northeastern Alberta, is home to significant oil sands on-site operations and a number of roles and occupations related to head office work. Although Statistics Canada does not collect workforce data specifically for oil sands operations, workforce data for the region's oil and gas industry, particularly the exploration and production (E&P) sub-sector, can be a useful proxy.

A total of 17,700 total oil and gas workers were living in Wood Buffalo-Cold Lake in 2016. Over 75%, or 13,400, of these workers were employed in the E&P sub-sector. The number of E&P workers in Wood Buffalo-Cold Lake increased by 46% from 2006 to 2016, an indication of the growth that occurred within the oil sands workforce during this period. However, the recent downturn in the industry and challenges related to market access have inhibited further growth in the sub-sector.



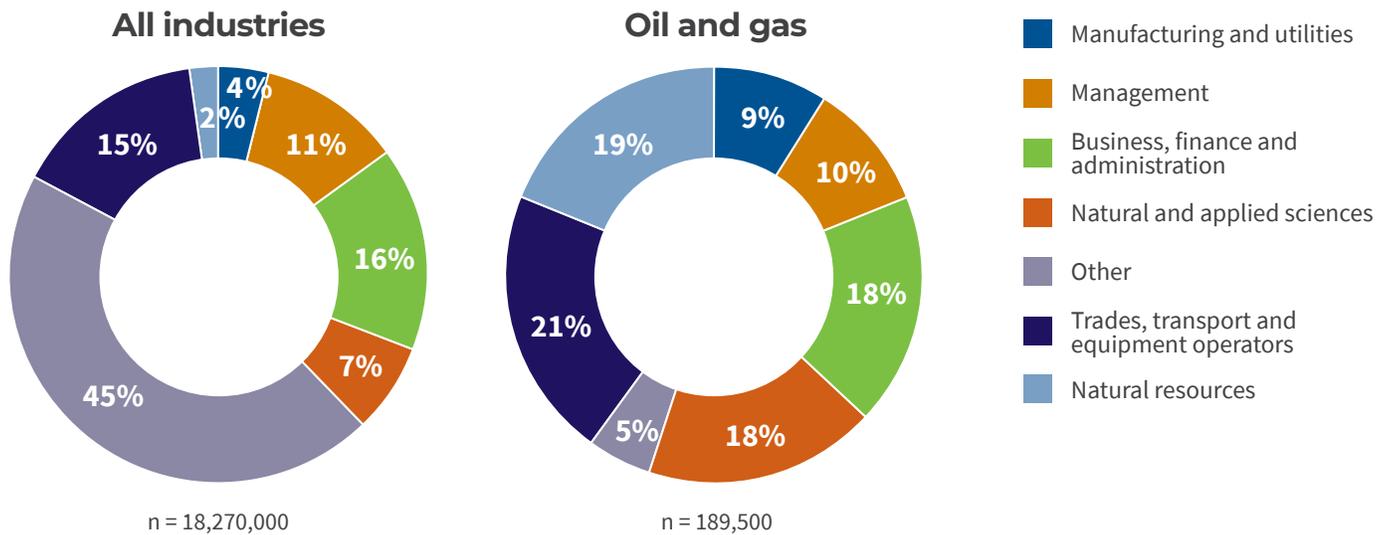
Occupational: Broad range of skills required

Canada’s oil and gas industry employed a diverse set of skills and occupational groups.

In 2016, the oil and gas industry employed workers with expertise across a broad range of skill types (Figure 2). The most commonly represented job family in the industry was trades, transport and equipment operators, who play a crucial role in day-to-day industry operations and accounted for roughly one in five oil and gas workers. Significant portions of the industry’s workforce were also employed in occupations related to natural and applied sciences (18%) and natural resources (19%)⁵, the latter of which

includes workers in oil and gas drilling, servicing and testing. Workers in business, finance and administration, those typically employed in office-based positions, accounted for 18% of the workforce. Managerial or supervisory roles accounted for 10% of workers, a slightly lower proportion than in Canada’s total workforce (11%). With respect to occupational groups, the oil and gas workforce was more balanced than Canada’s total workforce.

Figure 2: Occupational distribution by job family across Canada and in oil and gas in 2016



5 Statistics Canada’s definitions of these job families can be found at: <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=314243&CVD=314244&CLV=0&MLV=4&D=1>

Each of the three oil and gas sub-sectors had a distinct occupational composition suited to its role within the industry (Figure 3). In 2016, 53% of workers in oil and gas services were employed in positions related to trades, transport and equipment operation, or natural resources, reflecting the sub-sector's focus on fieldwork, and specifically oil and gas drilling, servicing and testing. In contrast, 54% of workers in the

pipeline sub-sector were employed in positions related to business, finance and administration, or natural and applied sciences. E&P had a more balanced job family profile, similar to the industry as a whole. Notably, the proportion of workers in managerial or supervisory roles was higher in pipeline, at 12%, than in the other sub-sectors.

Figure 3: Occupational distribution by workforce share in oil and gas sub-sectors in 2016

JOB FAMILY	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
All occupations (total)	88,900 (100%)	92,300 (100%)	8,400 (100%)
Management	9,200 (10%)	8,200 (9%)	990 (12%)
Business, finance and administration	18,200 (20%)	12,600 (14%)	2,200 (26%)
Natural and applied sciences	20,800 (23%)	11,700 (13%)	2,300 (27%)
Trades, transport and equipment operators	15,900 (18%)	23,400 (25%)	1,200 (14%)
Natural resources	8,600 (10%)	26,200 (28%)	200 (2%)
Manufacturing and utilities	11,900 (13%)	5,000 (5%)	900 (11%)
Other	4,300 (5%)	5,100 (5%)	600 (7%)

Note: Job family sums may differ from total sub-sector workforce data due to rounding.

The top 10 occupations accounted for one-third of the industry's total workforce.

In 2016, the occupations with the greatest share of the oil and gas industry were:

1. Contractors and supervisors, oil and gas drilling and services (9,845; 5.3% share of workforce)
2. Petroleum, gas and chemical process operators (no steam ticket required) (9,720; 5.2%)
3. Oil and gas well drillers, servicers, testers and related workers (7,620; 4.1%)
4. Heavy equipment operators (6,815; 3.6%)
5. Truck drivers (6,090; 3.3%)
6. Oil and gas drilling, servicing and related labourers (6,035; 3.2%)
7. Oil and gas well drilling and related workers and services operators (5,310; 2.8%)
8. Financial auditors and accountants (5,255; 2.8%)
9. Petroleum engineers (5,050; 2.7%)
10. Managers in natural resources production, drilling and well servicing (4,980; 2.7%)

Collectively, 67,000 workers were employed in these 10 occupations, accounting for 35% of the workforce in the upstream and midstream sectors of the industry.

Occupational composition

The most recent downturn prevented new investment and expansion activity in Canada's oil and gas industry, while production continued to rise. These divergent trends had a visible impact on the industry's occupational composition, illustrated through changes in occupational workforce shares. Figure 4 lists the occupations with the largest increases and decreases in workforce share from 2011 to 2016. This analysis was limited to occupations with a minimum of 2,000 workers in 2016.

Slow growth in oil and gas services contributed to large declines in workforce share for occupations related to oil and gas drilling,

testing and servicing. Occupations prominent in E&P and pipeline, including mechanical and power engineers, increased due to rising production levels.

The lower oil price environment also contributed to a greater emphasis on improving productivity, resulting in both rising merger and acquisition activity and organizational restructuring efforts to reduce costs of production during the period. These activities likely contributed to increased demand for engineering-related skills and declines in office and administration jobs.

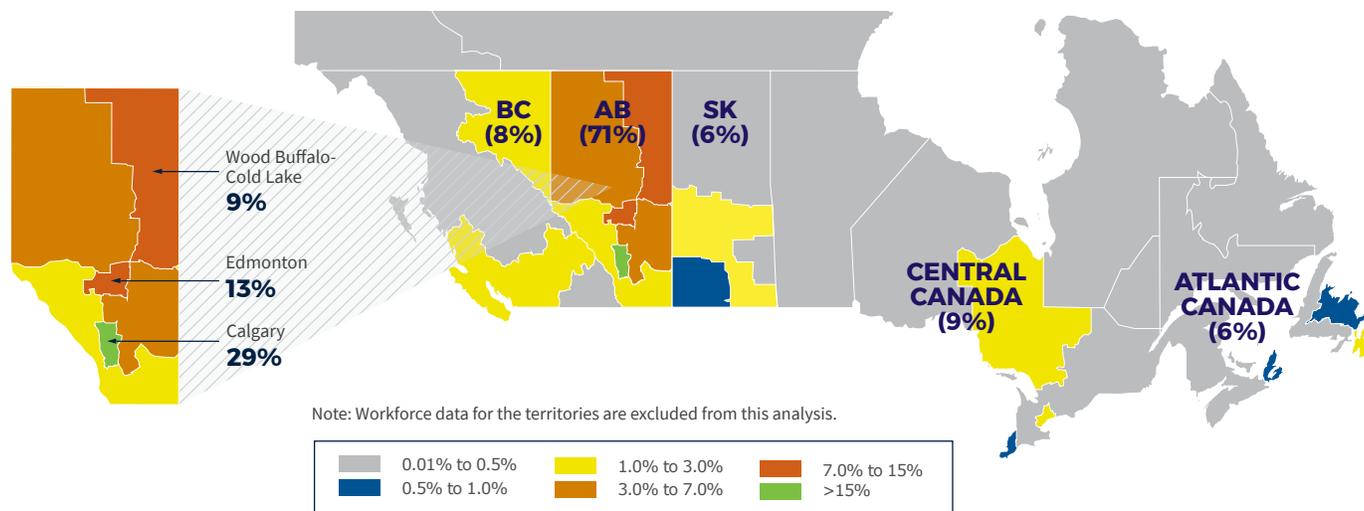
Figure 4: Top occupations by change in workforce share in oil and gas, 2011-2016

LARGEST INCREASE	LARGEST DECREASE
1. Mechanical engineers (+55%)	1. Geological and mineral technologists and technicians (-40%)
2. Industrial electricians (+41%)	2. Oil and gas well drillers, servicers, testers and related workers (-30%)
3. Supervisors, petroleum, gas and chemical processing and utilities (+37%)	3. Oil and gas drilling, servicing and related labourers (-26%)
4. Power engineers and power systems operators (+36%)	4. Underground production and development miners (-25%)
5. Construction trades helpers and labourers (+29%)	5. Oil and gas well drilling and related workers and service operators (-24%)
6. Welders and related machine operators (+25%)	6. Administrative assistants (-23%)
7. Petroleum, gas and chemical process operators (no steam ticket required) (+14%)	7. Petroleum engineers (-18%)
8. Administrative officers (+13%)	8. Geoscientists (-16%)
9. Inspectors in public and environmental health and occupational health and safety (+11%)	9. Financial auditors and accountants (-10%)
10. Senior managers - construction, transportation, production and utilities (+8%)	10. Purchasing agents and officers (-9%)

Geographical: Western Canada home to 85% of workers

Canada's oil and gas workforce has traditionally been centralized in Western Canada, mainly in Alberta. British Columbia, Alberta and Saskatchewan were home to about 85% of the industry's workers in 2016⁶. The remaining 15% of oil and gas workers lived in either Central (Manitoba, Ontario, Quebec) or Atlantic Canada (New Brunswick, Nova Scotia, Newfoundland and Labrador and Prince Edward Island).

Oil and gas workforce distribution by province and economic region



Although Central and Atlantic Canada saw little change in their share of the national oil and gas workforce from 2011 to 2016, both regions experienced strong growth during the period (Figure 5). The number of oil and gas workers living in Central Canada grew by 9%, from 16,200 to 17,700. Growth was even more prominent in Atlantic Canada, where the number of oil and gas workers rose by 22%, from 9,400 to 11,500. Workforce growth in both regions

exceeded the national growth rate of 7%. In Western Canada, British Columbia also saw significant growth in its oil and gas workforce, from 12,600 to 14,400, a 14% increase. Alberta was relatively on par with the national average at 6%. Notably, Saskatchewan was the only region that saw its oil and gas workforce decline, from 12,300 in 2011 to 11,700 in 2016 (5% decrease).

Figure 5: Geographic distribution of workforce in oil and gas, 2011-2016

	2011	2016	CHANGE IN WORKFORCE
Canada	177,900 (100%)	189,500 (100%)	11,600 (+7%)
British Columbia	12,600 (7%)	14,400 (8%)	1,700 (+14%)
Alberta	126,600 (71%)	133,700 (71%)	7,200 (+6%)
Saskatchewan	12,300 (7%)	11,700 (6%)	600 (-5%)
Central Canada	16,200 (9%)	17,700 (9%)	1,500 (+9%)
Atlantic Canada	9,400 (5%)	11,500 (6%)	2,100 (+22%)

Note: Provincial sums may differ from total Canadian workforce data due to rounding and the exclusion of the territories from this analysis.

⁶ While this discussion focuses on direct employment, the oil and gas industry is also responsible for creating indirect and induced jobs across Canada.

Most oil and gas workers are located in economic regions⁷ near major industry operations, primarily in Alberta. In 2016, the economic regions with the greatest share of the oil and gas workforce were:

1. Calgary, AB (53,930; 28.8%)
2. Edmonton, AB (23,645; 12.6%)
3. Wood Buffalo-Cold Lake, AB (17,690; 9.4%)
4. Athabasca-Grande Prairie-Peace River, AB (12,575; 6.7%)
5. Red Deer, AB (8,270; 4.4%)
6. Camrose-Drumheller, AB (7,570; 4.0%)
7. Lethbridge-Medicine Hat, AB (5,210; 2.8%)
8. Regina-Moose Mountain, SK (4,080; 2.2%)
9. Avalon Peninsula, NL (3,630; 1.9%)
10. Northeast Region, BC (3,575; 1.9%)

The top seven regions, all located in Alberta, accounted for 69% of the industry's total workforce. Furthermore, 51% of the workforce resided in the top three regions (Calgary, Edmonton, Wood Buffalo-Cold Lake) alone. Many oil and gas workers also resided in regions in the rest of Western Canada. Notably, Avalon Peninsula, in Newfoundland and Labrador, was home to just over 3,600 oil and gas workers.



⁷ An economic region is defined by Statistics Canada as a grouping of complete census divisions created as a standard geographic unit for analysis of regional economic activity.

SPOTLIGHT: High concentration of workers in Wood Buffalo region

Workforce concentration is a key metric for identifying regions with significant industry presence. Concentration is defined here as the number of oil and gas workers residing in a region as a share of the total regional workforce. In 2016, the economic regions with the highest concentration of oil and gas workers were:

1. Wood Buffalo-Cold Lake, AB (22.5% share of total regional workforce)
2. Northeast Region, BC (9.7%)
3. Athabasca-Grande Prairie-Peace River, AB (9.1%)
4. Banff-Jasper-Rocky Mountain House, AB (7.4%)
5. Red Deer, AB (7.4%)
6. Camrose-Drumheller, AB (7.3%)
7. Calgary, AB (6.5%)
8. Lethbridge-Medicine Hat, AB (3.7%)
9. Abitibi-Témiscamingue, QC (3.5%)
10. Edmonton, AB (3.2%)

Although Calgary and Edmonton were home to more oil and gas workers than any other region, their larger populations mean they each had a relatively lower concentration of workers. Instead, the top spots were occupied by regions with smaller populations centred around oil and gas industry operations. More than one in five workers who lived in Wood Buffalo-Cold Lake were employed in oil and gas in 2016. That figure was one in 10 in the Northeast Region of British Columbia, which includes the cities of Dawson Creek and Fort St. John as well as a number of Indigenous Peoples communities. Additionally, many workers in Wood Buffalo-Cold Lake who were employed in sectors outside oil and gas (e.g., construction) were likely supporting oil sands development and other industry operations.



WORKER MOBILITY

Oil and gas workers were nearly twice as likely as the average Canadian worker to have no fixed workplace in 2016.

Over one-fifth, or 22%, of the industry’s employed workers reported they did not go to the same workplace location each day, compared to 12% of Canada’s total employed workforce (Figure 6). Just 3% of oil and gas workers reported they worked from home in 2016, while 2% reported working at a location outside of Canada. The share of employed workers with no fixed workplace was significantly larger in oil and gas services than the industry’s other sub-sectors in 2016. Nearly one-third, or 30%, of workers in the services sub-sector had no regular place of work, compared to 15% in E&P and 9% in pipeline. However, the gap between the sub-sectors narrowed from 2006 when 36% of oil and gas services workers reported having no fixed workplace.

Oil and gas workers were also six times more likely to commute to a different province than the average Canadian worker in 2016.⁸ These workers filled job openings through temporary relocations, also known as fly-in fly-out (FIFO) employment. FIFO employment is particularly useful in remote areas with smaller local labour pools from which to hire. For example, 23,200 oil and gas workers listed Wood Buffalo-Cold Lake, in northeastern Alberta, as their place of work in 2016 (Figure 7). Only 60% of workers also listed the region as their place of residence, with an additional 24% living somewhere else in Alberta. Just under 9% of workers resided in the rest of Western Canada, while the remaining workers lived in either Atlantic (5%) or Central Canada (2%). One quarter, or 25%, of the region’s oil and gas services workers lived outside Alberta, compared to just 13% of E&P workers, reinforcing the notion of higher worker mobility among the oil and gas services sub-sector.

Figure 6: Share of workforce with no fixed workplace across Canada, in oil and gas sub-sectors in 2016

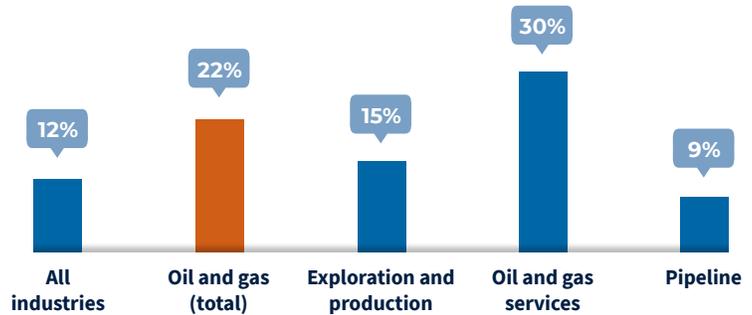


Figure 7: Wood Buffalo-Cold Lake oil and gas workforce by residence in 2016

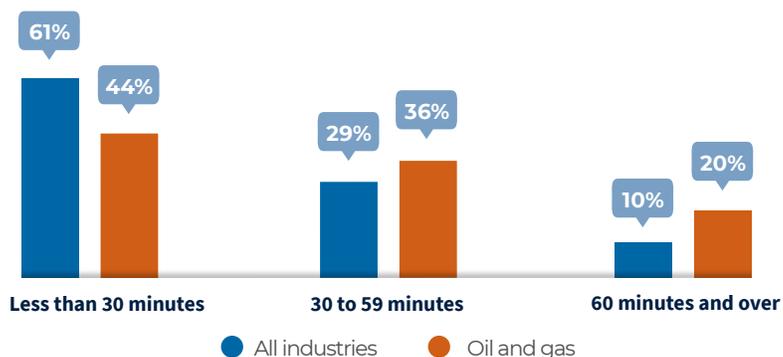


Percentages have been rounded and may not add up to 100%.

⁸ See data table on commuting destination in Appendix B.

Longer commutes were more prevalent within the oil and gas industry than in the total Canadian workforce in 2016. Oil and gas workers were twice as likely as the average worker to travel one hour or more for work (Figure 8). They were also somewhat more likely to have commutes of 30 to 59 minutes. Longer commutes in the industry were primarily a result of industry operations that are often situated in remote locations with limited travel options.

Figure 8: Labour force distribution by commuting duration across Canada and in oil and gas in 2016



WORK PATTERNS

The frequency of part-time and temporary positions within an industry reflects both its stability and the nature of the work. Nearly half, or 44%, of oil and gas workers worked part of the year (i.e., fewer than 49 weeks) and/or part-time (i.e., fewer than 30 hours per week) in 2016 (Figure 9). This share was lower than that of Canada's total workforce, which was 46%. In contrast, 55% of the industry's workforce held full-year, full-time (FY/FT) positions, compared to 52% in Canada's total workforce. The remaining 1% listed themselves as not having worked, compared to 3% in Canada's total workforce. Part-time and temporary positions were more common in the industry in 2016 than in 2006, when 41% of oil and gas workers were employed in these positions⁹. The increasing frequency of these positions is an illustration of the shift towards a "gig economy," as companies attempted to manage uncertainty in the industry.

Due to the frequency of seasonal employment within the services sub-sector, over half, or 51%, of its workforce worked part-year and/or part-time in 2016 (Figure 10). These positions were significantly less common in both E&P and pipeline, at 38% and 30%, respectively. All the industry's sub-sectors experienced an increasing trend with respect to part-time and temporary positions during the 2006 to 2016 period¹⁰.

Figure 9: Labour force distribution by work activity across Canada in oil and gas in 2016

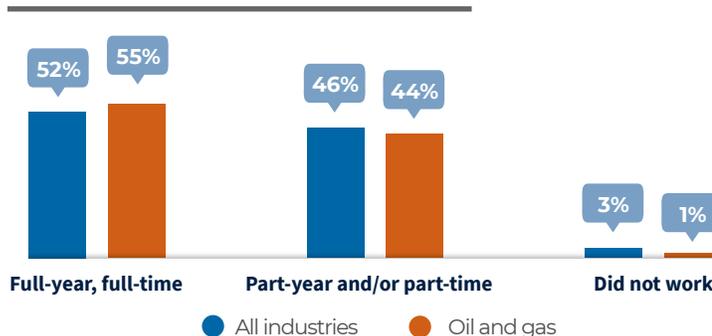
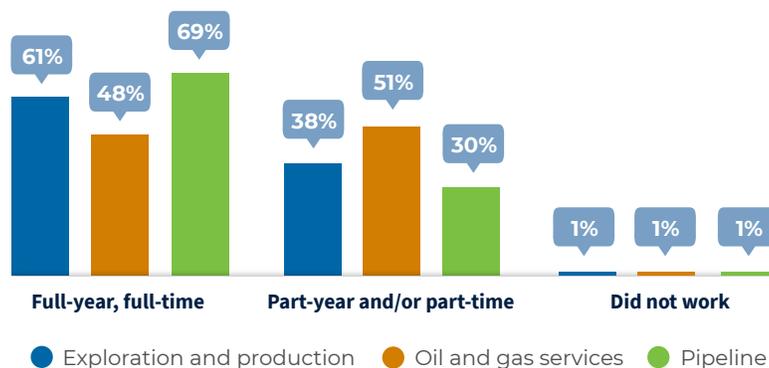


Figure 10: Labour force distribution by work activity in oil and gas sub-sectors in 2016



⁹ See data table on work activity in Appendix B for 2006 data.
¹⁰ See data table on work activity in Appendix B for 2006 data.

INCOME

Increase in average employment incomes among oil and gas workers aligns with increase in educational attainment.¹¹

Average employment income among oil and gas workers in Canada surpassed \$125,000 in 2016 (Figure 11). Incomes ranged from \$96,000 in oil and gas services to over \$153,000 in E&P. Overall, average employment income in oil and gas was 24% higher in 2016 than in 2011. Average earnings across Canada’s total workforce grew 17% during the same period. Pipeline workers earned 35% more in 2016 than in 2011, a much larger increase than among workers in E&P (24%) or oil and gas services (20%).

Oil and gas workers in Alberta had the highest earnings of any province or region, likely a result of the large concentration of head office roles (Figure 12). Their average employment income of \$136,000 was nearly 10% greater than the national average. In contrast, employment income was 25% below the national average for workers residing in Saskatchewan (\$94,000) and 28% below the national average in Central Canada (\$91,000). Income differences were driven in part by the type of workers in each province or region. A higher share of oil and gas workers residing in Saskatchewan or Central Canada were employed in the lower-paying services sub-sector. About 63% of the total oil and gas workforce in Saskatchewan and 73% in Central Canada were employed in the services sub-sector; no other province had a rate higher than 58%.

Figure 11: Average employment income in oil and gas sub-sectors, by census year

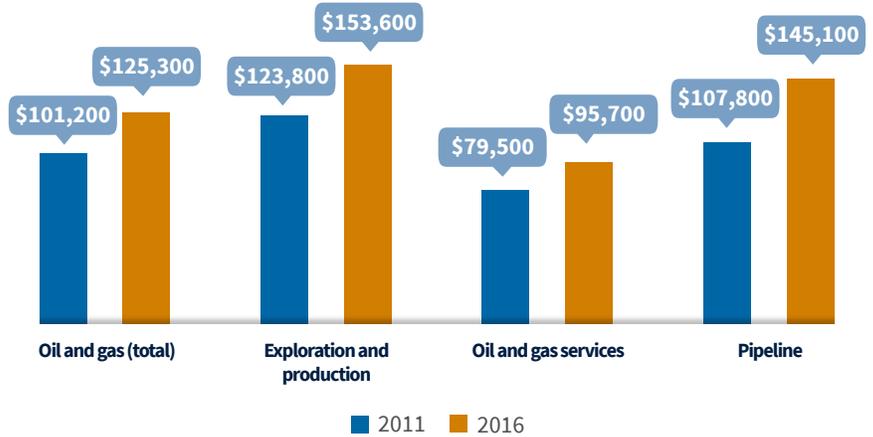
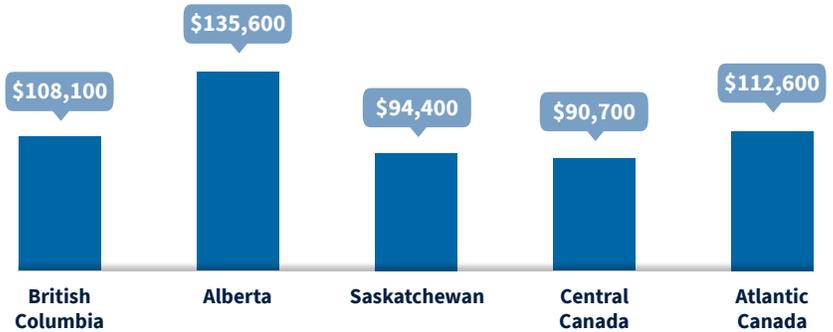


Figure 12: Average employment income in oil and gas in 2016, by province



¹¹ [PetrolMI Diversifying Canada’s Oil and Gas Workforce: A Decade in Review. June 2018.](#)

To compare oil and gas with other trade-intensive industries, average annualized earnings in 2016 were \$57,000 for manufacturing and \$63,000 for construction (Figure 13). Workers in the utilities sector fared better, earning just over \$90,000 on average in 2016.

Figure 13: Average employment income across Canada, in oil and gas and other trade-intensive industries in 2016



CONCLUSION

Canada’s oil and gas industry has undergone a significant transformation in the past decade. As the industry has adjusted to the ups and downs of the economy, there were corresponding shifts in the distribution of the industry’s workforce and the daily experiences of those workers.

While the industry saw a 15% increase in the size of its workforce from 2006 to 2016, sub-sector analysis shows the growth was mostly concentrated in E&P. The industry’s transformation was also illustrated through changes to its occupational composition between 2011 and 2016, as positions in engineering and applied sciences became more prominent and occupations related to drilling, servicing and testing were negatively impacted. The analysis also highlights the increasing number of oil and gas workers residing outside Western Canada, particularly in the Atlantic provinces. This trend reflected the growing importance of temporary relocations as a hiring strategy for remote industry operations.

In 2016, oil and gas workers’ daily experiences were characterized by longer commutes, often over an hour, and a greater likelihood than the average Canadian worker to have no fixed workplace. The industry’s workforce also shifted toward more part-time and temporary positions by 2016 as a response to uncertainty in the industry. These changes were compounded by demographic shifts in the workforce¹².

However, the nature of the industry’s work did not change. Oil and gas workers were well-compensated compared with other trade-intensive industries in 2016.

Looking ahead, it is expected that the industry will continue to transform as a result of the implementation of automation, regulations and a shift from oil and gas expansion to production optimization¹³. PetroLMI will continue to monitor these trends and reflect workforce shifts and changes in forthcoming reports.

¹² [PetroLMI Diversifying Canada’s Oil and Gas Workforce: A Decade in Review. June 2018.](#)

¹³ [PetroLMI A Workforce in Transition: Oil and Gas Skills of the Future. June 2018.](#)

APPENDIX A: RESEARCH NOTES & DEFINITIONS

Data for this report were primarily collected from Statistics Canada's 2006 Census, the 2011 National Household Survey (NHS) and 2016 Census releases and customized based on the North American Industry Classification System (NAICS) at the two- and three-digit level. Additional data were collected from Statistics Canada's Labour Force Survey (LFS) and the Survey of Employment, Payroll and Hours (SEPH). In some cases, data from 2006 Census or the 2011 NHS were unavailable for specific variables. The census year in question was omitted from the analysis in these cases. For example, changes in workforce share by occupation were calculated using 2011 NHS and 2016 Census data as 2006 Census data were unavailable.

The three sub-sectors that compose the oil and gas industry are: oil and gas extraction (NAICS 211), support activities for mining and oil and gas extraction (NAICS 213) and pipeline transportation (NAICS 486). In this report, they are referred to as exploration and production, oil and gas services and pipeline, respectively. All workforce estimates related to NAICS 213 were reduced by 15% in order to capture only the support activities for the oil and gas industry.

The **workforce**, also known as the labour force, refers to all persons who are either employed, or unemployed and actively seeking work. The terms "proportion" and "share" are used interchangeably in this report to refer to the number of individuals in the workforce belonging to a specific group as a percentage of the overall workforce. For example, in 2016, 133,700 of the 189,500 total oil and gas workers lived in Alberta. Thus, the proportion or share of the oil and gas workforce who lived in Alberta is 133,700 divided by 189,500, or 71%.

Direct employment refers to jobs created directly by the oil and gas industry's activities. Indirect employment refers to jobs created in other industries that provide goods and services to oil and gas. Induced employment refers to jobs created due to consumer spending by direct and indirect workers.

An **economic region** is defined by Statistics Canada as a grouping of complete census divisions created as a standard geographic unit for analysis of regional economic activity. There are 76 economic regions across Canada.

Full-year, full-time (FY/FT) workers are defined as persons aged 15 years and over who work 49 to 52 weeks per year (i.e., full-year) and mostly work for 30 hours or more per week (i.e., full-time) either for pay or in self-employment. Responses are based on the respondent's work activity in the year prior to the census.

Workers who reported having **no fixed workplace** refers to those who do not go from home to the same workplace location at the beginning of each shift. Other response categories include persons with a usual workplace address, persons who work at home and persons who work outside Canada. Responses are based on the respondent's place of work in the year prior to the census.

The Income section uses two different data sources. **Average employment income** includes all income received as wages, salaries and commissions from paid employment and net self-employment income. Data on average employment income were collected from the 2016 Census and 2011 NHS data releases for the three oil and gas sub-sectors and the average across all industries. **Average annualized earnings** include gross payroll earnings before deductions. Data on average earnings were collected from SEPH for all non-oil and gas industries. Weekly earnings were annualized based on a 52-week work year.

APPENDIX B: DATA TABLES

The values referenced throughout this report are rounded to the nearest hundred for readability purposes. The values in the data tables below are presented by Statistics Canada for the exploration and production, oil and gas services and pipeline sub-sectors, as well as the all industries total. Data related to the oil and gas services sub-sector are rounded to a base of 5. The oil and gas (total) column in each table refers to the sum of the counts in each sub-sector. The total values for the same industry or sub-sector and census year are not identical across data tables due to rounding of estimates and differences in response rates between census questions.

	PROVINCE	ALL INDUSTRIES	OIL AND GAS (TOTAL)	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
2016	Canada	18,268,125 (100%)	189,550 (100%)	88,895 (100%)	92,275 (100%)	8,375 (100%)
	Newfoundland and Labrador	251,800 (1%)	5,930 (3%)	2,315 (3%)	3,600 (4%)	15 (<1%)
	Prince Edward Island	76,645 (<1%)	305 (<1%)	80 (<1%)	225 (<1%)	0 (N/A)
	Nova Scotia	465,330 (3%)	2,805 (1%)	1,185 (1%)	1,585 (2%)	35 (<1%)
	New Brunswick	374,470 (2%)	2,430 (1%)	1,120 (1%)	1,290 (1%)	20 (<1%)
	Quebec	4,154,015 (23%)	5,195 (3%)	500 (1%)	4,635 (5%)	60 (1%)
	Ontario	6,970,625 (38%)	10,550 (6%)	2,880 (3%)	7,040 (8%)	630 (8%)
	Manitoba	649,530 (4%)	1,975 (1%)	590 (1%)	1,295 (1%)	90 (1%)
	Saskatchewan	575,310 (3%)	11,680 (6%)	3,860 (4%)	7,390 (8%)	430 (5%)
	Alberta	2,262,935 (12%)	133,725 (71%)	70,560 (79%)	56,400 (61%)	6,765 (81%)
	British Columbia	2,427,860 (13%)	14,370 (8%)	5,710 (6%)	8,350 (9%)	310 (4%)
2011	Canada	17,587,615 (100%)	177,935 (100%)	82,360 (100%)	88,510 (100%)	7,065 (100%)
	Newfoundland and Labrador	250,780 (1%)	4,855 (3%)	1,910 (2%)	2,945 (3%)	0 (N/A)
	Prince Edward Island	76,950 (<1%)	365 (<1%)	170 (<1%)	195 (<1%)	0 (N/A)
	Nova Scotia	474,650 (3%)	2,295 (1%)	1,035 (1%)	1,260 (1%)	0 (N/A)
	New Brunswick	389,070 (2%)	1,895 (1%)	885 (1%)	1,010 (1%)	0 (N/A)
	Quebec	4,085,125 (23%)	4,925 (3%)	435 (1%)	4,395 (5%)	95 (1%)
	Ontario	6,680,245 (38%)	9,345 (5%)	2,140 (3%)	6,730 (8%)	475 (7%)
	Manitoba	625,805 (4%)	1,960 (1%)	435 (1%)	1,460 (2%)	65 (1%)
	Saskatchewan	554,715 (3%)	12,315 (7%)	3,405 (4%)	8,385 (9%)	525 (7%)
	Alberta	2,088,150 (12%)	126,550 (71%)	68,400 (83%)	52,610 (59%)	5,540 (78%)
British Columbia	2,305,315 (13%)	12,640 (7%)	3,435 (4%)	8,880 (10%)	325 (5%)	

	PLACE OF WORK	ALL INDUSTRIES	OIL AND GAS (TOTAL)	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
2016	Total	17,230,040 (100%)	160,180 (100%)	78,900 (100%)	73,570 (100%)	7,710 (100%)
	Worked at home	1,272,280 (7%)	5,475 (3%)	1,795 (3%)	3,615 (5%)	65 (1%)
	Worked outside Canada	78,815 (<1%)	2,430 (2%)	885 (1%)	1,530 (2%)	15 (<1%)
	No fixed workplace	1,987,265 (12%)	34,695 (22%)	11,900 (15%)	22,120 (30%)	675 (9%)
	Usual place of work	13,891,680 (81%)	117,580 (73%)	64,320 (82%)	46,305 (63%)	6,955 (90%)
2006	Total	16,021,175 (100%)	153,275 (100%)	69,265 (100%)	79,780 (100%)	4,230 (100%)
	Worked at home	1,230,350 (8%)	6,560 (4%)	1,980 (3%)	4,510 (6%)	70 (2%)
	Worked outside Canada	76,570 (<1%)	2,540 (2%)	1,145 (2%)	1,370 (2%)	25 (1%)
	No fixed workplace	1,644,360 (10%)	40,680 (27%)	11,055 (16%)	29,115 (36%)	510 (12%)
	Usual place of work	13,069,895 (82%)	103,500 (68%)	55,085 (80%)	44,790 (56%)	3,625 (86%)

	COMMUTING DESTINATION	ALL INDUSTRIES	OIL AND GAS (TOTAL)	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
2016	Total	15,933,570 (100%)	139,260 (100%)	72,950 (100%)	58,840 (100%)	7,470(100%)
	Commute within Census subdivision	9,838,500 (62%)	81,645 (59%)	47,160 (65%)	29,225 (50%)	5,260 (70%)
	Commute within Census division	3,058,425 (19%)	31,915 (23%)	12,360 (17%)	17,845 (30%)	1,710 (23%)
	Commute within province	2,860,175 (18%)	17,110 (12%)	8,995 (12%)	7,695 (13%)	420 (6%)
	Commute to different province	176,470 (1%)	8,585 (6%)	4,435 (6%)	4,070 (7%)	80 (1%)

	COMMUTING DURATION	ALL INDUSTRIES	OIL AND GAS (TOTAL)	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
2016	Total	16,851,085 (100%)	180,005 (100%)	85,635 (100%)	86,105 (100%)	8,265 (100%)
	Less than 15 minutes	4,698,780 (28%)	30,800 (17%)	10,930 (13%)	18,705 (22%)	1,165 (14%)
	15 to 29 minutes	5,614,155 (33%)	48,210 (27%)	21,615 (25%)	24,060 (28%)	2,535 (31%)
	30 to 44 minutes	3,429,535 (20%)	41,525 (23%)	22,160 (26%)	16,855 (20%)	2,510 (30%)
	45 to 59 minutes	1,480,110 (9%)	22,835 (13%)	13,145 (15%)	8,475 (10%)	1,215 (15%)
	60 minutes and over	1,628,505 (10%)	36,635 (20%)	17,785 (21%)	18,010 (21%)	840 (10%)

	WORK ACTIVITY	ALL INDUSTRIES	OIL AND GAS (TOTAL)	EXPLORATION AND PRODUCTION	OIL AND GAS SERVICES	PIPELINE
2016	Total	18,268,125 (100%)	189,535 (100%)	88,895 (100%)	92,270 (100%)	8,370 (100%)
	Worked full-year, full-time	9,416,220 (52%)	103,875 (55%)	54,025 (61%)	44,110 (48%)	5,740 (69%)
	Worked part-year and/or part-time	8,357,325 (46%)	83,425 (44%)	33,950 (38%)	46,925 (51%)	2,550 (30%)
	Did not work	494,580 (3%)	2,235 (1%)	920 (1%)	1,235 (1%)	80 (1%)
2006	Total	18,418,095 (100%)	174,915 (100%)	76,915 (100%)	93,405 (100%)	4,595 (100%)
	Worked full-year, full-time	9,582,275 (52%)	99,855 (57%)	49,010 (64%)	47,475 (51%)	3,370 (73%)
	Worked part-year and/or part-time	8,276,300 (45%)	72,485 (41%)	26,900 (35%)	44,420 (48%)	1,165 (25%)
	Did not work	559,520 (3%)	2,580 (1%)	1,005 (1%)	1,515 (2%)	60 (1%)

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