

ECONOMIC COMMENTARY

The Contribution of the Energy Sector to the Alberta Economy

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Highlights:

- The energy sector contributes directly to nearly one quarter of provincial gross domestic product (23%).
- The contribution share rises to 29 percent when including construction from the energy sector.
- The contribution share rises further to 42 percent, when including all upstream linkages.

Falling energy commodity prices affect Alberta's economic growth. Not only is the energy sector affected: there are strong inter-industry linkages between the energy sector and other industry sectors. Using the most recently publicly available economic statistics (November 2015) from Statistics Canada, this note measures the contribution of the energy sector to the overall economy and particular industry sectors.

Alberta's energy sector is comprised of conventional oil and gas extraction, non-conventional oil extraction, mining and quarrying, and support activities for mining and oil and gas extraction. In 2012, the most recent year for which this data is available, the sector generated more than 68.4 billions of dollars in gross domestic product (GDP). Roughly 30 percent represents compensation to workers, 69 percent economic surplus, and the remainder is indirect taxes less subsidies on production. The surplus includes government revenues from royalties and land sales. The compensation to workers and economic surplus measures also includes government income tax revenues.

The energy sector generated 20 billions of dollars in value-added from construction activities. This activity is not included by traditional GDP-by-industry measures. Construction refers to activities such as building new factories, private roads, and installation of machinery and equipment. Economic data for each sub-sector is detailed in the second row of Table 1. Accounting for construction increases the contribution share to 29 percent.

The energy sector has important indirect linkages, commonly referred to as upstream linkages, or supply chains linkages. One of the most connected sectors is engineering construction. About 87 percent of its value added is caused by construction in the energy sector. Other energy-reliant sectors are professional, scientific and technical services at 36 percent, administrative and support, waste management and remediation services at 29 percent, and wholesale trade at 24 percent.

When taking in the full economic impact of operation and construction expenditures from the energy sector on the overall economy, the combined direct and indirect economic contribution of the energy sector is 42 percent of Alberta's GDP. In other words, for every hundred dollar generated in value-added in Alberta, 42 dollars is directly or indirectly attributable to the energy sector.

Table 1

(millions)	Conventional oil and gas extraction	Non-conventional oil extraction	Mining and quarrying (except oil and gas)	Support activities for mining and oil and gas extraction	Total	Share of Alberta GDP (2012)
Direct GDP-Operation	\$23,082	\$31,378	\$375	\$13,602	\$68,438	23%
Direct GDP-Construction	\$9,879	\$9,489	\$76	\$499	\$19,942	7%
Direct GDP-Operation and Construction	\$32,961	\$40,867	\$451	\$14,101	\$88,380	29%
Direct and Indirect GDP-Operation	\$33,712	\$43,135	\$550	\$13,602	\$90,999	30%
Direct and Indirect GDP-Construction	\$17,988	\$16,781	\$118	\$670	\$35,557	12%
Direct and Indirect GDP-Operation and Construction	\$51,699	\$59,916	\$668	\$14,273	\$126,556	42%

Source: Statistics Canada Supply and Use Tables (catalogue no. 15-602-X, published November 2015), and Interprovincial Input-Output Model (catalogue no. 15F0009XDB).