



Contribution of the Oil and Natural Gas Industry to the US Economy in 2023

Prepared for the American Petroleum Institute

October 2025



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Executive summary

The oil and natural gas industry has been a pillar of US industrial development since the mid-19th century, when the first commercial oil well was drilled in Pennsylvania in 1859. Over the decades, it has evolved into a highly advanced, capital-intensive sector, supporting millions of jobs and fueling innovation in areas ranging from petrochemicals and manufacturing to transportation and national security. Today, the industry continues to play a central role in meeting domestic and global energy demand while contributing significantly to public revenues and infrastructure investment.

The **American Petroleum Institute** engaged **PwC US Tax LLP (“PwC”)** to quantify the economic contribution of the US oil and natural gas industry in terms of employment, labor income, and value added at the national, state, and congressional district levels.¹ In addition, the analysis includes estimates of the industry’s tax contributions at both the national and state levels. The industry’s total economic contribution is measured through three key channels for calendar year 2023:²

- **Direct effects**, stemming from employment, production, and investment within the oil and natural gas industry itself;
- **Indirect effects**, generated through the industry’s purchases of goods and services from a broad range of domestic suppliers; and
- **Induced effects**, resulting from household spending by employees and business owners within the industry and its supply chain, as well as from dividend-related consumption by shareholders.

The findings demonstrate that the oil and natural gas industry has a broad and significant effect across all sectors of the US economy. When combining direct, indirect, and induced effects, the industry supported a total of **10.6 million full-time and part-time jobs** in 2023—equivalent to **4.9 percent of total U.S. employment** (see **Table ES-1**).

¹ Value added refers to the additional value created at a particular stage of production. It is a measure of the overall importance of an industry and represents the industry’s portion of US gross domestic product (“GDP”). Value added consists of employee compensation, proprietors’ income, income to capital owners from property, and indirect business taxes (including excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses).

² These economic contributions represent the entire *backward linkages* of the US oil and natural gas industry to its suppliers. They do not capture *forward linkages* (i.e., the economic effect on production in sectors that use oil and natural gas as an input).

Table ES-1. – Total contribution of the oil and natural gas industry to the US economy, 2023
[Dollar amounts in billions; jobs in millions]

Item	Direct effect	Indirect and induced effects		Total effect	Percent of US total
		Operational effects	Capital investment effects		
Employment (jobs) ⁽¹⁾	2.5	6.1	2.0	10.6	4.9%
Labor income ⁽²⁾	\$372.4	\$470.8	\$159.0	\$1,002.2	6.2%
Value added	\$1,008.0	\$792.5	\$255.8	\$2,056.3	7.4%

Source: PwC calculations using the IMPLAN modeling system. Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

At the national level, each direct job in the oil and natural gas industry supported an additional 3.2 jobs elsewhere in the US economy in 2023 (for a multiplier of 4.2). Counting direct, indirect, and induced effects, the industry's total effect on labor income (including proprietors' income) was \$1.0 trillion, or 6.2 percent of national labor income in 2023. The industry's total effect on value added (i.e., contribution to GDP) was \$2.1 trillion, accounting for 7.4 percent of the national total in 2023.

As shown in **Table ES-2**, we find that the industry's direct tax contribution to the federal, state, and local government was \$351.5 billion in 2023, with state and local taxes accounting for 75 percent of the total.

Including the direct, indirect, and induced effects from the industry's operational spending, capital investment, and dividend payout, the industry's total tax contribution to the federal, state, and local governments in 2023 was \$570.1 billion, accounting for 7.4 percent of all federal, state, and local government revenues.

Table ES-2. – The US oil and natural gas industry’s tax contributions, 2023
[Dollar amounts in billions]

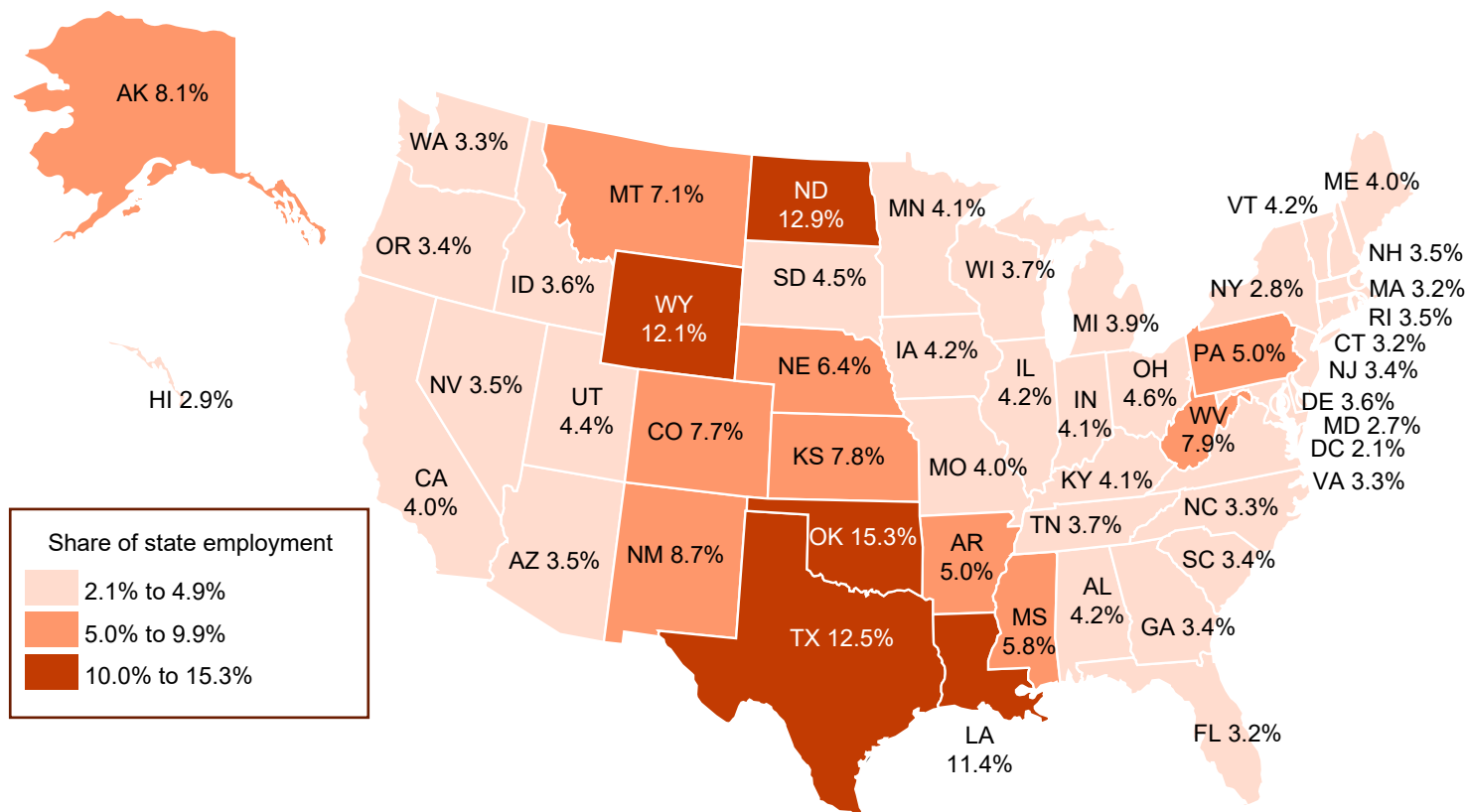
Tax category	Tax contributions		
	Direct	Indirect/induced	Total
Corporate Income Taxes	\$17.2	\$16.3	\$33.5
Personal Income Taxes	\$30.2	\$49.4	\$79.6
Excise Taxes	\$5.5	\$1.3	\$6.8
Customs Duties	\$4.9	\$1.1	\$6.0
Social Insurance Contributions	\$30.3	\$69.6	\$99.9
Federal total	\$88.1	\$137.7	\$225.8
Corporate Income Taxes	\$6.3	\$6.0	\$12.3
Personal Income Taxes	\$7.3	\$11.9	\$19.1
Property Taxes	\$104.7	\$24.8	\$129.4
Sales Taxes	\$121.4	\$28.7	\$150.1
Other	\$23.7	\$9.7	\$33.4
State & local total	\$263.3	\$81.0	\$344.3
Federal, state & local total	\$351.5	\$218.7	\$570.1

Source: Estimates based on data from the Bureau of Economic Analysis, Census Bureau, and the IMPLAN model.

Note: Details may not add to totals due to rounding.

The economic contribution of the oil and natural gas industry can be seen across the United States. The states with the largest direct employment effects are Texas, California, Oklahoma, Louisiana, and Pennsylvania, each with more than 90,000 jobs directly attributable to the oil and gas industry. In 30 states the industry directly and indirectly supported at least 100,000 jobs in 2023. Texas alone had 2.5 million jobs directly and indirectly supported by the industry, and California had close to 1 million jobs directly and indirectly supported by the industry. The share of state employment supported by the oil and natural gas industry (including direct, indirect, and induced effects) ranges from 2.0 percent in the District of Columbia to 15.2 percent in Oklahoma (see **Figure ES-1**, below).

Figure ES-1. Share of employment directly and indirectly supported by the oil and natural gas industry, 2023



Source: PwC calculations.

At the congressional district level, the number of jobs directly provided by the oil and natural gas industry was at least 1,000 in all but 13 districts and exceeded 5,000 in 136 congressional districts in 2023. Including direct, indirect, and induced effects, the industry supported more than 10,000 jobs in all but 11 districts in 2023.

I. Introduction

The oil and natural gas industry has been a pillar of US industrial development since the mid-19th century, when the first commercial oil well was drilled in Pennsylvania in 1859. Over the decades, it has evolved into a highly advanced, capital-intensive sector, supporting millions of jobs and fueling innovation in areas ranging from petrochemicals and manufacturing to transportation and national security. Today, the industry continues to play a central role in meeting domestic and global energy demand while contributing significantly to public revenues and infrastructure investment.

The **American Petroleum Institute** engaged **PwC US Tax LLP (“PwC”)** to quantify the industry’s economic footprint in 2023.³ This report presents PwC’s assessment of the industry’s economic contribution, focusing on its effects across multiple dimensions—including employment, labor income, value added, and tax revenues—at the national, state, and congressional district levels.⁴ In doing so, the report captures the full range of the industry’s influence by examining three distinct but interconnected channels of economic effects:⁵

- **Direct effects**, stemming from employment, production, and investment within the oil and natural gas industry itself;
- **Indirect effects**, generated through the industry’s purchases of goods and services from a broad range of domestic suppliers; and
- **Induced effects**, resulting from household spending by employees and business owners within the industry and its supply chain, as well as from dividend-related consumption by shareholders.

Together, these channels illustrate the industry’s extensive linkages across the US economy and its role in supporting a diverse range of sectors and communities.

The remainder of this report is structured as follows:

- **Section II** defines the scope of the oil and natural gas industry used in the analysis.

³ PwC has prepared several prior economic contribution studies for the American Petroleum Institute, with the most recent being *Impacts of the Oil and Natural Gas Industry on the US Economy in 2021* (April 2023).

⁴ Value added refers to the additional value created at a particular stage of production. It is a measure of the overall importance of an industry and represents the industry’s share of GDP. Value added consists of employee compensation, proprietors’ income, income to capital owners from property, and indirect business taxes (including excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses).

⁵ These economic effects represent all the *backward linkages* of the oil and natural gas industry to its suppliers. They do not capture *forward linkages* (i.e., the economic effects on production in sectors that use oil and natural gas as an input).

- **Section III** details PwC’s economic contribution estimates for 2023 at the national, state, and congressional district levels.
- **Section IV** presents a consolidated view of the industry’s total US “spend”—including labor and capital expenditures and dividend payments to US households and retirement accounts.
- The **Appendices** contain detailed results by sector, state, and congressional district, along with an overview of the methodology.

II. Industry definition

The US oil and natural gas industry comprises a diverse set of activities that are distributed across multiple industry classifications in federal economic data. Exploration and production activities fall within the **mining** sector; oil refining is categorized under **manufacturing**; pipeline operations are part of the **transportation** sector; natural gas distribution is classified within **utilities**; and oil marketing activities appear in both the **wholesale and retail trade** sectors. For the purposes of this study, PwC has defined the oil and natural gas industry to include all these segments, capturing the full value chain from upstream production to end-use distribution and sales.

Table 1, below, shows the composition of the industry as defined by PwC, followed by detailed descriptions based on the North American Industry Classification System (“NAICS”).

Table 1.– Composition of the US oil and natural gas industry

NAICS Code	Description
211	Oil and gas extraction (including NGL extraction)
213111	Drilling oil and gas wells
213112	Support activities for oil and gas operations
2212	Natural gas distribution (private and public)
23712	Oil and gas pipeline and related structures construction
32411	Petroleum refineries
324121	Asphalt paving mixture and block manufacturing
324122	Asphalt shingle and coating materials manufacturing
324191	Petroleum lubricating oil and grease manufacturing
4247	Petroleum and petroleum products merchant wholesalers
457	Gasoline stations and fuel dealers
486	Pipeline transportation

NAICS Code 211. Oil and gas extraction. Establishments in this subsector operate and/or develop 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 natural gas; 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 crude petroleum, the mining and extraction of oil from oil shale and oil sands, and the production of natural gas, sulfur recovery from natural gas, and recovery of hydrocarbon liquids. Establishments in this subsector include those that operate oil and gas wells on their own account or for others on a contract or fee basis.

NAICS Code 213111. Drilling oil and gas wells. This subsector comprises establishments primarily engaged in drilling oil and gas wells for others on a contract or fee basis. This industry includes contractors that specialize in spudding, drilling, re-drilling, and directional drilling.

NAICS Code 213112. Support activities for oil and gas operations. This subsector comprises establishments primarily engaged in performing support activities on a contract or fee basis for oil and gas operations (except site preparation and related construction activities). Services included are exploration (except geophysical surveying and mapping); excavating slush pits and cellars, well surveying; running, cutting, and pulling casings, tubes, and rods; cementing wells, shooting wells; perforating well casings; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells.

NAICS Code 2212. Natural gas distribution. This subsector comprises: (1) establishments primarily engaged in operating gas distribution systems (e.g., mains, meters); (2) establishments known as gas marketers that buy gas from the well and sell it to a distribution system; (3) establishments known as gas brokers or agents that arrange the sale of gas over gas distribution systems operated by others; and (4) establishments primarily engaged in transmitting and distributing gas to final consumers. Both privately and publicly owned establishments are included in this study.

NAICS Code 23712. Oil and gas pipeline and related structures construction. This subsector comprises establishments primarily engaged in the construction of oil and gas lines, mains, refineries, and storage tanks. The work performed may include new work, reconstruction, rehabilitation, and repairs. Specialty trade contractors are included in this group if they are engaged in activities primarily related to oil and gas pipeline and related structures construction. All structures (including buildings) that are integral parts of oil and gas networks (e.g., storage tanks, pumping stations, and refineries) are included in this subsector.

NAICS Code 32411. Petroleum refineries. This subsector comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

NAICS Code 324121. Asphalt paving mixture and block manufacturing. This subsector comprises establishments primarily engaged in manufacturing asphalt and tar paving mixtures and blocks from purchased asphaltic materials.

NAICS Code 324122. Asphalt shingle and coating materials manufacturing. This subsector comprises establishments primarily engaged in (1) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials and (2) manufacturing asphalt and tar and roofing cements and coatings from purchased asphaltic materials.

NAICS Code 324191. Petroleum lubricating oil and grease manufacturing. This subsector comprises establishments primarily engaged in blending or compounding refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

NAICS Code 4247. Petroleum and petroleum products merchant wholesalers. This subsector comprises establishments with bulk liquid storage facilities primarily engaged in the merchant wholesale distribution of crude petroleum and petroleum products, including liquefied petroleum gas.

NAICS Code 457. Gasoline stations and fuel dealers. Industries in this subsector retail automotive fuels (e.g., gasoline, diesel fuel, gasohol, alternative fuels) and automotive oils, without or in combination with convenience store items; or retail heating oil, liquefied petroleum (LP) gas, and other fuels via direct selling (i.e., home delivery).

NAICS Code 486. Pipeline transportation. Establishments in this subsector use transmission pipelines to transport products, such as crude oil, natural gas, refined petroleum products, and slurry. It also includes the storage of natural gas because the storage is usually done by the pipeline establishment and because a pipeline is inherently a network in which all the nodes are interdependent.

III. Contribution of the oil and natural gas industry to the US economy

This section presents the estimated economic contribution of the oil and natural gas industry at the national, state, and congressional district level.

The total economic contribution measured includes the direct effect (the jobs, labor income, value added, and tax payments within the oil and natural gas industry), the indirect effect (the jobs, labor income, value added, and tax payments occurring throughout the supply chain of the oil and natural gas industry), and the induced effect (the jobs, labor income, value added, and tax payments resulting from household spending of labor and proprietor's income earned either directly or indirectly from the oil and natural gas industry's spending and from dividends received from publicly traded oil and natural gas companies).

For this analysis, we have separately quantified the indirect and induced effects of the oil and natural gas industry's operational and capital spending. Operating expenditures are the costs of noncapital inputs (such as materials, rent, and utilities) for a company to run its business operations daily. Capital expenditures are the amounts that companies use to invest in major physical goods or services that have a productive life of more than one year.

A. National results

The economic activity of the oil and natural gas industry is measured using four separate metrics: employment, labor income, value added, and tax payments, as defined below.

- **Employment:** The number of payroll and self-employed jobs (including part-time jobs), averaged over the year.
- **Labor income:** The wages and salaries and benefits paid to employees and proprietors' income for the self-employed.
- **Value added:** The total output of each sector less the associated value of intermediate inputs. The sum of the value added across all sectors in the economy is GDP.⁶ An industry's value added represents its contribution to GDP.
- **Taxes:** Contributions to government finances at the federal, state, and local level.

⁶ Value added differs from gross output (or sales) because it excludes the value of intermediate goods that are embedded in the final sales of each industry.

Table 2, below, shows the direct contribution of the oil and natural gas industry to the US economy in terms of employment, labor income (including wages, salaries, and benefits as well as proprietors' income), and value added. In 2023, the oil and natural gas industry directly provided 2.5 million jobs for American workers, paid \$372.4 billion in wages and salaries and benefits and proprietors' income, and generated \$1.0 trillion in value added. The industry's direct national contribution to the US jobs, labor income, and value added ranged from 1.1 percent to 3.6 percent in 2023 (see **Appendix A** for a breakout of the industry's direct contribution by detailed subsector).

Table 2. – Direct contribution of the oil and natural gas industry to the US economy, 2023
[Dollar amounts in billions; jobs in millions]

Item	Direct	Percent of US economy
Employment (jobs) ⁽¹⁾	2.5	1.1%
Labor income ⁽²⁾	\$372.4	2.3%
Value added	\$1,008.0	3.6%

Source: PwC calculations based on data from the US Bureau of Economic Analysis, US Bureau of Labor Statistics, and US Census Bureau and supplemented by the IMPLAN modeling system.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

As shown in **Table 3**, below, the US oil and natural gas industry's total economic contribution (including direct, indirect, and induced effects from both operational and capital spending) ranged between 4.9 percent and 7.4 percent of all US jobs, labor income, and value added in 2023.

Table 3. – Total contribution of the oil and natural gas industry to the US economy, 2023
[Dollar amounts in billions; jobs in millions]

Item	Direct effect	Indirect and induced effects		Total contribution	Percent of US total
		Operational effects	Capital investment effects		
Employment (jobs) ⁽¹⁾	2.5	6.1	2.0	10.6	4.9%
Labor income ⁽²⁾	\$372.4	\$470.8	\$159.0	\$1,002.2	6.2%
Contribution to GDP	\$1,008.0	\$792.5	\$255.8	\$2,056.3	7.4%

Source: PwC calculations using the IMPLAN modeling system and data from the US Bureau of Economic Analysis, US Bureau of Labor Statistics, and US Census Bureau. Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Employment

PwC estimates that the US oil and natural gas industry's operations directly and indirectly supported 8.6 million full- and part-time jobs in the national economy in 2023. The industry's capital investment supported an additional 2.0 million jobs in the national economy. Combining the operational and capital investment effects, the oil and natural gas industry's total national employment contribution amounted to 10.6 million full-time and part-time jobs in 2023, accounting for 4.9 percent of total US employment.

Labor income

The associated labor income (including wages, salaries, and benefits as well as proprietors' income) from jobs directly and indirectly supported by the oil and natural gas industry through its operations, capital investment, and household spending out of dividend payments is estimated to be \$1.0 trillion, or 6.2 percent of total US labor income in 2023.

Value added

PwC estimates that the US oil and natural gas industry's operations directly and indirectly generated \$1.8 trillion of value added in the national economy in 2023, and its capital investment added an additional \$255.8 billion of value added. Combining both operational and capital investment effects, the industry's total value-added contribution at the national level was \$2.1 trillion, accounting for 7.4 percent of US GDP in 2023.

Distribution of indirect and induced activity

The indirect and induced economic activity occurs across a broad range of other industries. For employment, 54.3 percent of the indirect and induced effects attributable to the industry's operational expenditures is in the services sector. The service sector encompasses a wide range of industries that provide services rather than producing tangible goods. Another 13.3 percent is in the finance, insurance, real estate, rental, and leasing sector. The indirect and induced effect on employment attributable to the industry's capital expenditures is mostly concentrated in the construction and services sectors (see **Table 4a**, below).

A similar distribution of activity is observed for labor income; 54.1 percent of the indirect and induced effect attributable to the industry's operational expenditures is in the services sector, and 12.1 percent is in the finance, insurance, real estate, rental, and leasing sector. The indirect and induced contribution to labor income attributable to the industry's capital expenditures is mostly concentrated in the construction, services, and manufacturing sectors (see **Table 4b**, below).

For value added, the services sector accounted for 39.4 percent of the indirect and induced effects attributable to the industry's operational expenditures. Finance, real estate, rental, and leasing accounted for another 23.1 percent. The indirect and induced contribution to value added attributable to the industry's capital expenditures is mostly concentrated in the construction and services sectors, with over 10 percent distribution in the manufacturing, wholesale and retail trade, and finance, real estate, rental, and leasing sectors (see **Table 4c**, below).

Table 4a. – Distribution of indirect and induced activity generated by the US oil and natural gas industry, 2023: Employment

Industry supported	Indirect and induced effects	
	Operational	Capital
Total (in thousands)	6,144	2,018
Agriculture, forestry and fishing	1.2%	0.7%
Mining	0.2%	0.1%
Utilities	0.4%	0.2%
Construction	2.0%	35.1%
Manufacturing	4.9%	9.0%
Wholesale and retail trade	11.3%	9.9%
Transportation and warehousing	8.9%	4.7%
Information	2.0%	1.9%
Finance, insurance, real estate, rental and leasing	13.3%	6.6%
Services	54.3%	31.5%
Other	1.4%	0.2%
Total	100%	100%

Source: PwC calculations using the IMPLAN modeling system and data from US Bureau of Economic Analysis, US Bureau of Labor Statistics, and US Census Bureau.

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

Table 4b. – Distribution of indirect and induced activity generated by the US oil and natural gas industry, 2023: Labor income

Industry supported	Indirect and induced effects	
	Operational	Capital
Total (\$ billions)	\$470.8	\$159.0
Agriculture, forestry and fishing	0.8%	0.4%
Mining	0.3%	0.2%
Utilities	1.3%	0.6%
Construction	1.9%	33.9%
Manufacturing	6.3%	12.0%
Wholesale and retail trade	10.3%	9.9%
Transportation and warehousing	6.7%	3.4%
Information	4.2%	4.0%
Finance, insurance, real estate, rental and leasing	12.1%	5.8%
Services	54.1%	29.4%
Other	1.9%	0.3%
Total	100%	100%

Source: PwC calculations using the IMPLAN modeling system and data from US Bureau of Economic Analysis, US Bureau of Labor Statistics, and US Census Bureau.

Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 4c. – Distribution of indirect and induced activity generated by the US oil and natural gas industry, 2023: Value added

Industry supported	Indirect and induced effects	
	Operational	Capital
Total (\$ billions)	\$792.5	\$255.8
Agriculture, forestry and fishing	0.8%	0.4%
Mining	0.6%	0.3%
Utilities	2.4%	1.0%
Construction	1.7%	30.7%
Manufacturing	8.9%	11.8%
Wholesale and retail trade	11.1%	11.1%
Transportation and warehousing	5.5%	2.9%
Information	5.3%	5.3%
Finance, insurance, real estate, rental and leasing	23.1%	12.4%
Services	39.4%	23.7%
Other	1.3%	0.3%
Total	100%	100%

Source: PwC calculations using the IMPLAN modeling system and data from US Bureau of Economic Analysis, US Bureau of Labor Statistics, and US Census Bureau.

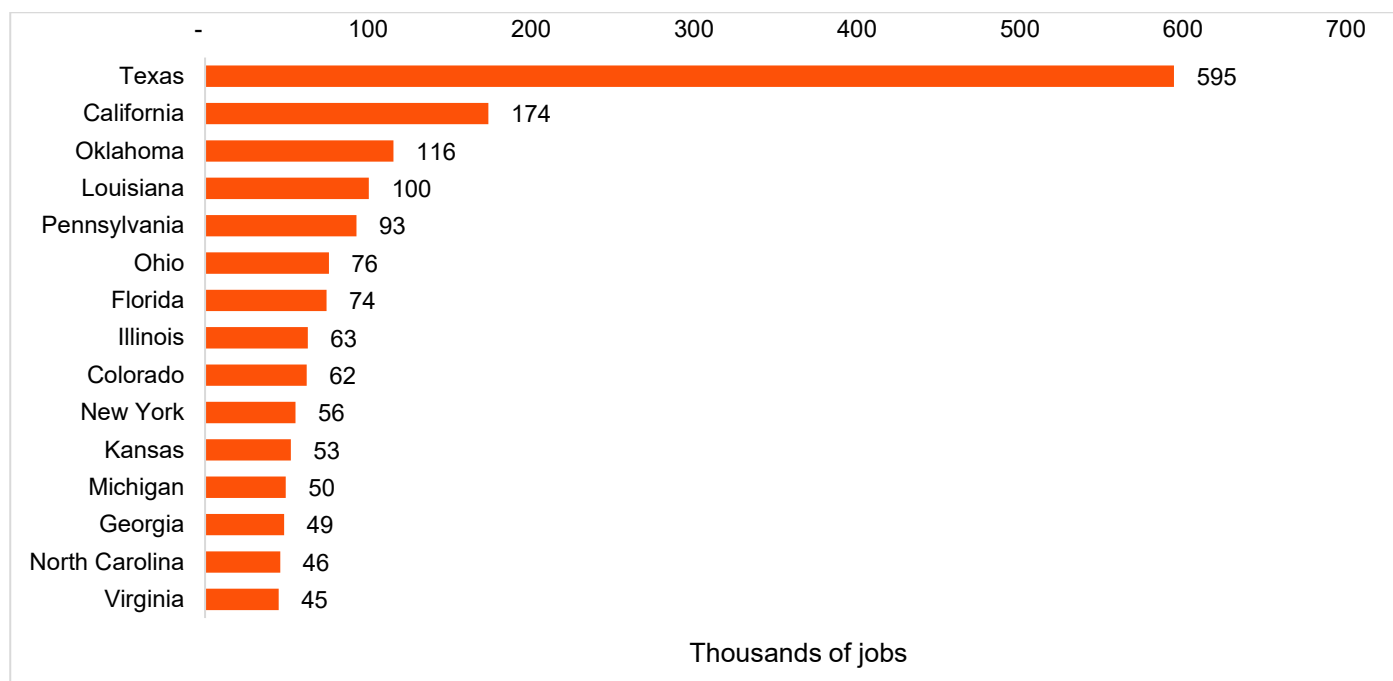
B. State results

The economic contribution of the oil and natural gas industry at the state level reflects the indirect and induced effects attributable to direct activity within each state's borders, as well as indirect and induced activity within a state that is attributable to direct activity in other states.⁷

The economic contribution of the oil and natural gas industry varies from state to state, depending on factors such as each state's population, natural resources, industry mix, wage structure, spending and saving patterns, and connections to other economies. In terms of the direct contribution of the oil and natural gas industry, **Figures 1, 2, and 3**, below, present employment, labor income, and value added for the top 15 states ranked by direct contribution (details for all states are available in **Appendix B**).

The figures indicate that Texas ranks substantially above all other states in terms of direct contributions of the oil and natural gas industry, with 594,500 jobs, \$137.5 billion of labor income, and \$335.1 billion of value added contributed in 2023. Other states with exceptionally large direct contributions include California, Oklahoma, Louisiana, and Pennsylvania, each with more than 90,000 jobs directly attributable to the oil and natural gas industry. These states have vast oil and natural gas deposits onshore and offshore that have led to substantial upstream and downstream operations.

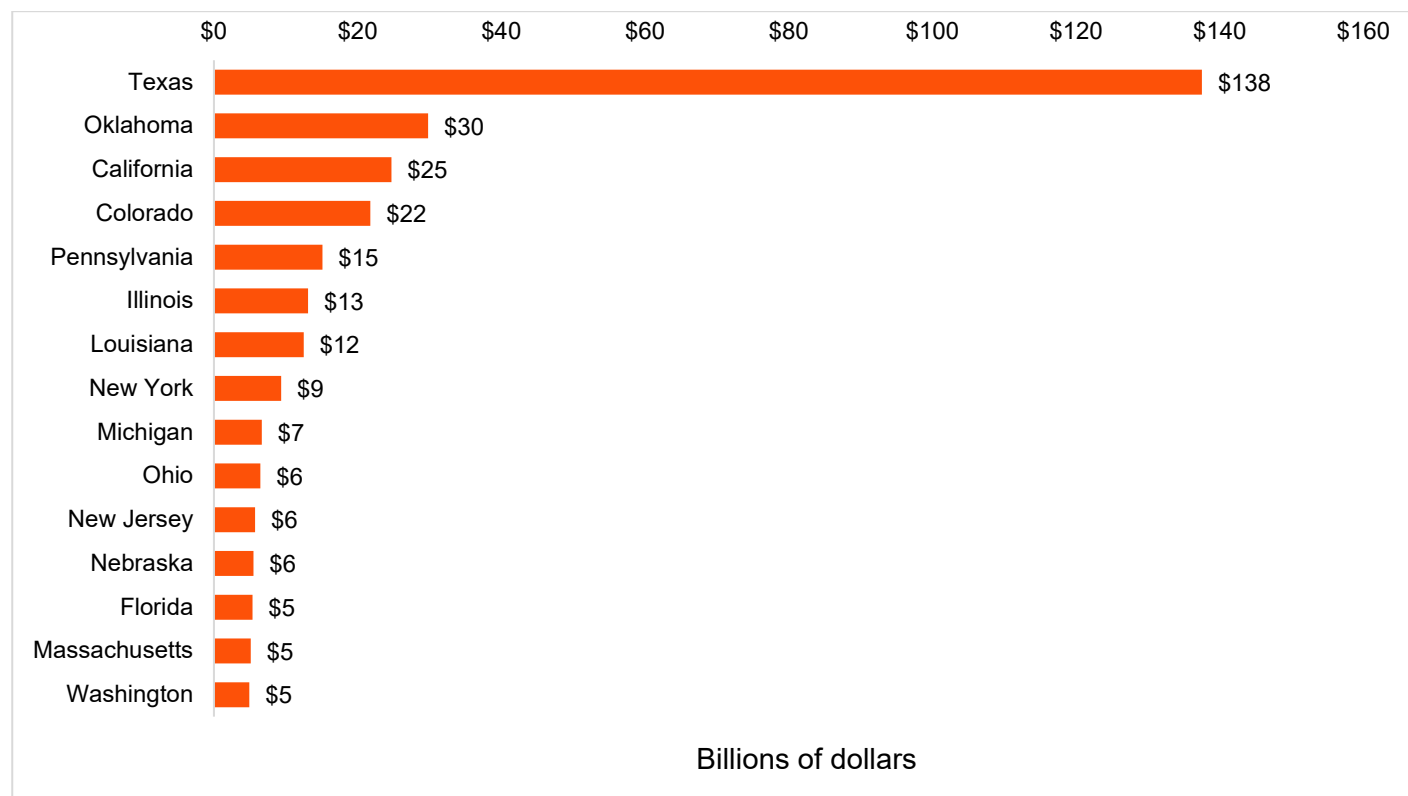
Figure 1. The oil and natural gas industry's direct contribution: top 15 states by direct employment, 2023



Source: PwC calculations based on the IMPLAN model. See **Appendix B** for underlying figures.

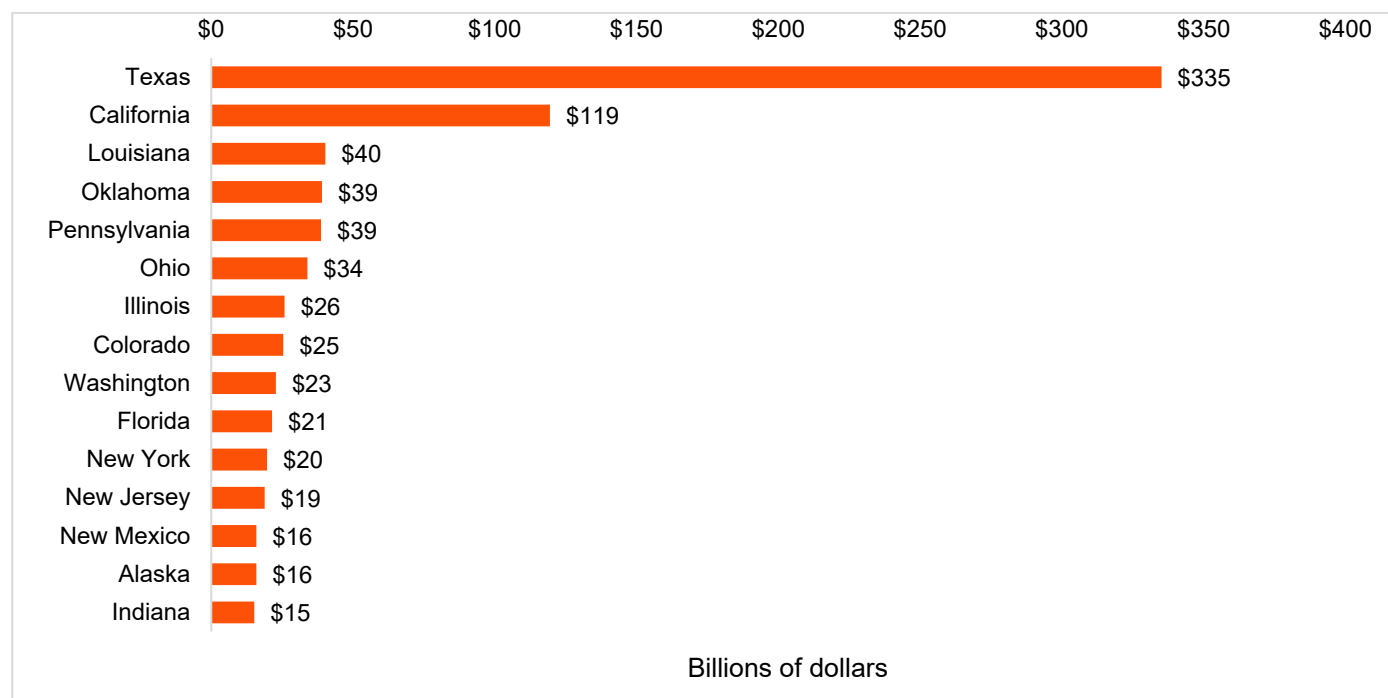
⁷ We have allocated the indirect and induced effects by industry attributable to direct activity in other states based on the overall level of economic activity of that industry in each state.

Figure 2. The oil and natural gas industry's direct contribution: top 15 states by direct labor income, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

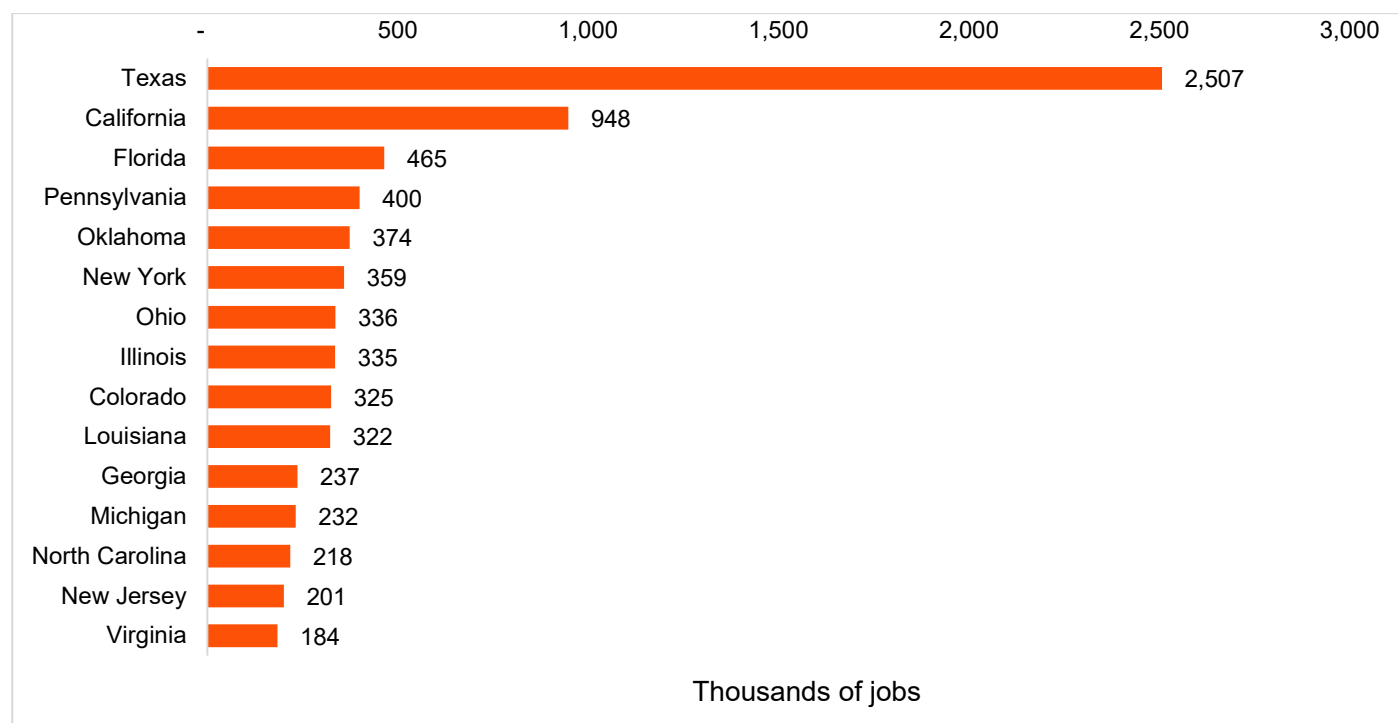
Figure 3. The oil and natural gas industry's direct contribution: top 15 states by direct value added, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

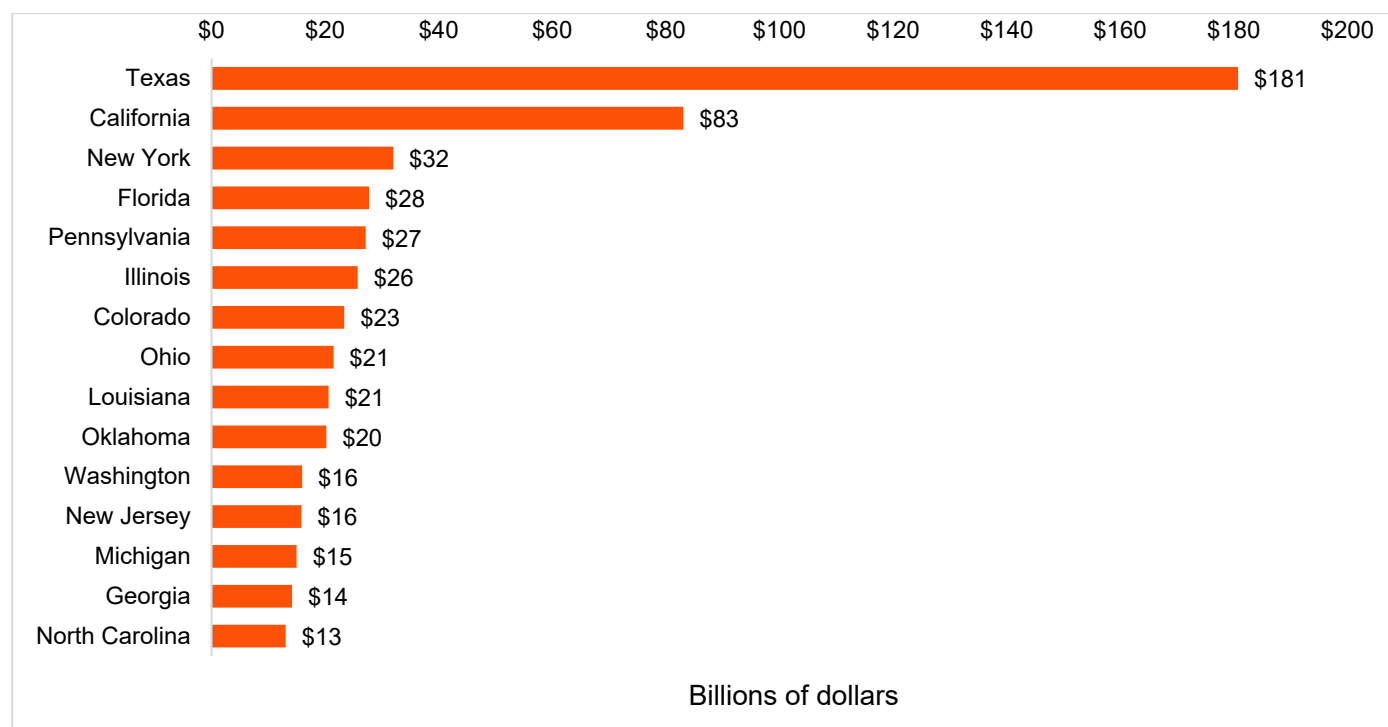
Figures 4 through **9**, below, present the total contribution of the oil and natural gas industry by state, including direct, indirect, and induced effects. Looking at the top 15 states in terms of total employment attributable to the oil and natural gas industry. Texas ranks highest, followed by California, Florida, Pennsylvania, and Oklahoma (see **Figure 4**, below). These states also rank high in terms of labor income and value added attributable to the oil and natural gas industry (see **Figures 5** and **6**, below). These states have the highest amounts of activities directly or indirectly attributable to the oil and natural gas industry in part because they also are among the largest economies in the country.

Figure 4. The oil and natural gas industry's total contribution: top 15 states by total employment contribution, 2023



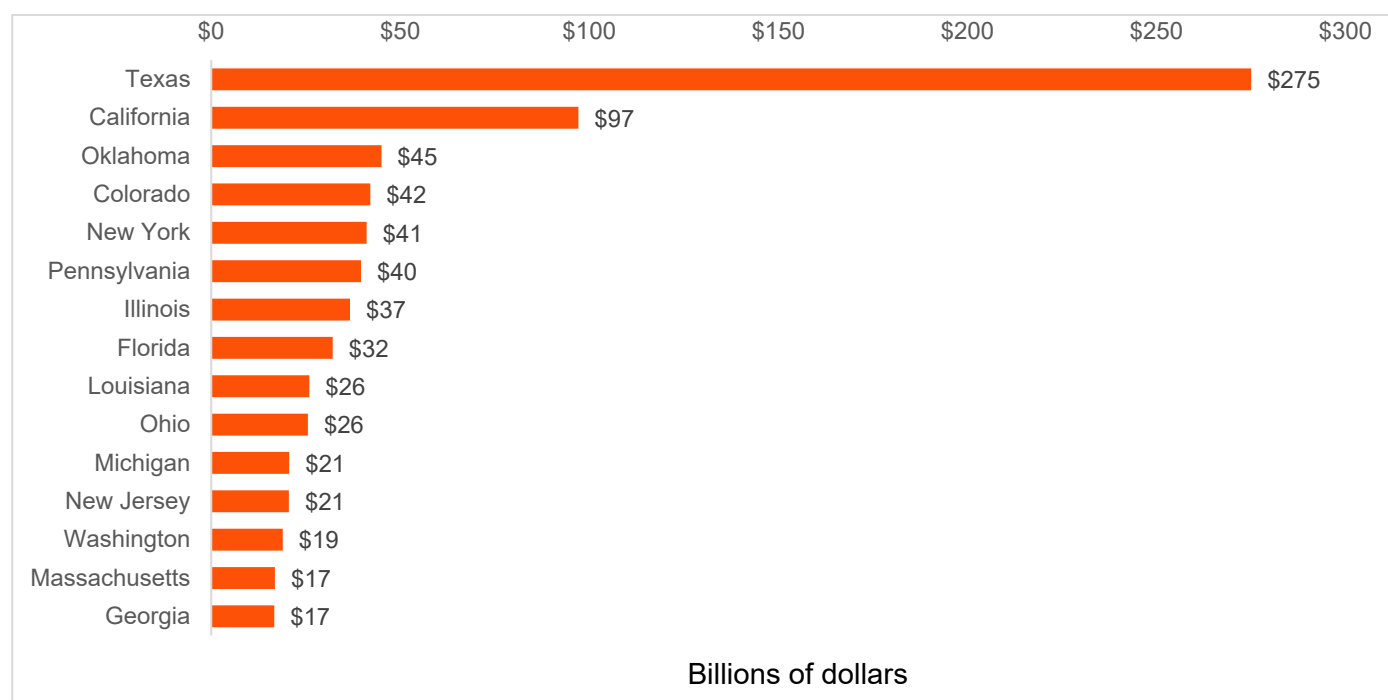
Source: PwC calculations based on the IMPLAN model. See **Appendix B** for underlying figures.

Figure 5. The oil and natural gas industry's total contribution: top 15 states by total labor income contribution, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

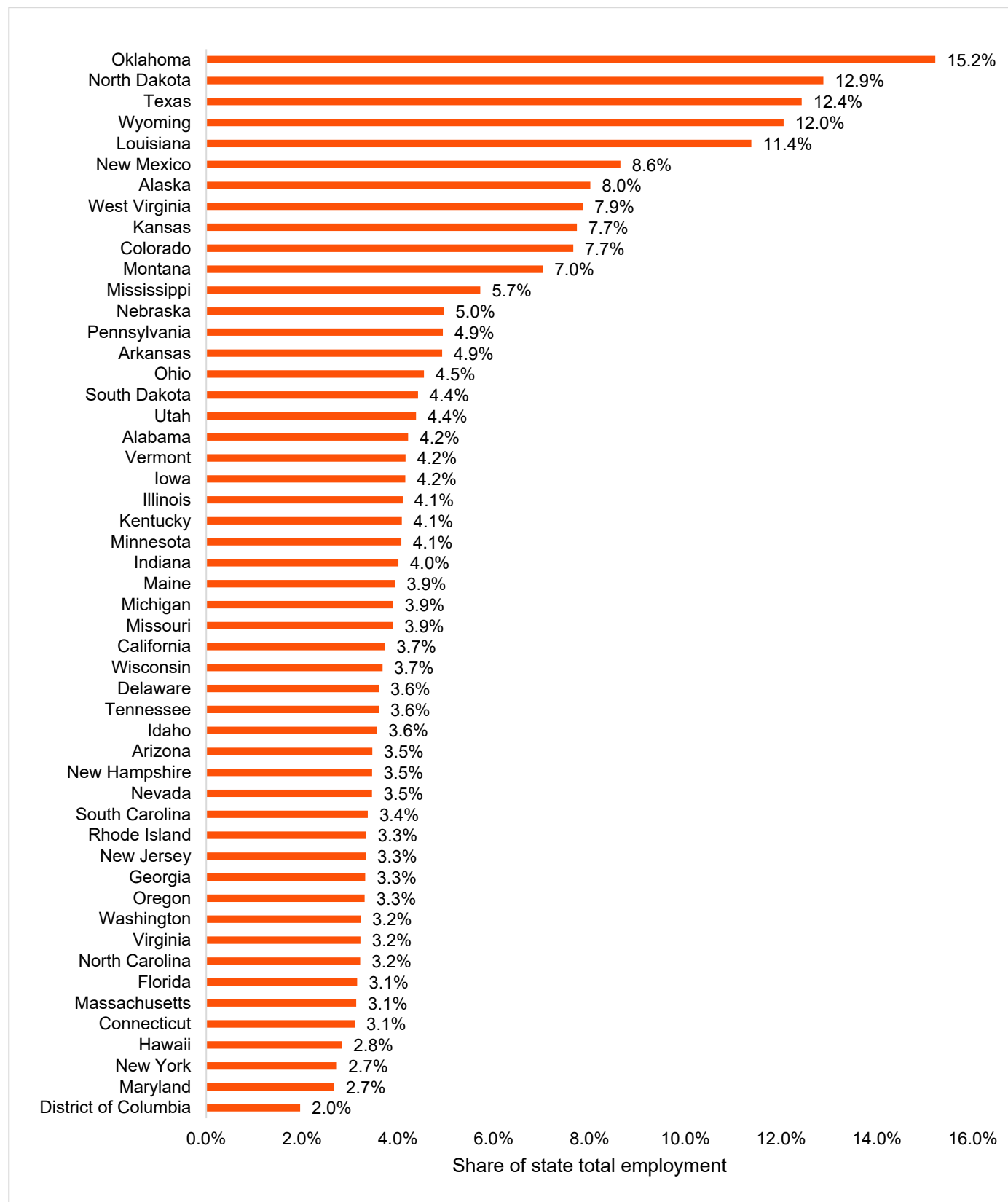
Figure 6. The oil and natural gas industry's total contribution: top 15 states by total value added contribution, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

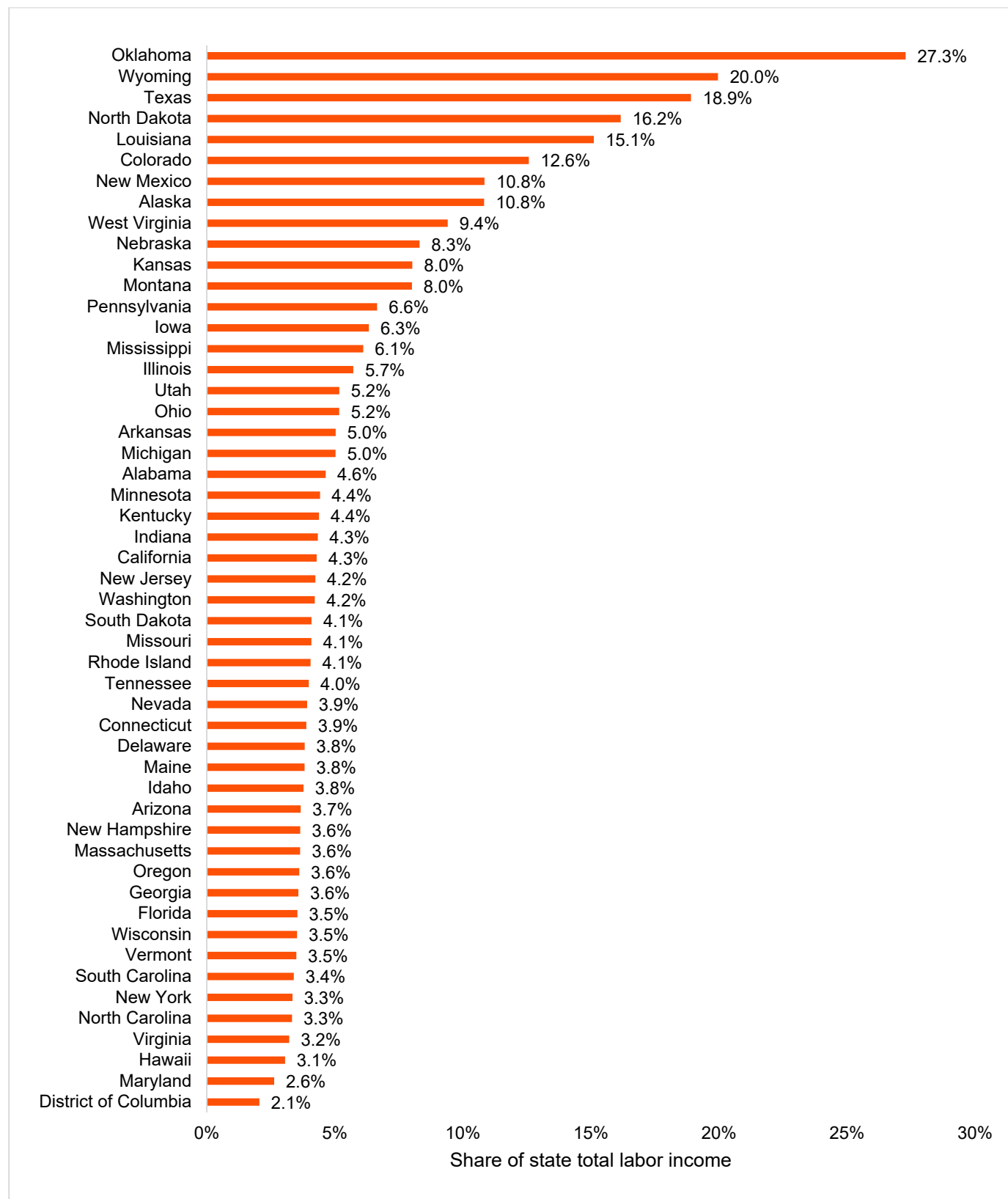
Looking at all states in terms of the share of state employment directly or indirectly attributable to the oil and natural gas industry, **Figure 7**, below, indicates that Oklahoma ranks highest, followed by North Dakota, Texas, Wyoming, and Louisiana. In each of these states, the oil and natural gas industry directly and indirectly contributed more than 10 percent of state employment in 2023. These states also rank high in terms of the share of state labor income and value added directly and indirectly attributable to the oil and natural gas industry (see **Figures 8 and 9**, below). These states, which have large oil and natural gas deposits, produce much of the country's domestic energy supply. The District of Columbia, Maryland, and New York are three study areas with the smallest percentage shares of economic activity attributable to the oil and natural gas industry.

Figure 7. The oil and natural gas industry's total employment contribution as a share of state employment, 2023



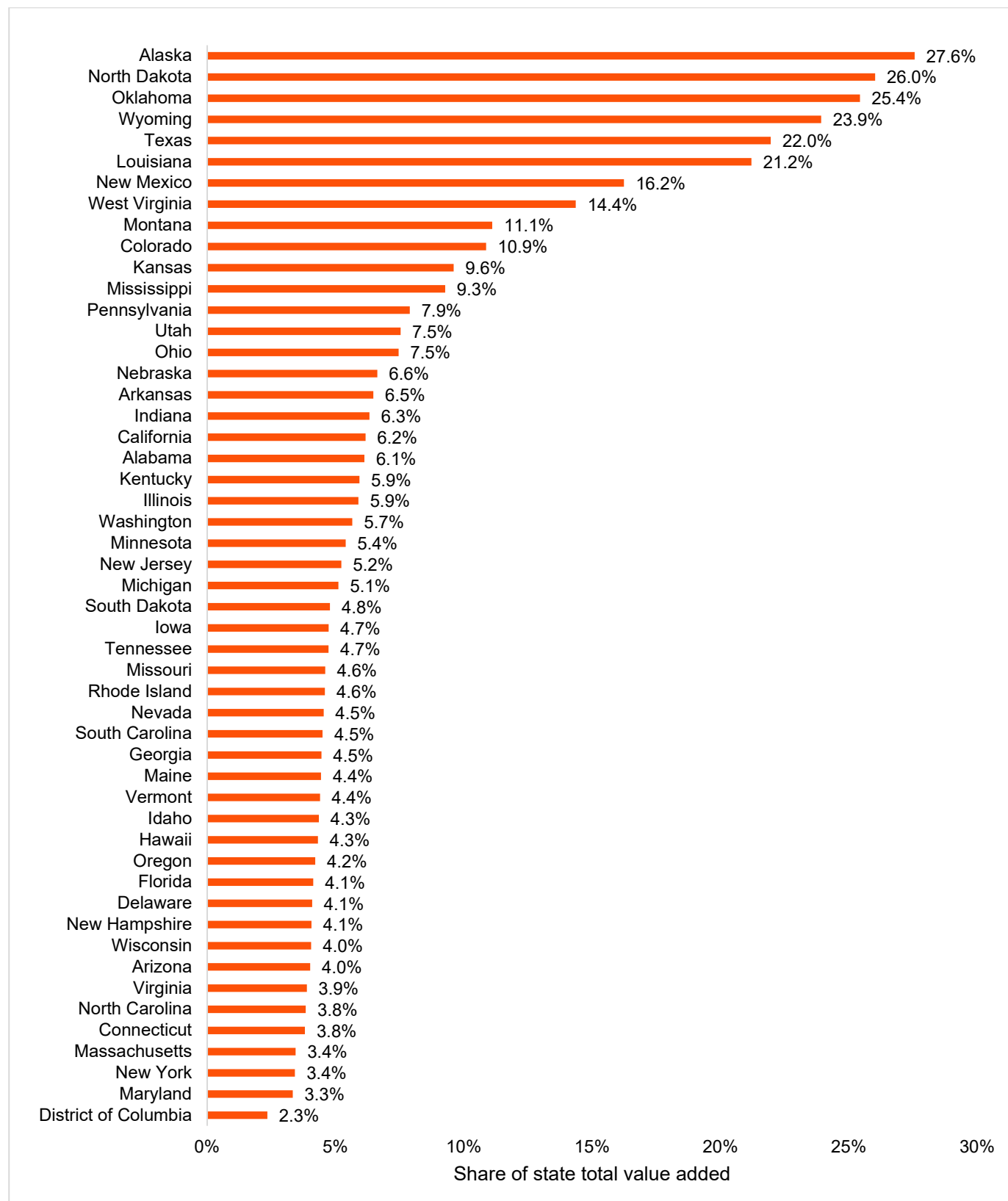
Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

Figure 8. The oil and natural gas industry's total labor income contribution as a share of state labor income, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

Figure 9. The oil and natural gas industry's total value-added employment contribution as a share of state employment, 2023



Source: PwC calculations based on the IMPLAN model. See [Appendix B](#) for underlying figures.

C. Congressional district results

The economic contribution of the oil and natural gas industry at the congressional district level reflects the indirect and induced effects attributable to direct activity within each congressional district's borders, as well as indirect and induced activity within a congressional district that is attributable to direct activity in other congressional districts.⁸

The oil and natural gas industry's activity varies considerably across congressional districts. The number of jobs directly attributable to the oil and natural gas industry was at least 1,000 in all but 13 districts and exceeded 5,000 in 136 congressional districts in 2023. Direct employment is especially pronounced in districts in Texas, North Dakota, Oklahoma, and Louisiana with significant oil and gas extraction activities.

Table 5, below, presents employment, labor income, and value added for the top 15 congressional districts ranked by direct employment. Seven of the top 15 districts in terms of the oil and natural gas industry's direct employment are in Texas, home to two of America's largest oil fields (the Permian Basin and the Eagle Ford).

Leading all districts in direct employment is Texas's 7th Congressional District, which includes portions of Harris, Fort Bend, and Brazoria counties, all located within the Gulf Coast region of Texas. Texas's 11th Congressional District encompasses all or part of 29 counties in west central Texas, stretching from the Permian Basin through the Hill Country to the outer fringes of Dallas-Fort Worth, including the top crude oil producing county of Midland. Texas's 38th Congressional District, the newest addition after the 2020 Census Redistricting, stretches from the Energy Corridor in western Harris County northwards to Cypress and Tomball. It includes the Houston suburbs of Jersey Village, Cypress, Tomball, Katy, and Klein. The Memorial Villages and a portion of the city of Houston are also located within the 38th district.

Oklahoma's 3rd Congressional District includes Oklahoma City and many of its suburbs and is home to the Anadarko Basin and the Arbuckle-Simpson Aquifer, which are known for oil and gas production. Oklahoma's 5th Congressional District is in Central Oklahoma and includes parts of Oklahoma, Pottawatomie, and Seminole counties, as well as the eastern portion of Canadian County.

North Dakota's At-Large District covers most of the Bakken region, another key oil-producing basin in the country.

⁸ We have allocated the indirect and induced effects by industry attributable to direct activity in other congressional districts within a state based on the overall level of economic activity of that industry in each congressional district in the state.

Louisiana’s 3rd Congressional District covers the southwestern and south-central portion of the state. Many of the nation’s largest oil fields are found in the federal Outer Continental Shelf (“OCS”) off the Louisiana coast, with a large share of federal OCS production in the Gulf of Mexico coming onshore in Louisiana.

Direct employment in the top 15 congressional districts for the oil and natural gas industry was 499,180 in 2023, or 20.3 percent of direct employment nationwide in the oil and natural gas industry.

In terms of total contributions (including indirect, indirect, and induced effects), the oil and natural gas industry supported more than 10,000 jobs in all but 11 congressional districts in 2023.

Table 5. The oil and natural gas industry’s direct contribution, 2023: Top 15 congressional districts, ranked by employment

Rank	CD	Employment ⁽¹⁾		Labor Income ⁽²⁾		Value Added	
		Amount (Jobs)	Share of US ⁽³⁾	Amount (\$ Million)	Share of US ⁽³⁾	Amount (\$ Million)	Share of US ⁽³⁾
1	TX-7	71,890	2.9%	\$33,769	9.1%	\$78,445	7.8%
2	TX-11	56,980	2.3%	\$12,426	3.3%	\$21,397	2.1%
3	TX-38	46,690	1.9%	\$18,159	4.9%	\$41,889	4.2%
4	TX-18	44,460	1.8%	\$5,525	1.5%	\$16,366	1.6%
5	OK-3	34,940	1.4%	\$3,239	0.9%	\$5,432	0.5%
6	ND-1 (At-Large)	32,970	1.3%	\$3,730	1.0%	\$14,999	1.5%
7	OK-5	31,320	1.3%	\$12,622	3.4%	\$16,400	1.6%
8	LA-3	26,730	1.1%	\$2,793	0.8%	\$8,504	0.8%
9	OK-1	23,690	1.0%	\$10,059	2.7%	\$12,156	1.2%
10	TX-23	22,890	0.9%	\$3,708	1.0%	\$8,416	0.8%
11	WY-1 (At-Large)	22,810	0.9%	\$3,685	1.0%	\$9,225	0.9%
12	TX-36	21,590	0.9%	\$4,234	1.1%	\$18,325	1.8%
13	TX-27	21,320	0.9%	\$3,268	0.9%	\$12,423	1.2%
14	NM-3	20,720	0.8%	\$2,180	0.6%	\$7,584	0.8%
15	KS-1	20,180	0.8%	\$1,079	0.3%	\$3,477	0.3%

Source: PwC calculations based on the IMPLAN model.

(1) Employment is defined as the number of direct, indirect, and induced payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors’ income.

(3) Share of US refers to the share of the US oil and natural gas industry’s direct impact at the national level.

Table 6, below, presents employment, labor income, and value added for the top 15 congressional districts ranked by total employment contribution, reflecting the oil and natural gas industry’s direct, indirect, and induced effects. Many of the same congressional districts that rank high in terms of direct employment also rank high in terms of total employment attributable to the oil and natural gas industry. Total industry-

supported employment in the top 15 congressional districts was 1.4 million in 2023, or 13.4 percent of total industry-supported employment nationwide.

Details for all congressional districts are available in [Appendix C](#).

Table 6. The oil and natural gas industry's total contribution, 2023: Top 15 congressional districts, ranked by employment

Rank	CD	Employment ⁽¹⁾		Labor Income ⁽²⁾		Value Added	
		Amount (Jobs)	Share of US ⁽³⁾	Amount (\$ Million)	Share of US ⁽³⁾	Amount (\$ Million)	Share of US ⁽³⁾
1	TX-7	167,750	1.6%	\$42,302	4.2%	\$90,921	4.4%
2	TX-38	119,670	1.1%	\$24,834	2.5%	\$52,069	2.5%
3	TX-24	118,610	1.1%	\$14,102	1.4%	\$23,134	1.1%
4	TX-11	116,050	1.1%	\$16,241	1.6%	\$27,750	1.4%
5	OK-5	97,650	0.9%	\$16,945	1.7%	\$23,351	1.1%
6	OK-1	95,700	0.9%	\$14,980	1.5%	\$20,075	1.0%
7	TX-37	94,730	0.9%	\$9,927	1.0%	\$14,035	0.7%
8	TX-18	84,970	0.8%	\$7,735	0.8%	\$20,404	1.0%
9	TX-33	81,040	0.8%	\$8,334	0.8%	\$14,760	0.7%
10	OK-3	80,400	0.8%	\$5,670	0.6%	\$10,018	0.5%
11	ND-1 (At-Large)	77,040	0.7%	\$6,794	0.7%	\$19,790	1.0%
12	TX-32	76,280	0.7%	\$10,223	1.0%	\$17,611	0.9%
13	TX-17	73,760	0.7%	\$7,194	0.7%	\$11,938	0.6%
14	CO-1	71,300	0.7%	\$21,803	2.2%	\$24,421	1.2%
15	TX-27	70,680	0.7%	\$6,112	0.6%	\$17,729	0.9%

Source: PwC calculations based on the IMPLAN model.

(1) Employment is defined as the number of direct, indirect, and induced payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Share of US refers to the share of the oil and natural gas industry's total impact at the national level.

IV. Wages, capital spending, and dividends from the oil and natural gas industry

The US oil and natural gas industry’s direct labor income in 2023 is estimated to be \$372.4 billion, as detailed in **Section III A**, above.

Based on data from the US Census Bureau’s Annual Capital Expenditure Survey, the industry’s capital expenditures are estimated to be \$202.9 billion in 2023.⁹

Total dividends paid by publicly traded companies in the industry were obtained from S&P’s Capital IQ® database. The measure of dividends used includes cash dividends paid to US shareholders from all classes of common stock out of income from US operations by publicly traded US corporations in the oil and natural gas industry. It also includes dividends paid to US shareholders out of income from US operations by publicly traded foreign corporations in the industry.¹⁰ Excluding distributions from Master Limited Partnerships and other pass-through entities,¹¹ PwC estimates that the publicly traded companies in the industry paid out a total of \$61.2 billion in dividends in 2023 to US households and retirement plans.¹²

One measure of the industry’s total “spend” is the sum of the industry’s expenditures on labor and capital and its payments of dividends. Using this measure, the industry’s total US “spend” amounted to \$636 billion in 2023, as shown in **Table 7**, below.

Table 7. The oil and natural gas industry’s total US spend in 2023

(Billions of dollars)

Labor Income	Capital Spending	Dividend Payout	Total Spend
\$372.4	\$202.9	\$61.2	\$636.6

Sources: PwC calculations based on the IMPLAN model, the US Census Bureau’s Annual Capital Expenditure Survey, and S&P’s Capital IQ® database.

⁹ The Census Bureau defines capital expenditures to include “all capitalized costs” incurred during the year for structures and equipment “chargeable to asset accounts, and for which depreciation and amortization accounts are ordinarily maintained.”
¹⁰ The measure of dividends used includes cash dividends from all classes of common stock, cash paid in lieu of fractional shares, liquidation payments to shareholders and other cash distributions to shareholders. It does not include the dollar value of stock dividends or dividends paid or accrued on preferred stock.
¹¹ Distributions from pass-through entities are included as proprietors’ income in PwC’s estimate of direct labor income.
¹² Additionally, the publicly traded companies in the industry paid out \$4 billion to US finance and insurance companies and other businesses.

Appendix A: Direct contribution by detailed sector

Table A-1. Direct contribution of the oil and natural gas industry on the US economy by subsector, 2023

NAICS Code	Subsector Description	Employment ⁽¹⁾ (000's)	Labor Income ⁽²⁾ (\$ billions)	Value Added (\$ billions)
211	Oil and gas extraction (including NGL extraction)	509.9	\$116.1	\$257.0
213111	Drilling oil and gas wells	55.2	\$7.8	\$13.2
213112	Support activities for oil and gas operations	252.6	\$32.8	\$55.6
2212	Natural gas distribution	131.6	\$27.8	\$80.2
23712	Oil and gas pipeline and related structures construction	155.5	\$16.5	\$20.3
32411	Petroleum refineries	65.4	\$29.5	\$190.7
324121	Asphalt paving mixture and block manufacturing	18.0	\$9.5	\$5.2
324122	Asphalt shingle and coating materials manufacturing	13.8	\$4.9	\$11.1
324191	Petroleum lubricating oil and grease manufacturing	11.6	\$7.2	\$6.1
4247	Petroleum and petroleum products merchant wholesalers	114.7	\$14.4	\$219.6
457	Gasoline stations	1,082.7	\$50.5	\$100.3
486	Pipeline transportation	55.1	\$55.4	\$48.7
	Total US Oil and Natural Gas Industry	2,466.1	\$372.4	\$1,008.0

Source: Estimates based on data from the US Bureau of Economic Analysis and supplemented by data from the US Bureau of Labor Statistics and US Census Bureau and 2023 input-output relationships from the IMPLAN modeling system.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Appendix B: Detailed results by state

Table B-1. The oil and natural gas industry's economic contribution by state, 2023
(Thousands of jobs; Billions of dollars)

State	Employment		Labor Income		Value Added		Tax Payments	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
US Total	2,466.1	10,628.1	\$372.4	\$1,002.2	\$1,008.0	\$2,056.3	\$351.5	\$570.1
Alabama	33.1	123.8	\$2.4	\$8.3	\$8.6	\$18.7	\$2.8	\$3.6
Alaska	14.0	37.5	\$2.3	\$4.0	\$15.9	\$18.8	\$2.8	\$3.0
Arizona	30.7	151.9	\$1.9	\$11.1	\$5.6	\$21.0	\$2.3	\$3.5
Arkansas	26.6	88.1	\$1.2	\$5.2	\$4.8	\$11.6	\$2.2	\$2.8
California	173.8	947.7	\$24.7	\$97.1	\$119.4	\$238.7	\$41.6	\$52.2
Colorado	62.4	325.0	\$21.8	\$42.0	\$25.4	\$57.5	\$5.7	\$8.0
Connecticut	13.6	74.9	\$2.2	\$8.0	\$4.0	\$13.2	\$0.7	\$1.5
Delaware	5.7	23.9	\$0.5	\$1.9	\$1.1	\$4.0	\$0.2	\$0.4
District of Columbia	2.2	17.9	\$0.4	\$2.6	\$1.1	\$4.1	\$0.3	\$0.4
Florida	74.5	464.6	\$5.4	\$32.1	\$21.4	\$66.2	\$10.5	\$13.9
Georgia	48.5	236.7	\$3.1	\$16.6	\$13.5	\$37.0	\$6.8	\$8.6
Hawaii	4.5	26.1	\$0.4	\$2.0	\$2.0	\$4.8	\$0.8	\$1.2
Idaho	11.1	43.3	\$0.6	\$2.8	\$1.8	\$5.3	\$0.9	\$1.2
Illinois	63.0	335.3	\$13.1	\$36.6	\$25.9	\$64.7	\$8.1	\$11.6
Indiana	38.2	168.6	\$2.8	\$12.6	\$15.2	\$31.6	\$3.3	\$4.5
Iowa	29.0	88.6	\$3.9	\$8.8	\$3.1	\$12.0	\$1.6	\$2.2
Kansas	52.7	154.6	\$3.4	\$11.0	\$9.7	\$21.9	\$2.3	\$3.2
Kentucky	29.5	110.6	\$1.7	\$7.3	\$7.6	\$16.6	\$3.3	\$4.1
Louisiana	100.5	322.3	\$12.5	\$25.9	\$40.2	\$66.8	\$6.2	\$8.2
Maine	11.6	35.0	\$0.6	\$2.2	\$1.5	\$4.1	\$0.8	\$1.0
Maryland	18.9	106.3	\$1.3	\$8.1	\$5.7	\$17.2	\$2.8	\$3.9
Massachusetts	25.6	158.1	\$5.1	\$16.8	\$7.7	\$25.4	\$2.3	\$3.6
Michigan	49.5	232.0	\$6.7	\$20.6	\$12.4	\$34.5	\$4.6	\$6.2
Minnesota	39.7	158.7	\$2.7	\$12.9	\$10.1	\$26.1	\$3.0	\$4.4
Mississippi	30.8	97.4	\$1.8	\$5.4	\$7.8	\$14.0	\$2.0	\$2.6
Missouri	42.7	154.9	\$2.5	\$10.7	\$6.6	\$19.8	\$2.4	\$3.4
Montana	16.5	53.2	\$1.3	\$3.6	\$4.4	\$8.1	\$1.0	\$1.3
Nebraska	14.8	69.3	\$5.5	\$8.4	\$6.7	\$12.0	\$1.2	\$1.5
Nevada	15.0	73.4	\$1.3	\$5.5	\$3.6	\$11.2	\$1.6	\$2.2
New Hampshire	8.2	32.7	\$0.5	\$2.7	\$1.5	\$4.6	\$0.5	\$0.7
New Jersey	37.0	201.0	\$5.7	\$20.5	\$18.8	\$42.2	\$8.7	\$11.1
New Mexico	42.7	100.8	\$4.6	\$8.0	\$15.9	\$21.9	\$5.5	\$6.0
New York	55.5	358.9	\$9.3	\$41.0	\$19.7	\$74.2	\$9.8	\$15.7
North Carolina	46.1	217.6	\$2.6	\$15.4	\$8.7	\$30.2	\$4.2	\$5.9
North Dakota	33.0	77.0	\$3.7	\$6.8	\$15.0	\$19.8	\$4.3	\$4.5
Ohio	76.0	336.1	\$6.5	\$25.6	\$33.9	\$66.0	\$6.6	\$9.0
Oklahoma	115.6	373.6	\$29.8	\$45.0	\$39.0	\$65.3	\$1.5	\$3.3
Oregon	17.1	89.0	\$1.4	\$7.2	\$4.3	\$13.4	\$1.9	\$2.8
Pennsylvania	92.9	399.6	\$15.1	\$39.6	\$38.7	\$77.0	\$9.7	\$12.8
Rhode Island	4.9	22.7	\$0.6	\$2.0	\$1.4	\$3.6	\$0.7	\$0.9
South Carolina	26.7	106.2	\$1.2	\$6.4	\$5.7	\$14.7	\$3.2	\$4.1
South Dakota	10.6	29.0	\$0.4	\$1.8	\$1.3	\$3.5	\$0.7	\$0.8
Tennessee	37.8	166.1	\$2.8	\$12.9	\$9.2	\$24.7	\$3.9	\$5.0
Texas	594.5	2,506.6	\$137.5	\$275.3	\$335.1	\$567.3	\$59.9	\$73.5
Utah	22.8	105.8	\$2.3	\$8.2	\$10.7	\$21.2	\$1.8	\$2.6
Vermont	6.6	18.4	\$0.2	\$1.0	\$0.7	\$1.9	\$0.4	\$0.5
Virginia	45.1	184.0	\$2.6	\$14.0	\$9.2	\$27.9	\$4.7	\$6.3
Washington	24.0	157.2	\$4.9	\$18.9	\$22.8	\$45.7	\$6.8	\$8.6
West Virginia	27.3	71.1	\$2.3	\$5.1	\$9.6	\$14.7	\$1.8	\$2.2
Wisconsin	40.3	141.8	\$1.5	\$9.2	\$4.8	\$17.3	\$2.1	\$3.1
Wyoming	22.8	53.4	\$3.7	\$5.4	\$9.2	\$12.4	\$0.7	\$0.9

Source: PwC calculations based on the IMPLAN modeling system (2023 database).

Note: Details may not add up to totals due to rounding.

Table B-1A. The oil and natural gas industry: job multipliers by state, 2023
(Thousands of jobs)

State	Employment contribution (000's)		Job Multipliers
	Direct	Total	
US Total	2,466.1	10,628.1	4.31
Alabama	33.1	123.8	3.74
Alaska	14.0	37.5	2.67
Arizona	30.7	151.9	4.96
Arkansas	26.6	88.1	3.31
California	173.8	947.7	5.45
Colorado	62.4	325.0	5.21
Connecticut	13.6	74.9	5.52
Delaware	5.7	23.9	4.16
District of Columbia	2.2	17.9	8.10
Florida	74.5	464.6	6.24
Georgia	48.5	236.7	4.88
Hawaii	4.5	26.1	5.76
Idaho	11.1	43.3	3.89
Illinois	63.0	335.3	5.32
Indiana	38.2	168.6	4.42
Iowa	29.0	88.6	3.05
Kansas	52.7	154.6	2.94
Kentucky	29.5	110.6	3.75
Louisiana	100.5	322.3	3.21
Maine	11.6	35.0	3.01
Maryland	18.9	106.3	5.62
Massachusetts	25.6	158.1	6.19
Michigan	49.5	232.0	4.68
Minnesota	39.7	158.7	4.00
Mississippi	30.8	97.4	3.16
Missouri	42.7	154.9	3.63
Montana	16.5	53.2	3.23
Nebraska	14.8	69.3	4.67
Nevada	15.0	73.4	4.88
New Hampshire	8.2	32.7	4.01
New Jersey	37.0	201.0	5.43
New Mexico	42.7	100.8	2.36
New York	55.5	358.9	6.47
North Carolina	46.1	217.6	4.72
North Dakota	33.0	77.0	2.34
Ohio	76.0	336.1	4.42
Oklahoma	115.6	373.6	3.23
Oregon	17.1	89.0	5.21
Pennsylvania	92.9	399.6	4.30
Rhode Island	4.9	22.7	4.61
South Carolina	26.7	106.2	3.97
South Dakota	10.6	29.0	2.75
Tennessee	37.8	166.1	4.39
Texas	594.5	2,506.6	4.22
Utah	22.8	105.8	4.64
Vermont	6.6	18.4	2.78
Virginia	45.1	184.0	4.08
Washington	24.0	157.2	6.56
West Virginia	27.3	71.1	2.61
Wisconsin	40.3	141.8	3.52
Wyoming	22.8	53.4	2.34

Source: PwC calculations based on the IMPLAN modeling system (2023 database).

Note: Details may not add up to totals due to rounding.

Table B-2. The oil and natural gas industry's total economic contribution as a share of state total, 2023
(percentage of state total)

State	Industry supported total employment / state total	Industry supported total labor income / state total	Industry supported total value added / state total
Alabama	4.2%	4.6%	6.1%
Alaska	8.0%	10.8%	27.6%
Arizona	3.5%	3.7%	4.0%
Arkansas	4.9%	5.0%	6.5%
California	3.7%	4.3%	6.2%
Colorado	7.7%	12.6%	10.9%
Connecticut	3.1%	3.9%	3.8%
Delaware	3.6%	3.8%	4.1%
District of Columbia	2.0%	2.1%	2.3%
Florida	3.1%	3.5%	4.1%
Georgia	3.3%	3.6%	4.5%
Hawaii	2.8%	3.1%	4.3%
Idaho	3.6%	3.8%	4.3%
Illinois	4.1%	5.7%	5.9%
Indiana	4.0%	4.3%	6.3%
Iowa	4.2%	6.3%	4.7%
Kansas	7.7%	8.0%	9.6%
Kentucky	4.1%	4.4%	5.9%
Louisiana	11.4%	15.1%	21.2%
Maine	3.9%	3.8%	4.4%
Maryland	2.7%	2.6%	3.3%
Massachusetts	3.1%	3.6%	3.4%
Michigan	3.9%	5.0%	5.1%
Minnesota	4.1%	4.4%	5.4%
Mississippi	5.7%	6.1%	9.3%
Missouri	3.9%	4.1%	4.6%
Montana	7.0%	8.0%	11.1%
Nebraska	5.0%	8.3%	6.6%
Nevada	3.5%	3.9%	4.5%
New Hampshire	3.5%	3.6%	4.1%
New Jersey	3.3%	4.2%	5.2%
New Mexico	8.6%	10.8%	16.2%
New York	2.7%	3.3%	3.4%
North Carolina	3.2%	3.3%	3.8%
North Dakota	12.9%	16.2%	26.0%
Ohio	4.5%	5.2%	7.5%
Oklahoma	15.2%	27.3%	25.4%
Oregon	3.3%	3.6%	4.2%
Pennsylvania	4.9%	6.6%	7.9%
Rhode Island	3.3%	4.1%	4.6%
South Carolina	3.4%	3.4%	4.5%
South Dakota	4.4%	4.1%	4.8%
Tennessee	3.6%	4.0%	4.7%
Texas	12.4%	18.9%	22.0%
Utah	4.4%	5.2%	7.5%
Vermont	4.2%	3.5%	4.4%
Virginia	3.2%	3.2%	3.9%
Washington	3.2%	4.2%	5.7%
West Virginia	7.9%	9.4%	14.4%
Wisconsin	3.7%	3.5%	4.0%
Wyoming	12.0%	20.0%	23.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database).

Table B-3. The economic contribution of the oil and natural gas industry in Alabama, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	33,120			33,120	1.1%
Indirect/induced effects on other industries					
Services		16,050	22,580	38,630	
Construction		11,690	400	12,090	
Wholesale and retail trade		3,170	6,810	9,980	
Manufacturing		5,880	2,960	8,840	
Finance, insurance, real estate, rental and leasing		3,530	5,300	8,830	
Transportation and warehousing		5,230	1,910	7,140	
Government		890	680	1,570	
Agriculture		310	1,010	1,320	
Information		660	650	1,310	
Utilities		430	200	630	
Mining		310	50	360	
Total employment contribution	33,120	48,130	42,560	123,810	4.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,412			\$2,412	1.4%
Indirect/induced effects on other industries					
Services		\$1,061	\$1,191	\$2,252	
Manufacturing		\$579	\$243	\$822	
Construction		\$771	\$26	\$798	
Wholesale and retail trade		\$300	\$348	\$648	
Finance, insurance, real estate, rental and leasing		\$223	\$227	\$450	
Transportation and warehousing		\$295	\$105	\$400	
Government		\$81	\$64	\$145	
Utilities		\$79	\$38	\$116	
Information		\$59	\$57	\$116	
Agriculture		\$15	\$54	\$69	
Mining		\$30	\$5	\$34	
Total labor income contribution	\$2,412	\$3,494	\$2,357	\$8,264	4.6%
Value Added (\$ Millions)					
Industry direct contribution	\$8,592			\$8,592	2.8%
Indirect/induced effects on other industries					
Services		\$1,287	\$1,557	\$2,844	
Finance, insurance, real estate, rental and leasing		\$697	\$1,137	\$1,834	
Manufacturing		\$1,177	\$418	\$1,595	
Construction		\$1,089	\$37	\$1,126	
Wholesale and retail trade		\$479	\$641	\$1,121	
Transportation and warehousing		\$388	\$138	\$527	
Utilities		\$276	\$132	\$408	
Information		\$108	\$118	\$226	
Government		\$108	\$81	\$189	
Mining		\$122	\$20	\$142	
Agriculture		\$16	\$60	\$77	
Total value added contribution	\$8,592	\$5,747	\$4,340	\$18,680	6.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-4. The economic contribution of the oil and natural gas industry in Alaska, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	14,020			14,020	3.0%
Indirect/induced effects on other industries					
Services		3,610	8,740	12,350	
Wholesale and retail trade		650	2,170	2,820	
Finance, insurance, real estate, rental and leasing		1,110	1,540	2,650	
Construction		1,890	110	2,000	
Transportation and warehousing		890	750	1,640	
Manufacturing		180	330	510	
Mining		310	50	360	
Information		120	210	330	
Government		120	150	270	
Agriculture		30	230	260	
Utilities		150	70	220	
Total employment contribution	14,020	9,060	14,380	37,460	8.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,344			\$2,344	6.3%
Indirect/induced effects on other industries					
Services		\$283	\$587	\$870	
Construction		\$180	\$10	\$190	
Finance, insurance, real estate, rental and leasing		\$75	\$92	\$167	
Wholesale and retail trade		\$50	\$109	\$159	
Transportation and warehousing		\$64	\$63	\$127	
Manufacturing		\$11	\$27	\$39	
Government		\$16	\$21	\$36	
Utilities		\$29	\$5	\$34	
Mining		\$22	\$11	\$33	
Information		\$11	\$20	\$31	
Agriculture		\$1	\$7	\$8	
Total labor income contribution	\$2,344	\$740	\$952	\$4,037	10.8%
Value Added (\$ Millions)					
Industry direct contribution	\$15,891			\$15,891	23.3%
Indirect/induced effects on other industries					
Services		\$357	\$732	\$1,089	
Finance, insurance, real estate, rental and leasing		\$220	\$435	\$655	
Construction		\$277	\$16	\$293	
Wholesale and retail trade		\$83	\$187	\$270	
Transportation and warehousing		\$89	\$95	\$184	
Mining		\$98	\$18	\$117	
Utilities		\$54	\$28	\$82	
Information		\$24	\$48	\$72	
Manufacturing		\$17	\$35	\$52	
Government		\$14	\$18	\$32	
Agriculture		\$2	\$21	\$23	
Total value added contribution	\$15,891	\$1,235	\$1,632	\$18,758	27.6%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-5. The economic contribution of the oil and natural gas industry in Arizona, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	30,650			30,650	0.7%
Indirect/induced effects on other industries					
Services		21,670	34,140	55,810	
Construction		16,970	590	17,560	
Finance, insurance, real estate, rental and leasing		4,740	8,930	13,670	
Wholesale and retail trade		3,640	8,240	11,880	
Transportation and warehousing		6,550	3,660	10,210	
Manufacturing		3,900	2,030	5,930	
Information		1,080	1,200	2,280	
Government		790	940	1,730	
Agriculture		190	770	960	
Mining		670	120	790	
Utilities		240	190	430	
Total employment contribution	30,650	60,450	60,810	151,920	3.5%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,936			\$1,936	0.6%
Indirect/induced effects on other industries					
Services		\$1,776	\$2,203	\$3,979	
Construction		\$1,331	\$46	\$1,377	
Finance, insurance, real estate, rental and leasing		\$429	\$629	\$1,058	
Wholesale and retail trade		\$377	\$533	\$909	
Manufacturing		\$424	\$191	\$615	
Transportation and warehousing		\$328	\$203	\$531	
Information		\$138	\$148	\$286	
Government		\$88	\$107	\$194	
Utilities		\$82	\$60	\$142	
Mining		\$75	\$14	\$89	
Agriculture		\$8	\$33	\$41	
Total labor income contribution	\$1,936	\$5,055	\$4,166	\$11,157	3.7%
Value Added (\$ Millions)					
Industry direct contribution	\$5,553			\$5,553	1.1%
Indirect/induced effects on other industries					
Services		\$2,202	\$2,847	\$5,049	
Finance, insurance, real estate, rental and leasing		\$1,052	\$2,182	\$3,235	
Construction		\$2,114	\$73	\$2,187	
Wholesale and retail trade		\$612	\$984	\$1,596	
Manufacturing		\$752	\$343	\$1,095	
Transportation and warehousing		\$432	\$308	\$740	
Information		\$251	\$293	\$544	
Mining		\$287	\$55	\$342	
Government		\$132	\$161	\$292	
Utilities		\$153	\$118	\$272	
Agriculture		\$14	\$55	\$69	
Total value added contribution	\$5,553	\$8,002	\$7,419	\$20,974	4.0%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-6. The economic contribution of the oil and natural gas industry in Arkansas, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	26,590			26,590	1.5%
Indirect/induced effects on other industries					
Services		13,330	15,000	28,330	
Construction		7,160	260	7,420	
Wholesale and retail trade		2,310	4,100	6,410	
Finance, insurance, real estate, rental and leasing		2,530	3,140	5,670	
Manufacturing		3,340	2,260	5,600	
Transportation and warehousing		3,400	1,310	4,710	
Agriculture		310	1,170	1,480	
Information		400	370	770	
Government		310	270	580	
Utilities		230	120	350	
Mining		130	20	150	
Total employment contribution	26,590	33,440	28,010	88,050	4.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,232			\$1,232	1.2%
Indirect/induced effects on other industries					
Services		\$1,076	\$822	\$1,898	
Manufacturing		\$281	\$155	\$436	
Construction		\$410	\$15	\$424	
Wholesale and retail trade		\$197	\$211	\$407	
Transportation and warehousing		\$197	\$77	\$274	
Finance, insurance, real estate, rental and leasing		\$141	\$121	\$261	
Agriculture		\$17	\$67	\$84	
Information		\$34	\$29	\$63	
Utilities		\$34	\$18	\$53	
Government		\$27	\$24	\$51	
Mining		\$9	\$1	\$11	
Total labor income contribution	\$1,232	\$2,422	\$1,540	\$5,194	5.0%
Value Added (\$ Millions)					
Industry direct contribution	\$4,771			\$4,771	2.7%
Indirect/induced effects on other industries					
Services		\$1,308	\$1,081	\$2,389	
Finance, insurance, real estate, rental and leasing		\$483	\$639	\$1,122	
Manufacturing		\$638	\$296	\$934	
Wholesale and retail trade		\$372	\$445	\$817	
Construction		\$565	\$20	\$585	
Transportation and warehousing		\$287	\$115	\$402	
Utilities		\$132	\$71	\$204	
Information		\$69	\$63	\$132	
Agriculture		\$21	\$86	\$107	
Government		\$36	\$31	\$67	
Mining		\$24	\$4	\$27	
Total value added contribution	\$4,771	\$3,934	\$2,851	\$11,557	6.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-7. The economic contribution of the oil and natural gas industry in California, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	173,810			173,810	0.7%
Indirect/induced effects on other industries					
Services		135,410	244,550	379,960	
Construction		82,230	3,200	85,430	
Finance, insurance, real estate, rental and leasing		22,880	53,760	76,640	
Wholesale and retail trade		22,860	52,630	75,490	
Transportation and warehousing		45,060	24,540	69,600	
Manufacturing		25,720	17,140	42,860	
Information		8,720	11,890	20,610	
Agriculture		2,420	8,690	11,110	
Government		4,640	5,610	10,250	
Utilities		690	530	1,220	
Mining		600	80	680	
Total employment contribution	173,810	351,220	422,610	947,650	3.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$24,717			\$24,717	1.1%
Indirect/induced effects on other industries					
Services		\$16,304	\$17,743	\$34,047	
Construction		\$7,093	\$273	\$7,366	
Finance, insurance, real estate, rental and leasing		\$2,332	\$4,364	\$6,696	
Wholesale and retail trade		\$2,451	\$3,559	\$6,010	
Information		\$2,603	\$3,316	\$5,918	
Manufacturing		\$3,249	\$1,889	\$5,138	
Transportation and warehousing		\$3,042	\$1,655	\$4,697	
Government		\$633	\$773	\$1,406	
Agriculture		\$151	\$562	\$713	
Utilities		\$178	\$133	\$311	
Mining		\$69	\$10	\$79	
Total labor income contribution	\$24,717	\$38,105	\$34,277	\$97,099	4.3%
Value Added (\$ Millions)					
Industry direct contribution	\$119,441			\$119,441	3.1%
Indirect/induced effects on other industries					
Services		\$19,971	\$22,870	\$42,841	
Finance, insurance, real estate, rental and leasing		\$6,036	\$14,554	\$20,589	
Information		\$5,953	\$7,718	\$13,671	
Wholesale and retail trade		\$4,144	\$7,459	\$11,604	
Construction		\$10,784	\$416	\$11,200	
Manufacturing		\$5,386	\$3,967	\$9,353	
Transportation and warehousing		\$3,844	\$2,421	\$6,265	
Government		\$586	\$716	\$1,301	
Utilities		\$646	\$493	\$1,139	
Agriculture		\$241	\$893	\$1,134	
Mining		\$180	\$26	\$206	
Total value added contribution	\$119,441	\$57,770	\$61,533	\$238,744	6.2%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-8. The economic contribution of the oil and natural gas industry in Colorado, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	62,370			62,370	1.5%
Indirect/induced effects on other industries					
Services		46,960	94,020	140,980	
Finance, insurance, real estate, rental and leasing		9,170	29,160	38,330	
Wholesale and retail trade		5,790	24,390	30,180	
Construction		17,650	1,420	19,070	
Transportation and warehousing		7,130	8,070	15,200	
Manufacturing		3,940	2,980	6,920	
Information		1,830	4,570	6,400	
Agriculture		230	2,020	2,250	
Government		770	1,270	2,040	
Utilities		420	360	780	
Mining		<u>380</u>	<u>70</u>	450	
Total employment contribution	62,370	94,270	168,330	324,970	7.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$21,776			\$21,776	6.5%
Indirect/induced effects on other industries					
Services		\$5,391	\$5,890	\$11,281	
Finance, insurance, real estate, rental and leasing		\$722	\$1,760	\$2,482	
Wholesale and retail trade		\$635	\$1,457	\$2,092	
Construction		\$1,440	\$110	\$1,550	
Information		\$282	\$653	\$935	
Transportation and warehousing		\$366	\$451	\$818	
Manufacturing		\$393	\$254	\$646	
Government		\$89	\$143	\$232	
Utilities		\$105	\$86	\$191	
Agriculture		\$5	\$36	\$41	
Mining		<u>\$31</u>	<u>\$6</u>	\$37	
Total labor income contribution	\$21,776	\$9,458	\$10,846	\$42,081	12.6%
Value Added (\$ Millions)					
Industry direct contribution	\$25,409			\$25,409	4.8%
Indirect/induced effects on other industries					
Services		\$6,132	\$7,594	\$13,726	
Finance, insurance, real estate, rental and leasing		\$1,664	\$5,835	\$7,499	
Wholesale and retail trade		\$1,016	\$2,642	\$3,658	
Construction		\$2,148	\$164	\$2,313	
Information		\$533	\$1,300	\$1,833	
Transportation and warehousing		\$499	\$679	\$1,178	
Manufacturing		\$541	\$429	\$970	
Utilities		\$264	\$221	\$485	
Government		\$81	\$133	\$214	
Mining		\$108	\$22	\$130	
Agriculture		<u>\$15</u>	<u>\$111</u>	\$126	
Total value added contribution	\$25,409	\$13,002	\$19,130	\$57,540	10.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-9. The economic contribution of the oil and natural gas industry in Connecticut, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	13,580			13,580	0.6%
Indirect/induced effects on other industries					
Services		8,060	20,190	28,250	
Finance, insurance, real estate, rental and leasing		1,800	5,850	7,650	
Construction		7,220	280	7,500	
Wholesale and retail trade		1,670	4,280	5,950	
Manufacturing		3,970	1,250	5,220	
Transportation and warehousing		2,500	1,710	4,210	
Information		540	740	1,280	
Government		320	450	770	
Agriculture		60	230	290	
Utilities		80	80	160	
Mining		50	10	60	
Total employment contribution	13,580	26,270	35,050	74,900	3.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,172			\$2,172	1.1%
Indirect/induced effects on other industries					
Services		\$938	\$1,592	\$2,530	
Finance, insurance, real estate, rental and leasing		\$243	\$600	\$843	
Construction		\$620	\$24	\$644	
Manufacturing		\$495	\$137	\$631	
Wholesale and retail trade		\$215	\$312	\$527	
Transportation and warehousing		\$146	\$98	\$244	
Information		\$88	\$122	\$209	
Government		\$33	\$47	\$80	
Utilities		\$27	\$23	\$50	
Agriculture		\$2	\$7	\$9	
Mining		\$2	\$0	\$2	
Total labor income contribution	\$2,172	\$2,808	\$2,963	\$7,944	3.9%
Value Added (\$ Millions)					
Industry direct contribution	\$3,983			\$3,983	1.2%
Indirect/induced effects on other industries					
Services		\$1,105	\$1,985	\$3,090	
Finance, insurance, real estate, rental and leasing		\$642	\$1,702	\$2,344	
Manufacturing		\$759	\$261	\$1,020	
Wholesale and retail trade		\$348	\$603	\$951	
Construction		\$690	\$27	\$717	
Information		\$194	\$306	\$500	
Transportation and warehousing		\$165	\$124	\$289	
Utilities		\$84	\$77	\$161	
Government		\$37	\$54	\$90	
Agriculture		\$4	\$10	\$13	
Mining		\$9	\$1	\$11	
Total value added contribution	\$3,983	\$4,037	\$5,149	\$13,169	3.8%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-10. The economic contribution of the oil and natural gas industry in Delaware, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	5,740			5,740	0.9%
Indirect/induced effects on other industries					
Services		2,660	4,960	7,620	
Construction		2,700	70	2,770	
Transportation and warehousing		1,740	580	2,320	
Finance, insurance, real estate, rental and leasing		640	1,660	2,300	
Wholesale and retail trade		560	1,200	1,760	
Manufacturing		440	400	840	
Information		90	110	200	
Government		70	60	130	
Agriculture		20	80	100	
Utilities		60	30	90	
Mining		10	0	10	
Total employment contribution	5,740	8,990	9,160	23,900	3.6%
Labor Income** (\$ Millions)					
Industry direct contribution	\$457			\$457	1.0%
Indirect/induced effects on other industries					
Services		\$96	\$302	\$399	
Finance, insurance, real estate, rental and leasing		\$161	\$189	\$350	
Construction		\$213	\$6	\$219	
Wholesale and retail trade		\$52	\$71	\$124	
Transportation and warehousing		\$91	\$28	\$119	
Manufacturing		\$52	\$31	\$83	
Information		\$11	\$12	\$23	
Agriculture		\$4	\$18	\$21	
Utilities		\$13	\$7	\$20	
Government		\$7	\$6	\$13	
Mining		\$1	\$0	\$1	
Total labor income contribution	\$457	\$700	\$670	\$1,828	3.8%
Value Added (\$ Millions)					
Industry direct contribution	\$1,117			\$1,117	1.1%
Indirect/induced effects on other industries					
Finance, insurance, real estate, rental and leasing		\$430	\$660	\$1,090	
Services		\$320	\$448	\$768	
Construction		\$302	\$8	\$310	
Manufacturing		\$167	\$83	\$250	
Wholesale and retail trade		\$81	\$116	\$197	
Transportation and warehousing		\$116	\$36	\$152	
Utilities		\$38	\$20	\$58	
Information		\$20	\$23	\$43	
Agriculture		\$3	\$14	\$17	
Government		\$5	\$4	\$9	
Mining		\$1	\$0	\$1	
Total value added contribution	\$1,117	\$1,482	\$1,413	\$4,012	4.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-11. The economic contribution of the oil and natural gas industry in the District of Columbia, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	2,210			2,210	0.2%
Indirect/induced effects on other industries					
Services		3,690	7,310	11,000	
Finance, insurance, real estate, rental and leasing		390	880	1,270	
Construction		1,110	30	1,140	
Wholesale and retail trade		240	450	690	
Information		290	390	680	
Government		210	250	460	
Transportation and warehousing		190	160	350	
Manufacturing		20	30	50	
Utilities		10	10	20	
Agriculture		0	0	0	
Mining		0	0	0	
Total employment contribution	2,210	6,160	9,530	17,900	2.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$431			\$431	0.3%
Indirect/induced effects on other industries					
Services		\$634	\$908	\$1,543	
Information		\$68	\$89	\$158	
Finance, insurance, real estate, rental and leasing		\$48	\$73	\$121	
Construction		\$91	\$3	\$94	
Wholesale and retail trade		\$48	\$39	\$87	
Government		\$36	\$43	\$78	
Transportation and warehousing		\$12	\$7	\$20	
Utilities		\$6	\$5	\$10	
Manufacturing		\$3	\$3	\$6	
Mining		\$0	\$0	\$0	
Agriculture		\$0	\$0	\$0	
Total labor income contribution	\$431	\$947	\$1,170	\$2,547	2.1%
Value Added (\$ Millions)					
Industry direct contribution	\$1,073			\$1,073	0.6%
Indirect/induced effects on other industries					
Services		\$762	\$1,154	\$1,916	
Finance, insurance, real estate, rental and leasing		\$147	\$296	\$443	
Information		\$144	\$196	\$340	
Construction		\$138	\$4	\$142	
Wholesale and retail trade		\$32	\$62	\$95	
Government		\$27	\$32	\$59	
Utilities		\$17	\$15	\$31	
Transportation and warehousing		\$15	\$10	\$25	
Manufacturing		\$4	\$6	\$10	
Mining		\$0	\$0	\$0	
Agriculture		\$0	\$0	\$0	
Total value added contribution	\$1,073	\$1,287	\$1,774	\$4,133	2.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-12. The economic contribution of the oil and natural gas industry in Florida, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	74,490			74,490	0.5%
Indirect/induced effects on other industries					
Services		71,370	116,180	187,550	
Construction		54,070	1,790	55,860	
Finance, insurance, real estate, rental and leasing		13,820	32,390	46,210	
Wholesale and retail trade		11,330	27,240	38,570	
Transportation and warehousing		19,460	12,870	32,330	
Manufacturing		9,800	5,370	15,170	
Information		3,430	4,110	7,540	
Agriculture		660	2,240	2,900	
Government		1,230	1,340	2,570	
Utilities		600	440	1,040	
Mining		370	40	410	
Total employment contribution	74,490	186,140	204,010	464,640	3.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$5,358			\$5,358	0.6%
Indirect/induced effects on other industries					
Services		\$5,928	\$7,138	\$13,066	
Construction		\$3,457	\$113	\$3,570	
Wholesale and retail trade		\$1,129	\$1,690	\$2,819	
Finance, insurance, real estate, rental and leasing		\$986	\$1,683	\$2,668	
Transportation and warehousing		\$946	\$661	\$1,607	
Manufacturing		\$939	\$445	\$1,385	
Information		\$409	\$475	\$884	
Utilities		\$208	\$144	\$352	
Government		\$129	\$143	\$272	
Agriculture		\$31	\$94	\$125	
Mining		\$29	\$3	\$32	
Total labor income contribution	\$5,358	\$14,190	\$12,590	\$32,138	3.5%
Value Added (\$ Millions)					
Industry direct contribution	\$21,439			\$21,439	1.3%
Indirect/induced effects on other industries					
Services		\$7,280	\$9,282	\$16,562	
Finance, insurance, real estate, rental and leasing		\$2,544	\$6,550	\$9,094	
Construction		\$5,709	\$188	\$5,897	
Wholesale and retail trade		\$1,960	\$3,262	\$5,222	
Manufacturing		\$1,500	\$806	\$2,306	
Transportation and warehousing		\$1,237	\$1,044	\$2,281	
Information		\$754	\$953	\$1,707	
Utilities		\$581	\$424	\$1,005	
Government		\$148	\$162	\$309	
Agriculture		\$57	\$183	\$239	
Mining		\$87	\$11	\$98	
Total value added contribution	\$21,439	\$21,856	\$22,865	\$66,160	4.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-13. The economic contribution of the oil and natural gas industry in Georgia, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	48,540			48,540	0.7%
Indirect/induced effects on other industries					
Services		32,930	52,670	85,600	
Construction		23,650	750	24,400	
Wholesale and retail trade		6,590	13,430	20,020	
Transportation and warehousing		11,670	6,650	18,320	
Finance, insurance, real estate, rental and leasing		5,830	11,520	17,350	
Manufacturing		8,190	5,650	13,840	
Information		2,000	2,400	4,400	
Agriculture		490	1,420	1,910	
Government		570	670	1,240	
Utilities		370	300	670	
Mining		320	50	370	
Total employment contribution	48,540	92,600	95,510	236,650	3.3%
Labor Income** (\$ Millions)					
Industry direct contribution	\$3,143			\$3,143	0.7%
Indirect/induced effects on other industries					
Services		\$2,782	\$3,181	\$5,963	
Construction		\$1,647	\$52	\$1,698	
Wholesale and retail trade		\$674	\$791	\$1,465	
Finance, insurance, real estate, rental and leasing		\$485	\$725	\$1,210	
Manufacturing		\$738	\$443	\$1,181	
Transportation and warehousing		\$588	\$379	\$967	
Information		\$283	\$333	\$615	
Utilities		\$80	\$63	\$142	
Agriculture		\$28	\$93	\$121	
Government		\$51	\$61	\$111	
Mining		\$34	\$5	\$39	
Total labor income contribution	\$3,143	\$7,388	\$6,125	\$16,655	3.6%
Value Added (\$ Millions)					
Industry direct contribution	\$13,491			\$13,491	1.6%
Indirect/induced effects on other industries					
Services		\$3,377	\$4,056	\$7,433	
Finance, insurance, real estate, rental and leasing		\$1,696	\$3,014	\$4,710	
Construction		\$2,774	\$88	\$2,861	
Wholesale and retail trade		\$1,148	\$1,525	\$2,673	
Manufacturing		\$1,419	\$958	\$2,376	
Information		\$597	\$780	\$1,377	
Transportation and warehousing		\$786	\$581	\$1,367	
Utilities		\$234	\$189	\$423	
Agriculture		\$27	\$88	\$115	
Mining		\$93	\$15	\$108	
Government		\$39	\$47	\$86	
Total value added contribution	\$13,491	\$12,191	\$11,340	\$37,022	4.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-14. The economic contribution of the oil and natural gas industry in Hawaii, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	4,520			4,520	0.5%
Indirect/induced effects on other industries					
Services		3,610	7,310	10,920	
Construction		3,160	100	3,260	
Finance, insurance, real estate, rental and leasing		760	1,340	2,100	
Wholesale and retail trade		510	1,570	2,080	
Transportation and warehousing		870	690	1,560	
Manufacturing		210	290	500	
Agriculture		70	310	380	
Information		130	180	310	
Government		150	160	310	
Utilities		50	50	100	
Mining		20	0	20	
Total employment contribution	4,520	9,540	11,990	26,050	2.8%
Labor Income** (\$ Millions)					
Industry direct contribution	\$448			\$448	0.7%
Indirect/induced effects on other industries					
Services		\$283	\$502	\$785	
Construction		\$282	\$9	\$291	
Finance, insurance, real estate, rental and leasing		\$53	\$82	\$135	
Wholesale and retail trade		\$38	\$84	\$122	
Transportation and warehousing		\$51	\$54	\$105	
Information		\$17	\$21	\$38	
Manufacturing		\$18	\$17	\$35	
Government		\$16	\$17	\$33	
Utilities		\$9	\$9	\$18	
Agriculture		\$2	\$7	\$9	
Mining		\$2	\$0	\$2	
Total labor income contribution	\$448	\$771	\$802	\$2,020	3.1%
Value Added (\$ Millions)					
Industry direct contribution	\$1,973			\$1,973	1.8%
Indirect/induced effects on other industries					
Services		\$367	\$713	\$1,079	
Finance, insurance, real estate, rental and leasing		\$194	\$408	\$602	
Construction		\$434	\$13	\$447	
Wholesale and retail trade		\$61	\$169	\$230	
Transportation and warehousing		\$79	\$103	\$183	
Utilities		\$37	\$36	\$73	
Information		\$29	\$41	\$70	
Manufacturing		\$25	\$25	\$51	
Government		\$14	\$15	\$29	
Agriculture		\$3	\$13	\$16	
Mining		\$5	\$1	\$5	
Total value added contribution	\$1,973	\$1,248	\$1,536	\$4,757	4.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-15. The economic contribution of the oil and natural gas industry in Idaho, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	11,130			11,130	0.9%
Indirect/induced effects on other industries					
Services		4,870	8,550	13,420	
Construction		5,630	190	5,820	
Wholesale and retail trade		1,010	2,360	3,370	
Finance, insurance, real estate, rental and leasing		1,010	2,100	3,110	
Manufacturing		1,420	1,050	2,470	
Transportation and warehousing		1,080	720	1,800	
Agriculture		230	950	1,180	
Information		230	250	480	
Government		110	140	250	
Mining		150	30	180	
Utilities		60	50	110	
Total employment contribution	11,130	15,810	16,390	43,340	3.6%
Labor Income** (\$ Millions)					
Industry direct contribution	\$624			\$624	0.8%
Indirect/induced effects on other industries					
Services		\$369	\$473	\$842	
Construction		\$384	\$12	\$397	
Wholesale and retail trade		\$99	\$144	\$242	
Manufacturing		\$129	\$89	\$218	
Finance, insurance, real estate, rental and leasing		\$63	\$103	\$166	
Agriculture		\$17	\$79	\$97	
Transportation and warehousing		\$53	\$37	\$90	
Information		\$22	\$23	\$46	
Government		\$10	\$12	\$23	
Utilities		\$13	\$2	\$16	
Mining		\$8	\$7	\$15	
Total labor income contribution	\$624	\$1,169	\$981	\$2,775	3.8%
Value Added (\$ Millions)					
Industry direct contribution	\$1,816			\$1,816	1.5%
Indirect/induced effects on other industries					
Services		\$455	\$604	\$1,059	
Finance, insurance, real estate, rental and leasing		\$183	\$440	\$623	
Construction		\$516	\$17	\$532	
Wholesale and retail trade		\$165	\$242	\$407	
Manufacturing		\$189	\$155	\$344	
Transportation and warehousing		\$79	\$54	\$133	
Agriculture		\$21	\$95	\$116	
Information		\$43	\$48	\$91	
Utilities		\$32	\$25	\$57	
Mining		\$45	\$9	\$54	
Government		\$12	\$15	\$27	
Total value added contribution	\$1,816	\$1,740	\$1,705	\$5,260	4.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-16. The economic contribution of the oil and natural gas industry in Illinois, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	63,010			63,010	0.8%
Indirect/induced effects on other industries					
Services		47,460	83,650	131,110	
Wholesale and retail trade		9,570	19,910	29,480	
Finance, insurance, real estate, rental and leasing		8,940	20,280	29,220	
Transportation and warehousing		16,420	9,240	25,660	
Construction		23,790	910	24,700	
Manufacturing		14,370	7,110	21,480	
Information		2,150	2,960	5,110	
Government		960	1,100	2,060	
Agriculture		380	1,610	1,990	
Utilities		650	400	1,050	
Mining		370	50	420	
Total employment contribution	63,010	125,060	147,220	335,290	4.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$13,088			\$13,088	2.0%
Indirect/induced effects on other industries					
Services		\$5,040	\$6,096	\$11,137	
Wholesale and retail trade		\$1,126	\$1,386	\$2,512	
Manufacturing		\$1,574	\$768	\$2,342	
Finance, insurance, real estate, rental and leasing		\$848	\$1,430	\$2,277	
Construction		\$1,866	\$75	\$1,941	
Transportation and warehousing		\$1,040	\$619	\$1,659	
Information		\$366	\$490	\$856	
Utilities		\$218	\$138	\$356	
Government		\$110	\$135	\$244	
Agriculture		\$42	\$198	\$240	
Mining		\$42	\$6	\$49	
Total labor income contribution	\$13,088	\$12,273	\$11,340	\$36,701	5.7%
Value Added (\$ Millions)					
Industry direct contribution	\$25,859			\$25,859	2.4%
Indirect/induced effects on other industries					
Services		\$5,948	\$7,904	\$13,852	
Finance, insurance, real estate, rental and leasing		\$2,398	\$5,171	\$7,569	
Wholesale and retail trade		\$1,898	\$2,736	\$4,634	
Manufacturing		\$2,658	\$1,625	\$4,284	
Construction		\$2,853	\$114	\$2,967	
Transportation and warehousing		\$1,408	\$922	\$2,330	
Information		\$676	\$983	\$1,659	
Utilities		\$557	\$359	\$916	
Agriculture		\$62	\$255	\$318	
Government		\$73	\$90	\$163	
Mining		\$110	\$16	\$126	
Total value added contribution	\$25,859	\$18,641	\$20,176	\$64,676	5.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-17. The economic contribution of the oil and natural gas industry in Indiana, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	38,150			38,150	0.9%
Indirect/induced effects on other industries					
Services		20,760	34,320	55,080	
Manufacturing		12,040	6,000	18,040	
Construction		15,700	490	16,190	
Wholesale and retail trade		4,660	8,700	13,360	
Transportation and warehousing		9,290	3,690	12,980	
Finance, insurance, real estate, rental and leasing		3,680	6,280	9,960	
Agriculture		270	1,250	1,520	
Information		710	790	1,500	
Government		490	440	930	
Utilities		350	210	560	
Mining		290	40	330	
Total employment contribution	38,150	68,250	62,230	168,620	4.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,758			\$2,758	1.0%
Indirect/induced effects on other industries					
Services		\$1,617	\$2,055	\$3,672	
Manufacturing		\$1,200	\$583	\$1,783	
Construction		\$1,186	\$37	\$1,223	
Finance, insurance, real estate, rental and leasing		\$368	\$608	\$975	
Wholesale and retail trade		\$442	\$484	\$926	
Transportation and warehousing		\$558	\$213	\$771	
Information		\$65	\$69	\$135	
Agriculture		\$21	\$99	\$120	
Utilities		\$58	\$35	\$92	
Government		\$46	\$42	\$89	
Mining		\$29	\$5	\$34	
Total labor income contribution	\$2,758	\$5,591	\$4,229	\$12,578	4.3%
Value Added (\$ Millions)					
Industry direct contribution	\$15,177			\$15,177	3.0%
Indirect/induced effects on other industries					
Services		\$1,983	\$2,699	\$4,682	
Manufacturing		\$2,245	\$1,378	\$3,623	
Finance, insurance, real estate, rental and leasing		\$873	\$1,728	\$2,601	
Construction		\$1,752	\$54	\$1,807	
Wholesale and retail trade		\$725	\$910	\$1,635	
Transportation and warehousing		\$762	\$291	\$1,053	
Utilities		\$209	\$127	\$336	
Information		\$118	\$141	\$259	
Agriculture		\$36	\$162	\$198	
Mining		\$98	\$16	\$113	
Government		\$49	\$44	\$93	
Total value added contribution	\$15,177	\$8,850	\$7,550	\$31,577	6.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-18. The economic contribution of the oil and natural gas industry in Iowa, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	29,030			29,030	1.4%
Indirect/induced effects on other industries					
Services		7,710	15,280	22,990	
Manufacturing		5,210	2,720	7,930	
Construction		7,650	260	7,910	
Wholesale and retail trade		1,910	4,640	6,550	
Finance, insurance, real estate, rental and leasing		2,020	3,980	6,000	
Transportation and warehousing		2,920	1,360	4,280	
Agriculture		310	1,940	2,250	
Information		380	460	840	
Government		260	270	530	
Utilities		130	100	230	
Mining		110	20	130	
Total employment contribution	29,030	28,600	31,010	88,640	4.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$3,891			\$3,891	2.8%
Indirect/induced effects on other industries					
Services		\$591	\$1,182	\$1,773	
Manufacturing		\$581	\$258	\$839	
Construction		\$533	\$24	\$556	
Wholesale and retail trade		\$179	\$351	\$530	
Finance, insurance, real estate, rental and leasing		\$168	\$324	\$493	
Transportation and warehousing		\$177	\$101	\$278	
Agriculture		\$32	\$238	\$271	
Information		\$37	\$55	\$92	
Government		\$23	\$33	\$56	
Utilities		\$22	\$22	\$44	
Mining		\$10	\$2	\$12	
Total labor income contribution	\$3,891	\$2,353	\$2,590	\$8,834	6.3%
Value Added (\$ Millions)					
Industry direct contribution	\$3,150			\$3,150	1.2%
Indirect/induced effects on other industries					
Services		\$725	\$1,517	\$2,242	
Finance, insurance, real estate, rental and leasing		\$592	\$1,427	\$2,019	
Manufacturing		\$1,119	\$480	\$1,599	
Wholesale and retail trade		\$296	\$626	\$922	
Construction		\$756	\$34	\$790	
Agriculture		\$53	\$343	\$396	
Transportation and warehousing		\$248	\$146	\$394	
Information		\$85	\$140	\$225	
Utilities		\$102	\$100	\$202	
Government		\$19	\$27	\$46	
Mining		\$23	\$4	\$27	
Total value added contribution	\$3,150	\$4,018	\$4,845	\$12,013	4.7%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-19. The economic contribution of the oil and natural gas industry in Kansas, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	52,660			52,660	2.6%
Indirect/induced effects on other industries					
Services		26,600	24,640	51,240	
Finance, insurance, real estate, rental and leasing		5,850	6,400	12,250	
Wholesale and retail trade		4,520	7,000	11,520	
Construction		7,950	360	8,310	
Transportation and warehousing		6,000	2,000	8,000	
Manufacturing		3,940	1,940	5,880	
Agriculture		200	1,420	1,620	
Information		680	720	1,400	
Government		590	370	960	
Utilities		410	120	530	
Mining		200	20	220	
Total employment contribution	52,660	56,940	44,990	154,590	7.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$3,427			\$3,427	2.5%
Indirect/induced effects on other industries					
Services		\$2,400	\$1,427	\$3,827	
Finance, insurance, real estate, rental and leasing		\$580	\$358	\$938	
Wholesale and retail trade		\$415	\$359	\$773	
Construction		\$539	\$24	\$563	
Manufacturing		\$351	\$159	\$510	
Transportation and warehousing		\$379	\$116	\$495	
Information		\$64	\$58	\$122	
Utilities		\$70	\$22	\$91	
Government		\$53	\$34	\$87	
Agriculture		\$6	\$35	\$41	
Mining		\$12	\$1	\$13	
Total labor income contribution	\$3,427	\$4,868	\$2,594	\$10,889	8.0%
Value Added (\$ Millions)					
Industry direct contribution	\$9,709			\$9,709	4.3%
Indirect/induced effects on other industries					
Services		\$2,820	\$1,827	\$4,647	
Finance, insurance, real estate, rental and leasing		\$1,379	\$1,264	\$2,643	
Wholesale and retail trade		\$693	\$703	\$1,395	
Manufacturing		\$586	\$318	\$904	
Construction		\$774	\$35	\$809	
Transportation and warehousing		\$550	\$168	\$718	
Information		\$173	\$267	\$439	
Utilities		\$251	\$78	\$329	
Agriculture		\$30	\$169	\$198	
Government		\$52	\$33	\$85	
Mining		\$32	\$4	\$36	
Total value added contribution	\$9,709	\$7,339	\$4,865	\$21,913	9.6%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-20. The economic contribution of the oil and natural gas industry in Kentucky, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	29,510			29,510	1.1%
Indirect/induced effects on other industries					
Services		14,140	20,310	34,450	
Construction		9,750	330	10,080	
Wholesale and retail trade		2,800	5,500	8,300	
Manufacturing		5,340	2,810	8,150	
Transportation and warehousing		5,610	2,460	8,070	
Finance, insurance, real estate, rental and leasing		2,940	4,060	7,000	
Agriculture		350	1,780	2,130	
Government		590	520	1,110	
Information		540	550	1,090	
Mining		340	60	400	
Utilities		190	110	300	
Total employment contribution	29,510	42,600	38,480	110,590	4.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,731			\$1,731	1.0%
Indirect/induced effects on other industries					
Services		\$1,012	\$1,206	\$2,217	
Manufacturing		\$540	\$254	\$794	
Construction		\$642	\$21	\$664	
Transportation and warehousing		\$379	\$176	\$554	
Wholesale and retail trade		\$245	\$292	\$538	
Finance, insurance, real estate, rental and leasing		\$221	\$249	\$470	
Government		\$66	\$60	\$126	
Information		\$49	\$48	\$96	
Agriculture		\$12	\$58	\$69	
Utilities		\$30	\$17	\$46	
Mining		\$34	\$6	\$39	
Total labor income contribution	\$1,731	\$3,228	\$2,386	\$7,345	4.4%
Value Added (\$ Millions)					
Industry direct contribution	\$7,555			\$7,555	2.7%
Indirect/induced effects on other industries					
Services		\$1,208	\$1,519	\$2,727	
Finance, insurance, real estate, rental and leasing		\$609	\$943	\$1,552	
Manufacturing		\$856	\$510	\$1,366	
Wholesale and retail trade		\$442	\$559	\$1,001	
Construction		\$862	\$29	\$890	
Transportation and warehousing		\$462	\$226	\$688	
Utilities		\$129	\$73	\$202	
Information		\$89	\$100	\$188	
Government		\$87	\$76	\$163	
Mining		\$122	\$22	\$145	
Agriculture		\$19	\$90	\$108	
Total value added contribution	\$7,555	\$4,884	\$4,148	\$16,586	5.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-21. The economic contribution of the oil and natural gas industry in Louisiana, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	100,480			100,480	3.5%
Indirect/induced effects on other industries					
Services		42,730	68,380	111,110	
Wholesale and retail trade		9,700	18,500	28,200	
Finance, insurance, real estate, rental and leasing		10,930	15,020	25,950	
Construction		20,470	1,020	21,490	
Transportation and warehousing		14,170	4,280	18,450	
Manufacturing		6,720	1,910	8,630	
Information		1,130	1,420	2,550	
Government		1,360	1,160	2,520	
Agriculture		370	1,230	1,600	
Utilities		750	300	1,050	
Mining		260	20	280	
Total employment contribution	100,480	108,600	113,240	322,320	11.4%
Labor Income** (\$ Millions)					
Industry direct contribution	\$12,489			\$12,489	7.3%
Indirect/induced effects on other industries					
Services		\$2,714	\$3,600	\$6,314	
Wholesale and retail trade		\$827	\$877	\$1,703	
Construction		\$1,347	\$67	\$1,414	
Finance, insurance, real estate, rental and leasing		\$673	\$626	\$1,299	
Transportation and warehousing		\$860	\$226	\$1,087	
Manufacturing		\$820	\$173	\$993	
Government		\$117	\$102	\$219	
Information		\$81	\$98	\$179	
Utilities		\$108	\$43	\$151	
Agriculture		\$13	\$36	\$49	
Mining		\$28	\$2	\$31	
Total labor income contribution	\$12,489	\$7,589	\$5,851	\$25,929	15.1%
Value Added (\$ Millions)					
Industry direct contribution	\$40,249			\$40,249	12.8%
Indirect/induced effects on other industries					
Services		\$3,294	\$4,635	\$7,929	
Manufacturing		\$4,609	\$516	\$5,125	
Finance, insurance, real estate, rental and leasing		\$1,951	\$2,844	\$4,795	
Wholesale and retail trade		\$1,513	\$1,757	\$3,270	
Construction		\$1,992	\$99	\$2,091	
Transportation and warehousing		\$1,249	\$353	\$1,601	
Utilities		\$628	\$253	\$882	
Information		\$171	\$227	\$399	
Government		\$154	\$133	\$288	
Mining		\$82	\$7	\$89	
Agriculture		\$17	\$59	\$76	
Total value added contribution	\$40,249	\$15,660	\$10,883	\$66,793	21.2%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-22. The economic contribution of the oil and natural gas industry in Maine, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	11,630			11,630	1.3%
Indirect/induced effects on other industries					
Services		3,540	7,090	10,630	
Construction		3,750	130	3,880	
Wholesale and retail trade		630	1,730	2,360	
Finance, insurance, real estate, rental and leasing		720	1,300	2,020	
Manufacturing		1,100	680	1,780	
Transportation and warehousing		930	400	1,330	
Agriculture		140	400	540	
Information		200	210	410	
Government		150	150	300	
Utilities		50	30	80	
Mining		60	0	60	
Total employment contribution	11,630	11,270	12,130	35,040	3.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$562			\$562	1.0%
Indirect/induced effects on other industries					
Services		\$293	\$462	\$755	
Construction		\$235	\$8	\$243	
Manufacturing		\$94	\$55	\$149	
Wholesale and retail trade		\$53	\$94	\$148	
Finance, insurance, real estate, rental and leasing		\$57	\$88	\$144	
Transportation and warehousing		\$54	\$22	\$75	
Information		\$19	\$19	\$38	
Government		\$15	\$16	\$31	
Agriculture		\$5	\$17	\$22	
Utilities		\$9	\$5	\$14	
Mining		\$3	\$0	\$3	
Total labor income contribution	\$562	\$837	\$787	\$2,186	3.8%
Value Added (\$ Millions)					
Industry direct contribution	\$1,526			\$1,526	1.6%
Indirect/induced effects on other industries					
Services		\$366	\$609	\$974	
Finance, insurance, real estate, rental and leasing		\$186	\$406	\$592	
Wholesale and retail trade		\$90	\$183	\$273	
Construction		\$241	\$9	\$250	
Manufacturing		\$150	\$99	\$249	
Transportation and warehousing		\$69	\$31	\$100	
Information		\$28	\$31	\$59	
Utilities		\$30	\$19	\$50	
Government		\$17	\$17	\$34	
Agriculture		\$5	\$19	\$24	
Mining		\$7	\$0	\$7	
Total value added contribution	\$1,526	\$1,188	\$1,423	\$4,137	4.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-23. The economic contribution of the oil and natural gas industry in Maryland, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	18,910			18,910	0.5%
Indirect/induced effects on other industries					
Services		15,120	26,670	41,790	
Construction		14,670	420	15,090	
Wholesale and retail trade		2,360	5,790	8,150	
Finance, insurance, real estate, rental and leasing		2,380	5,530	7,910	
Transportation and warehousing		4,820	2,870	7,690	
Manufacturing		2,010	1,430	3,440	
Information		760	900	1,660	
Government		320	380	700	
Agriculture		100	410	510	
Utilities		210	150	360	
Mining		<u>70</u>	<u>10</u>	<u>80</u>	
Total employment contribution	18,910	42,810	44,560	106,270	2.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,277			\$1,277	0.4%
Indirect/induced effects on other industries					
Services		\$1,462	\$1,828	\$3,290	
Construction		\$1,108	\$32	\$1,140	
Wholesale and retail trade		\$243	\$344	\$587	
Finance, insurance, real estate, rental and leasing		\$214	\$352	\$566	
Manufacturing		\$218	\$142	\$360	
Transportation and warehousing		\$227	\$128	\$355	
Information		\$148	\$170	\$318	
Government		\$39	\$48	\$87	
Utilities		\$41	\$29	\$70	
Agriculture		\$5	\$22	\$28	
Mining		<u>\$7</u>	<u>\$1</u>	<u>\$9</u>	
Total labor income contribution	\$1,277	\$3,712	\$3,097	\$8,086	2.6%
Value Added (\$ Millions)					
Industry direct contribution	\$5,717			\$5,717	1.1%
Indirect/induced effects on other industries					
Services		\$1,883	\$2,373	\$4,256	
Finance, insurance, real estate, rental and leasing		\$602	\$1,512	\$2,114	
Construction		\$1,944	\$56	\$2,000	
Wholesale and retail trade		\$388	\$651	\$1,039	
Information		\$288	\$368	\$656	
Manufacturing		\$339	\$305	\$644	
Transportation and warehousing		\$281	\$177	\$458	
Utilities		\$131	\$95	\$226	
Agriculture		\$6	\$25	\$32	
Government		\$14	\$16	\$30	
Mining		<u>\$14</u>	<u>\$2</u>	<u>\$16</u>	
Total value added contribution	\$5,717	\$5,888	\$5,582	\$17,187	3.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-24. The economic contribution of the oil and natural gas industry in Massachusetts, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	25,560			25,560	0.5%
Indirect/induced effects on other industries					
<i>Services</i>		19,320	47,750	67,070	
<i>Construction</i>		16,270	590	16,860	
<i>Finance, insurance, real estate, rental and leasing</i>		3,550	10,840	14,390	
<i>Wholesale and retail trade</i>		3,510	9,640	13,150	
<i>Transportation and warehousing</i>		3,980	3,620	7,600	
<i>Manufacturing</i>		4,830	2,740	7,570	
<i>Information</i>		1,810	2,210	4,020	
<i>Government</i>		390	540	930	
<i>Agriculture</i>		100	400	500	
<i>Utilities</i>		190	180	370	
<i>Mining</i>		<u>80</u>	<u>10</u>	<u>90</u>	
Total employment contribution	25,560	54,020	78,510	158,090	3.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$5,119			\$5,119	1.1%
Indirect/induced effects on other industries					
<i>Services</i>		\$2,656	\$2,946	\$5,602	
<i>Construction</i>		\$1,537	\$41	\$1,578	
<i>Finance, insurance, real estate, rental and leasing</i>		\$473	\$835	\$1,307	
<i>Wholesale and retail trade</i>		\$447	\$476	\$923	
<i>Manufacturing</i>		\$590	\$288	\$879	
<i>Information</i>		\$371	\$350	\$721	
<i>Transportation and warehousing</i>		\$226	\$155	\$382	
<i>Utilities</i>		\$127	\$88	\$215	
<i>Government</i>		\$50	\$53	\$103	
<i>Agriculture</i>		\$3	\$12	\$14	
<i>Mining</i>		<u>\$7</u>	<u>\$1</u>	<u>\$8</u>	
Total labor income contribution	\$5,119	\$6,486	\$5,246	\$16,852	3.6%
Value Added (\$ Millions)					
Industry direct contribution	\$7,652			\$7,652	1.0%
Indirect/induced effects on other industries					
<i>Services</i>		\$3,280	\$3,733	\$7,013	
<i>Finance, insurance, real estate, rental and leasing</i>		\$1,127	\$2,288	\$3,415	
<i>Construction</i>		\$1,931	\$53	\$1,984	
<i>Manufacturing</i>		\$928	\$646	\$1,575	
<i>Wholesale and retail trade</i>		\$582	\$819	\$1,401	
<i>Information</i>		\$695	\$683	\$1,377	
<i>Transportation and warehousing</i>		\$293	\$228	\$520	
<i>Utilities</i>		\$191	\$145	\$336	
<i>Government</i>		\$21	\$22	\$43	
<i>Agriculture</i>		\$5	\$16	\$21	
<i>Mining</i>		<u>\$12</u>	<u>\$2</u>	<u>\$14</u>	
Total value added contribution	\$7,652	\$9,066	\$8,634	\$25,352	3.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-25. The economic contribution of the oil and natural gas industry in Michigan, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	49,530			49,530	0.8%
Indirect/induced effects on other industries					
Services		32,140	53,320	85,460	
Manufacturing		14,550	6,320	20,870	
Construction		18,880	740	19,620	
Wholesale and retail trade		5,810	13,020	18,830	
Finance, insurance, real estate, rental and leasing		5,760	11,710	17,470	
Transportation and warehousing		8,260	4,430	12,690	
Information		1,340	1,590	2,930	
Agriculture		400	1,560	1,960	
Government		760	860	1,620	
Utilities		430	320	750	
Mining		230	40	270	
Total employment contribution	49,530	88,550	93,920	232,000	3.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$6,667			\$6,667	1.6%
Indirect/induced effects on other industries					
Services		\$2,880	\$3,445	\$6,325	
Manufacturing		\$1,472	\$597	\$2,069	
Construction		\$1,372	\$56	\$1,428	
Wholesale and retail trade		\$588	\$800	\$1,388	
Finance, insurance, real estate, rental and leasing		\$460	\$803	\$1,262	
Transportation and warehousing		\$448	\$264	\$712	
Information		\$155	\$182	\$337	
Utilities		\$93	\$71	\$165	
Government		\$69	\$82	\$151	
Agriculture		\$17	\$70	\$87	
Mining		\$21	\$4	\$24	
Total labor income contribution	\$6,667	\$7,575	\$6,373	\$20,615	5.0%
Value Added (\$ Millions)					
Industry direct contribution	\$12,393			\$12,393	1.8%
Indirect/induced effects on other industries					
Services		\$3,466	\$4,263	\$7,729	
Finance, insurance, real estate, rental and leasing		\$1,269	\$2,978	\$4,247	
Manufacturing		\$2,160	\$1,024	\$3,184	
Wholesale and retail trade		\$933	\$1,501	\$2,434	
Construction		\$1,846	\$75	\$1,921	
Transportation and warehousing		\$557	\$364	\$921	
Information		\$298	\$369	\$667	
Utilities		\$295	\$227	\$522	
Government		\$78	\$92	\$170	
Agriculture		\$31	\$137	\$169	
Mining		\$78	\$15	\$93	
Total value added contribution	\$12,393	\$11,012	\$11,046	\$34,451	5.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-26. The economic contribution of the oil and natural gas industry in Minnesota, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	39,700			39,700	1.0%
Indirect/induced effects on other industries					
Services		18,560	35,640	54,200	
Construction		13,170	470	13,640	
Wholesale and retail trade		4,300	8,240	12,540	
Manufacturing		7,870	3,770	11,640	
Finance, insurance, real estate, rental and leasing		3,660	7,750	11,410	
Transportation and warehousing		6,020	2,960	8,980	
Information		990	1,210	2,200	
Agriculture		330	1,680	2,010	
Government		700	670	1,370	
Utilities		390	220	610	
Mining		330	50	380	
Total employment contribution	39,700	56,320	62,680	158,700	4.1%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,723			\$2,723	0.9%
Indirect/induced effects on other industries					
Services		\$1,921	\$2,485	\$4,406	
Manufacturing		\$826	\$371	\$1,197	
Construction		\$1,112	\$39	\$1,151	
Wholesale and retail trade		\$513	\$552	\$1,064	
Finance, insurance, real estate, rental and leasing		\$421	\$623	\$1,044	
Transportation and warehousing		\$370	\$184	\$554	
Information		\$149	\$171	\$320	
Agriculture		\$23	\$137	\$160	
Government		\$67	\$65	\$132	
Utilities		\$75	\$43	\$118	
Mining		\$37	\$6	\$43	
Total labor income contribution	\$2,723	\$5,512	\$4,676	\$12,911	4.4%
Value Added (\$ Millions)					
Industry direct contribution	\$10,056			\$10,056	2.1%
Indirect/induced effects on other industries					
Services		\$2,343	\$3,012	\$5,356	
Finance, insurance, real estate, rental and leasing		\$1,064	\$2,133	\$3,197	
Wholesale and retail trade		\$800	\$974	\$1,774	
Manufacturing		\$1,196	\$573	\$1,769	
Construction		\$1,676	\$60	\$1,736	
Transportation and warehousing		\$519	\$278	\$798	
Information		\$263	\$335	\$597	
Utilities		\$201	\$116	\$318	
Agriculture		\$36	\$195	\$231	
Government		\$67	\$64	\$131	
Mining		\$93	\$16	\$109	
Total value added contribution	\$10,056	\$8,258	\$7,757	\$26,071	5.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-27. The economic contribution of the oil and natural gas industry in Mississippi, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	30,790			30,790	1.8%
Indirect/induced effects on other industries					
Services		13,190	16,040	29,230	
Construction		8,070	280	8,350	
Transportation and warehousing		5,910	1,530	7,440	
Wholesale and retail trade		2,340	4,730	7,070	
Finance, insurance, real estate, rental and leasing		2,890	3,260	6,150	
Manufacturing		3,570	1,570	5,140	
Agriculture		300	970	1,270	
Government		450	300	750	
Information		320	310	630	
Utilities		350	150	500	
Mining		100	10	110	
Total employment contribution	30,790	37,480	29,170	97,440	5.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,826			\$1,826	2.1%
Indirect/induced effects on other industries					
Services		\$710	\$720	\$1,430	
Construction		\$413	\$14	\$427	
Manufacturing		\$313	\$104	\$418	
Transportation and warehousing		\$309	\$77	\$385	
Wholesale and retail trade		\$171	\$202	\$372	
Finance, insurance, real estate, rental and leasing		\$151	\$126	\$277	
Utilities		\$45	\$19	\$64	
Government		\$36	\$25	\$61	
Agriculture		\$14	\$38	\$51	
Information		\$23	\$21	\$44	
Mining		\$6	\$1	\$6	
Total labor income contribution	\$1,826	\$2,190	\$1,347	\$5,362	6.1%
Value Added (\$ Millions)					
Industry direct contribution	\$7,816			\$7,816	5.2%
Indirect/induced effects on other industries					
Services		\$866	\$957	\$1,823	
Finance, insurance, real estate, rental and leasing		\$552	\$700	\$1,251	
Manufacturing		\$625	\$174	\$800	
Wholesale and retail trade		\$307	\$404	\$711	
Transportation and warehousing		\$436	\$106	\$542	
Construction		\$506	\$17	\$524	
Utilities		\$176	\$76	\$252	
Information		\$45	\$49	\$94	
Agriculture		\$20	\$69	\$89	
Government		\$47	\$32	\$79	
Mining		\$26	\$3	\$30	
Total value added contribution	\$7,816	\$3,607	\$2,588	\$14,011	9.3%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-28. The economic contribution of the oil and natural gas industry in Missouri, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	42,650			42,650	1.1%
Indirect/induced effects on other industries					
Services		19,080	31,430	50,510	
Construction		13,500	470	13,970	
Wholesale and retail trade		4,040	8,030	12,070	
Finance, insurance, real estate, rental and leasing		4,280	7,350	11,630	
Manufacturing		6,060	3,310	9,370	
Transportation and warehousing		5,630	2,750	8,380	
Agriculture		360	2,000	2,360	
Information		970	1,040	2,010	
Government		610	630	1,240	
Utilities		240	170	410	
Mining		280	40	320	
Total employment contribution	42,650	55,050	57,200	154,900	3.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,514			\$2,514	1.0%
Indirect/induced effects on other industries					
Services		\$1,720	\$1,972	\$3,692	
Construction		\$975	\$33	\$1,008	
Wholesale and retail trade		\$397	\$453	\$851	
Manufacturing		\$554	\$287	\$841	
Finance, insurance, real estate, rental and leasing		\$336	\$442	\$778	
Transportation and warehousing		\$315	\$152	\$467	
Information		\$120	\$128	\$248	
Government		\$60	\$63	\$123	
Agriculture		\$13	\$71	\$84	
Utilities		\$42	\$28	\$70	
Mining		\$48	\$7	\$55	
Total labor income contribution	\$2,514	\$4,580	\$3,637	\$10,731	4.1%
Value Added (\$ Millions)					
Industry direct contribution	\$6,563			\$6,563	1.5%
Indirect/induced effects on other industries					
Services		\$2,069	\$2,579	\$4,648	
Finance, insurance, real estate, rental and leasing		\$938	\$1,601	\$2,540	
Wholesale and retail trade		\$619	\$843	\$1,462	
Manufacturing		\$856	\$562	\$1,418	
Construction		\$1,352	\$47	\$1,399	
Transportation and warehousing		\$463	\$235	\$698	
Information		\$216	\$235	\$451	
Utilities		\$136	\$93	\$229	
Agriculture		\$28	\$134	\$162	
Government		\$65	\$68	\$133	
Mining		\$71	\$10	\$81	
Total value added contribution	\$6,563	\$6,812	\$6,407	\$19,782	4.6%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-29. The economic contribution of the oil and natural gas industry in Montana, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	16,480			16,480	2.2%
Indirect/induced effects on other industries					
Services		7,180	9,980	17,160	
Construction		4,910	180	5,090	
Wholesale and retail trade		1,500	2,760	4,260	
Finance, insurance, real estate, rental and leasing		1,780	2,450	4,230	
Transportation and warehousing		2,160	580	2,740	
Manufacturing		610	330	940	
Agriculture		150	730	880	
Information		250	270	520	
Mining		300	50	350	
Government		210	130	340	
Utilities		170	60	230	
Total employment contribution	16,480	19,230	17,490	53,200	7.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,262			\$1,262	2.8%
Indirect/induced effects on other industries					
Services		\$523	\$560	\$1,083	
Construction		\$332	\$12	\$344	
Wholesale and retail trade		\$124	\$148	\$272	
Finance, insurance, real estate, rental and leasing		\$114	\$129	\$242	
Transportation and warehousing		\$139	\$35	\$174	
Manufacturing		\$50	\$20	\$70	
Mining		\$42	\$7	\$48	
Information		\$23	\$24	\$47	
Agriculture		\$7	\$33	\$40	
Utilities		\$25	\$9	\$34	
Government		\$18	\$11	\$29	
Total labor income contribution	\$1,262	\$1,395	\$988	\$3,645	8.0%
Value Added (\$ Millions)					
Industry direct contribution	\$4,410			\$4,410	6.0%
Indirect/induced effects on other industries					
Services		\$583	\$691	\$1,274	
Finance, insurance, real estate, rental and leasing		\$309	\$471	\$780	
Construction		\$431	\$16	\$447	
Wholesale and retail trade		\$199	\$222	\$421	
Transportation and warehousing		\$226	\$59	\$285	
Manufacturing		\$94	\$29	\$123	
Mining		\$90	\$15	\$105	
Information		\$46	\$52	\$98	
Utilities		\$69	\$25	\$94	
Agriculture		\$12	\$60	\$72	
Government		\$15	\$9	\$25	
Total value added contribution	\$4,410	\$2,075	\$1,649	\$8,135	11.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-30. The economic contribution of the oil and natural gas industry in Nebraska, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	14,840			14,840	1.1%
Indirect/induced effects on other industries					
Services		7,700	18,360	26,060	
Wholesale and retail trade		1,280	5,350	6,630	
Finance, insurance, real estate, rental and leasing		1,400	4,930	6,330	
Construction		5,190	270	5,460	
Manufacturing		1,920	1,630	3,550	
Transportation and warehousing		1,880	1,420	3,300	
Agriculture		190	1,220	1,410	
Information		390	670	1,060	
Government		260	360	620	
Mining		50	10	60	
Utilities		10	10	20	
Total employment contribution	14,840	20,270	34,200	69,320	5.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$5,507			\$5,507	5.5%
Indirect/induced effects on other industries					
Services		\$654	\$555	\$1,209	
Construction		\$347	\$11	\$357	
Manufacturing		\$199	\$137	\$335	
Wholesale and retail trade		\$128	\$140	\$267	
Finance, insurance, real estate, rental and leasing		\$98	\$124	\$222	
Transportation and warehousing		\$129	\$64	\$193	
Agriculture		\$15	\$108	\$123	
Information		\$41	\$38	\$79	
Government		\$34	\$28	\$62	
Utilities		\$8	\$5	\$13	
Mining		\$4	\$1	\$5	
Total labor income contribution	\$5,507	\$1,656	\$1,210	\$8,373	8.3%
Value Added (\$ Millions)					
Industry direct contribution	\$6,667			\$6,667	3.7%
Indirect/induced effects on other industries					
Services		\$805	\$744	\$1,548	
Finance, insurance, real estate, rental and leasing		\$398	\$648	\$1,046	
Manufacturing		\$391	\$280	\$672	
Construction		\$532	\$16	\$548	
Wholesale and retail trade		\$239	\$271	\$510	
Transportation and warehousing		\$272	\$130	\$402	
Agriculture		\$54	\$279	\$333	
Information		\$91	\$85	\$176	
Government		\$29	\$23	\$51	
Utilities		\$30	\$20	\$50	
Mining		\$8	\$1	\$10	
Total value added contribution	\$6,667	\$2,849	\$2,497	\$12,013	6.6%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-31. The economic contribution of the oil and natural gas industry in Nevada, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	15,030			15,030	0.7%
Indirect/induced effects on other industries					
Services		10,030	18,470	28,500	
Construction		8,000	260	8,260	
Transportation and warehousing		3,690	2,240	5,930	
Finance, insurance, real estate, rental and leasing		1,780	4,090	5,870	
Wholesale and retail trade		1,390	3,650	5,040	
Manufacturing		1,350	880	2,230	
Information		410	490	900	
Mining		670	120	790	
Government		250	290	540	
Agriculture		30	140	170	
Utilities		80	60	140	
Total employment contribution	15,030	27,690	30,680	73,400	3.5%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,268			\$1,268	0.9%
Indirect/induced effects on other industries					
Services		\$858	\$1,222	\$2,080	
Construction		\$679	\$22	\$701	
Wholesale and retail trade		\$135	\$218	\$352	
Finance, insurance, real estate, rental and leasing		\$115	\$195	\$310	
Transportation and warehousing		\$181	\$117	\$299	
Manufacturing		\$123	\$72	\$196	
Information		\$47	\$53	\$100	
Mining		\$83	\$15	\$98	
Government		\$24	\$29	\$53	
Utilities		\$20	\$14	\$33	
Agriculture		\$1	\$6	\$7	
Total labor income contribution	\$1,268	\$2,266	\$1,963	\$5,497	3.9%
Value Added (\$ Millions)					
Industry direct contribution	\$3,636			\$3,636	1.5%
Indirect/induced effects on other industries					
Services		\$1,100	\$1,797	\$2,897	
Construction		\$1,294	\$42	\$1,336	
Finance, insurance, real estate, rental and leasing		\$420	\$887	\$1,307	
Wholesale and retail trade		\$213	\$412	\$625	
Transportation and warehousing		\$236	\$183	\$419	
Manufacturing		\$205	\$124	\$329	
Information		\$103	\$121	\$224	
Mining		\$176	\$33	\$209	
Utilities		\$59	\$43	\$102	
Government		\$32	\$38	\$70	
Agriculture		\$3	\$10	\$13	
Total value added contribution	\$3,636	\$3,842	\$3,691	\$11,169	4.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-32. The economic contribution of the oil and natural gas industry in New Hampshire, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	8,160			8,160	0.9%
Indirect/induced effects on other industries					
Services		4,010	7,040	11,050	
Construction		3,540	120	3,660	
Wholesale and retail trade		900	1,990	2,890	
Manufacturing		1,760	630	2,390	
Finance, insurance, real estate, rental and leasing		690	1,580	2,270	
Transportation and warehousing		790	420	1,210	
Information		250	280	530	
Government		110	130	240	
Agriculture		50	140	190	
Utilities		40	30	70	
Mining		40	10	50	
Total employment contribution	8,160	12,190	12,360	32,710	3.5%
Labor Income** (\$ Millions)					
Industry direct contribution	\$531			\$531	0.7%
Indirect/induced effects on other industries					
Services		\$451	\$546	\$997	
Construction		\$318	\$10	\$328	
Wholesale and retail trade		\$119	\$147	\$266	
Manufacturing		\$186	\$59	\$245	
Finance, insurance, real estate, rental and leasing		\$65	\$126	\$191	
Information		\$38	\$41	\$79	
Transportation and warehousing		\$42	\$22	\$64	
Government		\$11	\$12	\$23	
Utilities		\$8	\$6	\$14	
Agriculture		\$2	\$2	\$3	
Mining		\$3	\$0	\$3	
Total labor income contribution	\$531	\$1,242	\$972	\$2,745	3.6%
Value Added (\$ Millions)					
Industry direct contribution	\$1,463			\$1,463	1.3%
Indirect/induced effects on other industries					
Services		\$530	\$698	\$1,227	
Finance, insurance, real estate, rental and leasing		\$181	\$444	\$626	
Wholesale and retail trade		\$162	\$236	\$398	
Manufacturing		\$231	\$84	\$314	
Construction		\$275	\$9	\$284	
Information		\$70	\$79	\$149	
Transportation and warehousing		\$53	\$31	\$84	
Utilities		\$28	\$20	\$48	
Government		\$10	\$11	\$21	
Mining		\$11	\$2	\$12	
Agriculture		\$3	\$5	\$8	
Total value added contribution	\$1,463	\$1,553	\$1,619	\$4,635	4.1%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-33. The economic contribution of the oil and natural gas industry in New Jersey, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	36,980			36,980	0.6%
Indirect/induced effects on other industries					
Services		27,220	49,770	76,990	
Finance, insurance, real estate, rental and leasing		5,970	14,460	20,430	
Wholesale and retail trade		5,580	12,240	17,820	
Construction		17,140	640	17,780	
Transportation and warehousing		10,320	5,910	16,230	
Manufacturing		4,770	3,620	8,390	
Information		1,560	1,920	3,480	
Government		800	950	1,750	
Agriculture		130	430	560	
Utilities		230	170	400	
Mining		140	10	150	
Total employment contribution	36,980	73,870	90,110	200,970	3.3%
Labor Income** (\$ Millions)					
Industry direct contribution	\$5,719			\$5,719	1.2%
Indirect/induced effects on other industries					
Services		\$3,186	\$3,871	\$7,056	
Wholesale and retail trade		\$645	\$932	\$1,577	
Construction		\$1,503	\$55	\$1,559	
Finance, insurance, real estate, rental and leasing		\$583	\$957	\$1,540	
Manufacturing		\$661	\$397	\$1,058	
Transportation and warehousing		\$585	\$473	\$1,058	
Information		\$262	\$318	\$580	
Government		\$96	\$116	\$212	
Utilities		\$67	\$48	\$115	
Mining		\$36	\$4	\$40	
Agriculture		\$5	\$17	\$22	
Total labor income contribution	\$5,719	\$7,629	\$7,187	\$20,536	4.2%
Value Added (\$ Millions)					
Industry direct contribution	\$18,824			\$18,824	2.3%
Indirect/induced effects on other industries					
Services		\$4,006	\$4,894	\$8,900	
Finance, insurance, real estate, rental and leasing		\$1,359	\$3,242	\$4,601	
Wholesale and retail trade		\$1,025	\$1,728	\$2,753	
Construction		\$1,992	\$74	\$2,066	
Manufacturing		\$983	\$919	\$1,902	
Transportation and warehousing		\$803	\$540	\$1,343	
Information		\$502	\$647	\$1,149	
Utilities		\$212	\$157	\$369	
Government		\$71	\$86	\$158	
Mining		\$48	\$5	\$53	
Agriculture		\$10	\$28	\$38	
Total value added contribution	\$18,824	\$11,011	\$12,320	\$42,155	5.2%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-34. The economic contribution of the oil and natural gas industry in New Mexico, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	42,710			42,710	3.7%
Indirect/induced effects on other industries					
Services		9,860	19,270	29,130	
Wholesale and retail trade		2,190	5,550	7,740	
Finance, insurance, real estate, rental and leasing		3,440	3,620	7,060	
Construction		5,420	340	5,760	
Transportation and warehousing		2,710	1,200	3,910	
Manufacturing		800	510	1,310	
Government		550	560	1,110	
Agriculture		120	710	830	
Information		290	410	700	
Utilities		190	100	290	
Mining		190	30	220	
Total employment contribution	42,710	25,760	32,310	100,780	8.6%
Labor Income** (\$ Millions)					
Industry direct contribution	\$4,640			\$4,640	6.3%
Indirect/induced effects on other industries					
Services		\$697	\$1,022	\$1,719	
Wholesale and retail trade		\$204	\$191	\$396	
Finance, insurance, real estate, rental and leasing		\$147	\$248	\$395	
Construction		\$346	\$21	\$368	
Transportation and warehousing		\$136	\$59	\$194	
Government		\$45	\$47	\$91	
Manufacturing		\$57	\$32	\$89	
Information		\$23	\$31	\$54	
Utilities		\$24	\$13	\$37	
Agriculture		\$4	\$29	\$34	
Mining		\$19	\$3	\$22	
Total labor income contribution	\$4,640	\$1,701	\$1,697	\$8,038	10.8%
Value Added (\$ Millions)					
Industry direct contribution	\$15,906			\$15,906	11.8%
Indirect/induced effects on other industries					
Services		\$929	\$1,346	\$2,276	
Finance, insurance, real estate, rental and leasing		\$576	\$939	\$1,514	
Wholesale and retail trade		\$240	\$415	\$655	
Construction		\$504	\$31	\$535	
Transportation and warehousing		\$222	\$94	\$316	
Manufacturing		\$93	\$66	\$159	
Government		\$69	\$71	\$140	
Information		\$50	\$79	\$129	
Utilities		\$82	\$42	\$124	
Mining		\$102	\$18	\$120	
Agriculture		\$7	\$42	\$49	
Total value added contribution	\$15,906	\$2,873	\$3,143	\$21,922	16.2%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-35. The economic contribution of the oil and natural gas industry in New York, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	55,510			55,510	0.4%
Indirect/induced effects on other industries					
Services		44,810	107,650	152,460	
Finance, insurance, real estate, rental and leasing		9,250	28,490	37,740	
Construction		33,800	1,160	34,960	
Wholesale and retail trade		7,610	19,970	27,580	
Transportation and warehousing		11,070	9,160	20,230	
Manufacturing		8,630	5,470	14,100	
Information		3,630	5,240	8,870	
Government		1,820	2,410	4,230	
Agriculture		350	1,280	1,630	
Utilities		600	540	1,140	
Mining		380	50	430	
Total employment contribution	55,510	121,960	181,430	358,900	2.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$9,348			\$9,348	0.8%
Indirect/induced effects on other industries					
Services		\$5,913	\$9,073	\$14,986	
Finance, insurance, real estate, rental and leasing		\$1,642	\$3,972	\$5,614	
Construction		\$2,807	\$96	\$2,903	
Wholesale and retail trade		\$836	\$1,485	\$2,321	
Information		\$945	\$1,320	\$2,265	
Manufacturing		\$901	\$514	\$1,415	
Transportation and warehousing		\$599	\$559	\$1,159	
Government		\$238	\$320	\$558	
Utilities		\$203	\$171	\$374	
Agriculture		\$18	\$74	\$92	
Mining		\$46	\$7	\$53	
Total labor income contribution	\$9,348	\$14,150	\$17,591	\$41,088	3.3%
Value Added (\$ Millions)					
Industry direct contribution	\$19,665			\$19,665	0.9%
Indirect/induced effects on other industries					
Services		\$7,226	\$11,437	\$18,663	
Finance, insurance, real estate, rental and leasing		\$5,224	\$11,526	\$16,750	
Information		\$2,066	\$3,042	\$5,108	
Construction		\$4,289	\$148	\$4,437	
Wholesale and retail trade		\$1,387	\$2,820	\$4,207	
Manufacturing		\$1,359	\$1,100	\$2,458	
Transportation and warehousing		\$763	\$852	\$1,615	
Utilities		\$418	\$371	\$789	
Government		\$132	\$180	\$313	
Agriculture		\$25	\$90	\$115	
Mining		\$56	\$8	\$63	
Total value added contribution	\$19,665	\$22,944	\$31,572	\$74,181	3.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-36. The economic contribution of the oil and natural gas industry in North Carolina, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	46,120			46,120	0.7%
Indirect/induced effects on other industries					
Services		27,960	47,320	75,280	
Construction		25,050	790	25,840	
Wholesale and retail trade		6,280	12,520	18,800	
Finance, insurance, real estate, rental and leasing		5,210	10,900	16,110	
Manufacturing		9,470	5,890	15,360	
Transportation and warehousing		8,020	4,450	12,470	
Information		1,710	1,930	3,640	
Agriculture		400	1,570	1,970	
Government		560	640	1,200	
Utilities		300	230	530	
Mining		190	30	220	
Total employment contribution	46,120	85,150	86,280	217,560	3.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,592			\$2,592	0.6%
Indirect/induced effects on other industries					
Services		\$2,451	\$2,894	\$5,344	
Construction		\$1,710	\$53	\$1,763	
Manufacturing		\$912	\$483	\$1,395	
Wholesale and retail trade		\$650	\$736	\$1,386	
Finance, insurance, real estate, rental and leasing		\$504	\$877	\$1,381	
Transportation and warehousing		\$390	\$235	\$625	
Information		\$230	\$250	\$480	
Utilities		\$108	\$78	\$186	
Agriculture		\$20	\$96	\$116	
Government		\$50	\$58	\$108	
Mining		\$15	\$2	\$17	
Total labor income contribution	\$2,592	\$7,039	\$5,764	\$15,395	3.3%
Value Added (\$ Millions)					
Industry direct contribution	\$8,662			\$8,662	1.1%
Indirect/induced effects on other industries					
Services		\$3,140	\$3,698	\$6,838	
Finance, insurance, real estate, rental and leasing		\$1,505	\$2,985	\$4,491	
Manufacturing		\$1,665	\$1,278	\$2,943	
Construction		\$2,480	\$78	\$2,558	
Wholesale and retail trade		\$966	\$1,333	\$2,299	
Information		\$413	\$483	\$895	
Transportation and warehousing		\$494	\$332	\$826	
Utilities		\$220	\$169	\$389	
Agriculture		\$26	\$132	\$158	
Government		\$51	\$59	\$110	
Mining		\$67	\$11	\$79	
Total value added contribution	\$8,662	\$11,027	\$10,558	\$30,248	3.8%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-37. The economic contribution of the oil and natural gas industry in North Dakota, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	32,970			32,970	5.5%
Indirect/induced effects on other industries					
Services		7,770	13,290	21,060	
Finance, insurance, real estate, rental and leasing		3,510	3,510	7,020	
Wholesale and retail trade		2,010	4,000	6,010	
Construction		3,210	200	3,410	
Transportation and warehousing		2,040	830	2,870	
Manufacturing		930	340	1,270	
Agriculture		140	650	790	
Information		260	340	600	
Government		290	260	550	
Utilities		220	100	320	
Mining		140	20	160	
Total employment contribution	32,970	20,520	23,550	77,040	12.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$3,730			\$3,730	8.9%
Indirect/induced effects on other industries					
Services		\$589	\$764	\$1,353	
Finance, insurance, real estate, rental and leasing		\$239	\$178	\$416	
Wholesale and retail trade		\$207	\$205	\$412	
Construction		\$246	\$15	\$261	
Transportation and warehousing		\$139	\$55	\$195	
Agriculture		\$22	\$109	\$131	
Manufacturing		\$92	\$30	\$122	
Information		\$24	\$33	\$56	
Utilities		\$37	\$16	\$53	
Government		\$25	\$22	\$47	
Mining		\$16	\$3	\$19	
Total labor income contribution	\$3,730	\$1,636	\$1,429	\$6,794	16.2%
Value Added (\$ Millions)					
Industry direct contribution	\$14,999			\$14,999	19.7%
Indirect/induced effects on other industries					
Services		\$693	\$920	\$1,613	
Finance, insurance, real estate, rental and leasing		\$535	\$559	\$1,094	
Wholesale and retail trade		\$313	\$318	\$631	
Construction		\$372	\$23	\$394	
Transportation and warehousing		\$212	\$81	\$293	
Manufacturing		\$197	\$49	\$246	
Utilities		\$125	\$53	\$178	
Agriculture		\$28	\$123	\$151	
Information		\$50	\$73	\$123	
Mining		\$40	\$7	\$47	
Government		\$11	\$10	\$21	
Total value added contribution	\$14,999	\$2,576	\$2,215	\$19,790	26.0%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-38. The economic contribution of the oil and natural gas industry in Ohio, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	75,980			75,980	1.0%
Indirect/induced effects on other industries					
Services		49,920	73,320	123,240	
Wholesale and retail trade		9,760	17,910	27,670	
Manufacturing		18,780	7,480	26,260	
Construction		25,260	960	26,220	
Finance, insurance, real estate, rental and leasing		8,710	15,020	23,730	
Transportation and warehousing		16,320	7,090	23,410	
Information		1,760	2,040	3,800	
Agriculture		420	1,950	2,370	
Government		1,190	1,120	2,310	
Utilities		490	270	760	
Mining		310	40	350	
Total employment contribution	75,980	132,920	127,200	336,090	4.5%
Labor Income** (\$ Millions)					
Industry direct contribution	\$6,454			\$6,454	1.3%
Indirect/induced effects on other industries					
Services		\$4,490	\$4,595	\$9,085	
Manufacturing		\$1,832	\$656	\$2,488	
Wholesale and retail trade		\$940	\$1,036	\$1,976	
Construction		\$1,865	\$71	\$1,935	
Finance, insurance, real estate, rental and leasing		\$595	\$765	\$1,359	
Transportation and warehousing		\$918	\$394	\$1,312	
Information		\$183	\$207	\$391	
Government		\$124	\$120	\$244	
Utilities		\$108	\$59	\$167	
Agriculture		\$24	\$82	\$106	
Mining		\$41	\$6	\$46	
Total labor income contribution	\$6,454	\$11,119	\$7,991	\$25,564	5.2%
Value Added (\$ Millions)					
Industry direct contribution	\$33,931			\$33,931	3.8%
Indirect/induced effects on other industries					
Services		\$5,301	\$5,716	\$11,016	
Finance, insurance, real estate, rental and leasing		\$2,632	\$4,121	\$6,753	
Manufacturing		\$3,153	\$1,322	\$4,474	
Wholesale and retail trade		\$1,492	\$2,008	\$3,500	
Construction		\$2,549	\$97	\$2,646	
Transportation and warehousing		\$1,175	\$515	\$1,690	
Information		\$360	\$443	\$802	
Utilities		\$408	\$225	\$633	
Government		\$125	\$119	\$245	
Agriculture		\$42	\$167	\$209	
Mining		\$84	\$11	\$96	
Total value added contribution	\$33,931	\$17,321	\$14,744	\$65,995	7.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-39. The economic contribution of the oil and natural gas industry in Oklahoma, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	115,550			115,550	4.7%
Indirect/induced effects on other industries					
Services		44,300	88,590	132,890	
Finance, insurance, real estate, rental and leasing		13,810	24,510	38,320	
Wholesale and retail trade		8,310	28,280	36,590	
Transportation and warehousing		9,510	6,590	16,100	
Construction		11,550	1,920	13,470	
Manufacturing		5,270	2,210	7,480	
Government		2,130	2,900	5,030	
Information		1,240	2,390	3,630	
Agriculture		280	2,710	2,990	
Utilities		760	440	1,200	
Mining		280	50	330	
Total employment contribution	115,550	97,430	160,580	373,560	15.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$29,801			\$29,801	18.1%
Indirect/induced effects on other industries					
Services		\$3,227	\$4,948	\$8,176	
Wholesale and retail trade		\$719	\$1,386	\$2,105	
Finance, insurance, real estate, rental and leasing		\$791	\$938	\$1,729	
Construction		\$703	\$119	\$822	
Transportation and warehousing		\$470	\$315	\$785	
Manufacturing		\$470	\$166	\$636	
Government		\$174	\$246	\$420	
Information		\$103	\$202	\$305	
Utilities		\$113	\$68	\$182	
Agriculture		\$4	\$31	\$35	
Mining		\$18	\$3	\$21	
Total labor income contribution	\$29,801	\$6,793	\$8,423	\$45,016	27.3%
Value Added (\$ Millions)					
Industry direct contribution	\$39,034			\$39,034	15.2%
Indirect/induced effects on other industries					
Services		\$4,049	\$6,337	\$10,385	
Finance, insurance, real estate, rental and leasing		\$2,101	\$4,238	\$6,339	
Wholesale and retail trade		\$1,127	\$2,481	\$3,608	
Transportation and warehousing		\$731	\$522	\$1,252	
Construction		\$913	\$154	\$1,067	
Manufacturing		\$722	\$292	\$1,014	
Government		\$369	\$527	\$896	
Utilities		\$488	\$295	\$783	
Information		\$214	\$477	\$691	
Agriculture		\$13	\$126	\$140	
Mining		\$59	\$12	\$71	
Total value added contribution	\$39,034	\$10,787	\$15,459	\$65,280	25.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-40. The economic contribution of the oil and natural gas industry in Oregon, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	17,080			17,080	0.6%
Indirect/induced effects on other industries					
Services		11,600	20,830	32,430	
Construction		9,320	310	9,630	
Wholesale and retail trade		2,380	5,160	7,540	
Manufacturing		4,180	2,340	6,520	
Finance, insurance, real estate, rental and leasing		1,900	3,840	5,740	
Transportation and warehousing		3,300	1,860	5,160	
Agriculture		510	1,520	2,030	
Information		750	820	1,570	
Government		460	540	1,000	
Mining		130	20	150	
Utilities		70	60	130	
Total employment contribution	17,080	34,600	37,320	89,000	3.3%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,413			\$1,413	0.7%
Indirect/induced effects on other industries					
Services		\$1,139	\$1,432	\$2,571	
Construction		\$815	\$27	\$842	
Manufacturing		\$465	\$219	\$684	
Wholesale and retail trade		\$247	\$317	\$564	
Finance, insurance, real estate, rental and leasing		\$156	\$272	\$428	
Transportation and warehousing		\$180	\$105	\$285	
Information		\$107	\$113	\$219	
Government		\$55	\$65	\$121	
Agriculture		\$23	\$59	\$82	
Utilities		\$18	\$15	\$33	
Mining		\$8	\$1	\$9	
Total labor income contribution	\$1,413	\$3,213	\$2,625	\$7,251	3.6%
Value Added (\$ Millions)					
Industry direct contribution	\$4,324			\$4,324	1.4%
Indirect/induced effects on other industries					
Services		\$1,421	\$1,781	\$3,202	
Finance, insurance, real estate, rental and leasing		\$461	\$1,061	\$1,522	
Manufacturing		\$761	\$390	\$1,151	
Construction		\$1,076	\$36	\$1,112	
Wholesale and retail trade		\$343	\$521	\$865	
Information		\$222	\$245	\$468	
Transportation and warehousing		\$238	\$153	\$392	
Government		\$59	\$70	\$130	
Agriculture		\$32	\$90	\$122	
Utilities		\$65	\$53	\$118	
Mining		\$17	\$3	\$20	
Total value added contribution	\$4,324	\$4,696	\$4,405	\$13,425	4.2%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-41. The economic contribution of the oil and natural gas industry in Pennsylvania, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	92,920			92,920	1.1%
Indirect/induced effects on other industries					
Services		49,110	106,790	155,900	
Finance, insurance, real estate, rental and leasing		10,110	22,290	32,400	
Wholesale and retail trade		8,590	23,630	32,220	
Construction		26,360	1,300	27,660	
Transportation and warehousing		14,950	9,150	24,100	
Manufacturing		14,350	7,370	21,720	
Information		2,050	3,160	5,210	
Government		1,430	1,930	3,360	
Agriculture		400	1,820	2,220	
Utilities		630	460	1,090	
Mining		700	120	820	
Total employment contribution	92,920	128,670	178,020	399,610	4.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$15,111			\$15,111	2.5%
Indirect/induced effects on other industries					
Services		\$5,060	\$7,310	\$12,370	
Finance, insurance, real estate, rental and leasing		\$900	\$1,519	\$2,418	
Wholesale and retail trade		\$922	\$1,357	\$2,279	
Construction		\$2,081	\$102	\$2,183	
Manufacturing		\$1,427	\$698	\$2,125	
Transportation and warehousing		\$886	\$525	\$1,412	
Information		\$386	\$551	\$937	
Government		\$156	\$215	\$371	
Utilities		\$121	\$88	\$210	
Agriculture		\$21	\$84	\$106	
Mining		\$61	\$11	\$72	
Total labor income contribution	\$15,111	\$12,022	\$12,460	\$39,593	6.6%
Value Added (\$ Millions)					
Industry direct contribution	\$38,705			\$38,705	4.0%
Indirect/induced effects on other industries					
Services		\$6,150	\$9,068	\$15,218	
Finance, insurance, real estate, rental and leasing		\$2,237	\$5,324	\$7,561	
Wholesale and retail trade		\$1,351	\$2,497	\$3,848	
Manufacturing		\$2,318	\$1,356	\$3,674	
Construction		\$2,807	\$138	\$2,945	
Information		\$688	\$1,103	\$1,791	
Transportation and warehousing		\$1,095	\$690	\$1,785	
Utilities		\$462	\$337	\$799	
Government		\$151	\$209	\$360	
Mining		\$192	\$34	\$227	
Agriculture		\$25	\$108	\$134	
Total value added contribution	\$38,705	\$17,477	\$20,864	\$77,047	7.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-42. The economic contribution of the oil and natural gas industry in Rhode Island, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	4,930			4,930	0.7%
Indirect/induced effects on other industries					
Services		2,910	6,130	9,040	
Construction		2,050	70	2,120	
Finance, insurance, real estate, rental and leasing		590	1,270	1,860	
Wholesale and retail trade		540	1,170	1,710	
Manufacturing		1,000	470	1,470	
Transportation and warehousing		590	420	1,010	
Information		130	160	290	
Government		70	90	160	
Agriculture		10	50	60	
Utilities		30	20	50	
Mining		10	0	10	
Total employment contribution	4,930	7,940	9,870	22,740	3.3%
Labor Income** (\$ Millions)					
Industry direct contribution	\$607			\$607	1.3%
Indirect/induced effects on other industries					
Services		\$265	\$400	\$665	
Construction		\$161	\$6	\$166	
Finance, insurance, real estate, rental and leasing		\$53	\$92	\$146	
Wholesale and retail trade		\$61	\$75	\$136	
Manufacturing		\$92	\$39	\$131	
Transportation and warehousing		\$25	\$17	\$42	
Information		\$14	\$16	\$30	
Government		\$8	\$10	\$18	
Utilities		\$5	\$4	\$9	
Agriculture		\$0	\$2	\$2	
Mining		\$1	\$0	\$1	
Total labor income contribution	\$607	\$685	\$662	\$1,955	4.1%
Value Added (\$ Millions)					
Industry direct contribution	\$1,408			\$1,408	1.8%
Indirect/induced effects on other industries					
Services		\$317	\$516	\$834	
Finance, insurance, real estate, rental and leasing		\$163	\$356	\$519	
Construction		\$206	\$7	\$214	
Wholesale and retail trade		\$76	\$134	\$210	
Manufacturing		\$136	\$59	\$195	
Transportation and warehousing		\$32	\$25	\$57	
Information		\$25	\$31	\$56	
Utilities		\$19	\$17	\$36	
Government		\$8	\$10	\$18	
Mining		\$5	\$1	\$5	
Agriculture		\$1	\$3	\$4	
Total value added contribution	\$1,408	\$988	\$1,161	\$3,556	4.6%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-43. The economic contribution of the oil and natural gas industry in South Carolina, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	26,740			26,740	0.8%
Indirect/induced effects on other industries					
Services		13,460	20,830	34,290	
Construction		11,010	350	11,360	
Manufacturing		5,780	2,830	8,610	
Wholesale and retail trade		2,640	5,700	8,340	
Finance, insurance, real estate, rental and leasing		2,650	4,700	7,350	
Transportation and warehousing		4,130	1,940	6,070	
Information		630	650	1,280	
Agriculture		250	680	930	
Government		330	370	700	
Utilities		190	160	350	
Mining		120	20	140	
Total employment contribution	26,740	41,180	38,230	106,160	3.4%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,214			\$1,214	0.6%
Indirect/induced effects on other industries					
Services		\$956	\$1,109	\$2,065	
Manufacturing		\$553	\$240	\$793	
Construction		\$737	\$23	\$760	
Wholesale and retail trade		\$249	\$310	\$559	
Finance, insurance, real estate, rental and leasing		\$189	\$255	\$444	
Transportation and warehousing		\$206	\$96	\$302	
Information		\$66	\$66	\$132	
Government		\$34	\$38	\$72	
Utilities		\$29	\$24	\$53	
Agriculture		\$6	\$11	\$18	
Mining		\$11	\$2	\$13	
Total labor income contribution	\$1,214	\$3,036	\$2,174	\$6,424	3.4%
Value Added (\$ Millions)					
Industry direct contribution	\$5,746			\$5,746	1.8%
Indirect/induced effects on other industries					
Services		\$1,180	\$1,492	\$2,672	
Finance, insurance, real estate, rental and leasing		\$527	\$1,134	\$1,661	
Manufacturing		\$956	\$432	\$1,387	
Construction		\$1,164	\$37	\$1,200	
Wholesale and retail trade		\$394	\$571	\$965	
Transportation and warehousing		\$257	\$126	\$383	
Utilities		\$142	\$116	\$258	
Information		\$118	\$132	\$250	
Government		\$51	\$57	\$109	
Mining		\$40	\$7	\$47	
Agriculture		\$10	\$27	\$37	
Total value added contribution	\$5,746	\$4,839	\$4,130	\$14,715	4.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-44. The economic contribution of the oil and natural gas industry in South Dakota, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	10,570			10,570	1.6%
Indirect/induced effects on other industries					
Services		2,840	4,760	7,600	
Construction		2,510	90	2,600	
Finance, insurance, real estate, rental and leasing		880	1,270	2,150	
Wholesale and retail trade		700	1,330	2,030	
Manufacturing		1,040	540	1,580	
Transportation and warehousing		740	320	1,060	
Agriculture		120	690	810	
Government		130	120	250	
Information		110	120	230	
Utilities		50	30	80	
Mining		60	10	70	
Total employment contribution	10,570	9,170	9,290	29,030	4.4%
Labor Income** (\$ Millions)					
Industry direct contribution	\$427			\$427	1.0%
Indirect/induced effects on other industries					
Services		\$210	\$281	\$491	
Construction		\$184	\$6	\$190	
Finance, insurance, real estate, rental and leasing		\$83	\$91	\$175	
Manufacturing		\$109	\$49	\$158	
Wholesale and retail trade		\$66	\$71	\$137	
Agriculture		\$16	\$107	\$122	
Transportation and warehousing		\$39	\$18	\$56	
Information		\$10	\$10	\$19	
Government		\$9	\$9	\$18	
Utilities		\$7	\$4	\$11	
Mining		\$5	\$1	\$5	
Total labor income contribution	\$427	\$737	\$646	\$1,810	4.1%
Value Added (\$ Millions)					
Industry direct contribution	\$1,308			\$1,308	1.8%
Indirect/induced effects on other industries					
Services		\$259	\$361	\$621	
Finance, insurance, real estate, rental and leasing		\$255	\$322	\$577	
Construction		\$227	\$8	\$234	
Wholesale and retail trade		\$107	\$125	\$232	
Manufacturing		\$136	\$67	\$203	
Agriculture		\$27	\$152	\$179	
Transportation and warehousing		\$52	\$25	\$76	
Utilities		\$27	\$17	\$44	
Information		\$19	\$22	\$41	
Government		\$8	\$7	\$15	
Mining		\$9	\$2	\$10	
Total value added contribution	\$1,308	\$1,124	\$1,109	\$3,541	4.8%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-45. The economic contribution of the oil and natural gas industry in Tennessee, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	37,800			37,800	0.8%
Indirect/induced effects on other industries					
Services		19,390	36,460	55,850	
Construction		17,120	570	17,690	
Wholesale and retail trade		3,930	9,180	13,110	
Manufacturing		7,880	4,230	12,110	
Finance, insurance, real estate, rental and leasing		3,750	7,900	11,650	
Transportation and warehousing		7,030	4,060	11,090	
Information		1,130	1,370	2,500	
Agriculture		360	1,600	1,960	
Government		1,110	710	1,820	
Mining		270	40	310	
Utilities		150	70	220	
Total employment contribution	37,800	62,120	66,190	166,110	3.6%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,766			\$2,766	0.9%
Indirect/induced effects on other industries					
Services		\$1,680	\$2,589	\$4,269	
Construction		\$1,474	\$48	\$1,522	
Manufacturing		\$761	\$383	\$1,144	
Wholesale and retail trade		\$388	\$556	\$944	
Finance, insurance, real estate, rental and leasing		\$298	\$489	\$787	
Transportation and warehousing		\$480	\$270	\$749	
Information		\$144	\$166	\$310	
Government		\$140	\$92	\$231	
Utilities		\$33	\$16	\$49	
Mining		\$23	\$3	\$27	
Agriculture		\$6	\$12	\$18	
Total labor income contribution	\$2,766	\$5,426	\$4,624	\$12,816	4.0%
Value Added (\$ Millions)					
Industry direct contribution	\$9,218			\$9,218	1.8%
Indirect/induced effects on other industries					
Services		\$2,027	\$3,299	\$5,326	
Finance, insurance, real estate, rental and leasing		\$816	\$1,805	\$2,622	
Manufacturing		\$1,322	\$793	\$2,114	
Wholesale and retail trade		\$676	\$1,081	\$1,757	
Construction		\$1,560	\$51	\$1,611	
Transportation and warehousing		\$609	\$361	\$970	
Information		\$237	\$311	\$548	
Government		\$153	\$94	\$247	
Utilities		\$118	\$55	\$173	
Mining		\$73	\$11	\$84	
Agriculture		\$13	\$42	\$55	
Total value added contribution	\$9,218	\$7,604	\$7,904	\$24,726	4.7%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-46. The economic contribution of the oil and natural gas industry in Texas, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	594,510			594,510	2.9%
Indirect/induced effects on other industries					
Services		370,980	623,960	994,940	
Finance, insurance, real estate, rental and leasing		92,330	185,250	277,580	
Wholesale and retail trade		54,890	177,540	232,430	
Transportation and warehousing		83,930	57,220	141,150	
Construction		105,290	9,930	115,220	
Manufacturing		46,910	22,070	68,980	
Information		10,890	25,040	35,930	
Government		7,730	10,670	18,400	
Agriculture		1,590	14,190	15,780	
Utilities		5,770	3,610	9,380	
Mining		<u>2,030</u>	<u>320</u>	<u>2,350</u>	
Total employment contribution	594,510	782,320	1,129,800	2,506,630	12.4%
Labor Income** (\$ Millions)					
Industry direct contribution	\$137,467			\$137,467	9.4%
Indirect/induced effects on other industries					
Services		\$35,360	\$36,526	\$71,886	
Finance, insurance, real estate, rental and leasing		\$7,019	\$9,679	\$16,698	
Wholesale and retail trade		\$5,885	\$10,351	\$16,237	
Construction		\$7,761	\$718	\$8,479	
Transportation and warehousing		\$4,804	\$3,127	\$7,931	
Manufacturing		\$5,783	\$1,977	\$7,760	
Information		\$1,369	\$3,002	\$4,371	
Utilities		\$1,147	\$720	\$1,868	
Government		\$774	\$1,075	\$1,849	
Agriculture		\$37	\$264	\$302	
Mining		<u>\$183</u>	<u>\$29</u>	<u>\$212</u>	
Total labor income contribution	\$137,467	\$70,125	\$67,468	\$275,059	18.9%
Value Added (\$ Millions)					
Industry direct contribution	\$335,081			\$335,081	13.0%
Indirect/induced effects on other industries					
Services		\$40,480	\$45,883	\$86,363	
Finance, insurance, real estate, rental and leasing		\$16,022	\$33,888	\$49,910	
Wholesale and retail trade		\$10,430	\$19,778	\$30,208	
Manufacturing		\$19,410	\$4,158	\$23,568	
Construction		\$10,774	\$994	\$11,768	
Transportation and warehousing		\$6,201	\$4,141	\$10,341	
Information		\$2,661	\$6,533	\$9,195	
Utilities		\$3,903	\$2,458	\$6,361	
Government		\$1,186	\$1,654	\$2,841	
Agriculture		\$93	\$801	\$894	
Mining		<u>\$646</u>	<u>\$104</u>	<u>\$751</u>	
Total value added contribution	\$335,081	\$111,806	\$120,392	\$567,280	22.0%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-47. The economic contribution of the oil and natural gas industry in Utah, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	22,800			22,800	0.9%
Indirect/induced effects on other industries					
Services		15,890	20,840	36,730	
Construction		11,150	380	11,530	
Finance, insurance, real estate, rental and leasing		3,480	6,750	10,230	
Wholesale and retail trade		2,600	6,000	8,600	
Transportation and warehousing		4,490	1,950	6,440	
Manufacturing		3,140	1,930	5,070	
Information		950	1,250	2,200	
Government		440	410	850	
Agriculture		100	540	640	
Mining		370	60	430	
Utilities		160	80	240	
Total employment contribution	22,800	42,790	40,180	105,760	4.4%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,273			\$2,273	1.4%
Indirect/induced effects on other industries					
Services		\$1,314	\$1,160	\$2,475	
Construction		\$899	\$30	\$930	
Wholesale and retail trade		\$250	\$352	\$603	
Finance, insurance, real estate, rental and leasing		\$209	\$294	\$503	
Manufacturing		\$274	\$152	\$426	
Transportation and warehousing		\$267	\$121	\$388	
Information		\$122	\$156	\$279	
Utilities		\$106	\$54	\$160	
Government		\$41	\$40	\$81	
Mining		\$65	\$11	\$77	
Agriculture		\$4	\$25	\$29	
Total labor income contribution	\$2,273	\$3,552	\$2,395	\$8,221	5.2%
Value Added (\$ Millions)					
Industry direct contribution	\$10,743			\$10,743	3.8%
Indirect/induced effects on other industries					
Services		\$1,635	\$1,570	\$3,204	
Finance, insurance, real estate, rental and leasing		\$767	\$1,293	\$2,061	
Construction		\$1,549	\$52	\$1,601	
Wholesale and retail trade		\$391	\$669	\$1,060	
Manufacturing		\$477	\$279	\$756	
Information		\$246	\$327	\$572	
Transportation and warehousing		\$373	\$188	\$562	
Utilities		\$214	\$110	\$324	
Mining		\$162	\$27	\$189	
Government		\$42	\$39	\$81	
Agriculture		\$5	\$33	\$39	
Total value added contribution	\$10,743	\$5,863	\$4,587	\$21,193	7.5%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-48. The economic contribution of the oil and natural gas industry in Vermont, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	6,610			6,610	1.5%
Indirect/induced effects on other industries					
Services		2,170	3,670	5,840	
Construction		1,780	60	1,840	
Wholesale and retail trade		280	780	1,060	
Finance, insurance, real estate, rental and leasing		340	590	930	
Manufacturing		530	380	910	
Transportation and warehousing		310	150	460	
Agriculture		70	220	290	
Information		130	120	250	
Government		50	50	100	
Mining		40	10	50	
Utilities		30	20	50	
Total employment contribution	6,610	5,720	6,060	18,400	4.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$161			\$161	0.6%
Indirect/induced effects on other industries					
Services		\$185	\$227	\$411	
Construction		\$111	\$4	\$114	
Manufacturing		\$46	\$30	\$76	
Wholesale and retail trade		\$24	\$41	\$65	
Finance, insurance, real estate, rental and leasing		\$25	\$35	\$61	
Transportation and warehousing		\$17	\$8	\$25	
Information		\$12	\$11	\$24	
Agriculture		\$2	\$10	\$12	
Government		\$7	\$4	\$11	
Utilities		\$6	\$6	\$11	
Mining		\$3	\$0	\$4	
Total labor income contribution	\$161	\$438	\$376	\$974	3.5%
Value Added (\$ Millions)					
Industry direct contribution	\$670			\$670	1.5%
Indirect/induced effects on other industries					
Services		\$224	\$301	\$526	
Finance, insurance, real estate, rental and leasing		\$82	\$167	\$249	
Wholesale and retail trade		\$41	\$77	\$118	
Construction		\$113	\$4	\$117	
Manufacturing		\$66	\$40	\$105	
Information		\$20	\$19	\$39	
Transportation and warehousing		\$22	\$12	\$33	
Utilities		\$15	\$10	\$25	
Agriculture		\$2	\$11	\$13	
Mining		\$10	\$2	\$11	
Government		\$4	\$4	\$8	
Total value added contribution	\$670	\$598	\$646	\$1,914	4.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-49. The economic contribution of the oil and natural gas industry in Virginia, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	45,120			45,120	0.8%
Indirect/induced effects on other industries					
Services		26,710	40,450	67,160	
Construction		19,410	620	20,030	
Wholesale and retail trade		3,890	8,950	12,840	
Finance, insurance, real estate, rental and leasing		4,210	8,320	12,530	
Transportation and warehousing		6,920	3,980	10,900	
Manufacturing		5,910	2,740	8,650	
Information		1,420	1,670	3,090	
Government		730	830	1,560	
Agriculture		290	1,080	1,370	
Utilities		220	150	370	
Mining		280	40	320	
Total employment contribution	45,120	69,980	68,840	183,950	3.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,575			\$2,575	0.6%
Indirect/induced effects on other industries					
Services		\$3,181	\$2,888	\$6,069	
Construction		\$1,387	\$44	\$1,431	
Finance, insurance, real estate, rental and leasing		\$367	\$544	\$912	
Wholesale and retail trade		\$410	\$499	\$910	
Manufacturing		\$577	\$222	\$800	
Transportation and warehousing		\$364	\$216	\$580	
Information		\$217	\$262	\$479	
Government		\$76	\$89	\$165	
Utilities		\$43	\$29	\$72	
Agriculture		\$11	\$35	\$45	
Mining		\$28	\$5	\$32	
Total labor income contribution	\$2,575	\$6,661	\$4,832	\$14,069	3.2%
Value Added (\$ Millions)					
Industry direct contribution	\$9,176			\$9,176	1.3%
Indirect/induced effects on other industries					
Services		\$3,797	\$3,636	\$7,433	
Finance, insurance, real estate, rental and leasing		\$1,073	\$2,299	\$3,372	
Construction		\$2,277	\$73	\$2,350	
Wholesale and retail trade		\$678	\$990	\$1,668	
Manufacturing		\$939	\$625	\$1,564	
Information		\$406	\$500	\$905	
Transportation and warehousing		\$479	\$317	\$796	
Utilities		\$172	\$119	\$290	
Government		\$88	\$102	\$190	
Mining		\$119	\$20	\$139	
Agriculture		\$12	\$46	\$59	
Total value added contribution	\$9,176	\$10,039	\$8,727	\$27,942	3.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-50. The economic contribution of the oil and natural gas industry in Washington, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	23,960			23,960	0.5%
Indirect/induced effects on other industries					
Services		21,960	37,120	59,080	
Construction		18,450	630	19,080	
Transportation and warehousing		8,280	4,100	12,380	
Wholesale and retail trade		4,230	8,040	12,270	
Finance, insurance, real estate, rental and leasing		3,520	7,880	11,400	
Manufacturing		4,250	2,750	7,000	
Information		2,710	2,800	5,510	
Agriculture		710	2,380	3,090	
Government		1,420	1,500	2,920	
Mining		240	30	270	
Utilities		140	90	230	
Total employment contribution	23,960	65,900	67,310	157,170	3.2%
Labor Income** (\$ Millions)					
Industry direct contribution	\$4,928			\$4,928	1.1%
Indirect/induced effects on other industries					
Services		\$3,195	\$3,058	\$6,253	
Construction		\$1,718	\$59	\$1,778	
Information		\$863	\$904	\$1,767	
Wholesale and retail trade		\$484	\$606	\$1,090	
Finance, insurance, real estate, rental and leasing		\$366	\$608	\$974	
Transportation and warehousing		\$560	\$295	\$855	
Manufacturing		\$427	\$238	\$665	
Government		\$182	\$198	\$381	
Agriculture		\$35	\$123	\$158	
Utilities		\$25	\$17	\$42	
Mining		\$18	\$2	\$20	
Total labor income contribution	\$4,928	\$7,874	\$6,108	\$18,911	4.2%
Value Added (\$ Millions)					
Industry direct contribution	\$22,772			\$22,772	2.8%
Indirect/induced effects on other industries					
Services		\$3,129	\$3,731	\$6,861	
Information		\$1,998	\$2,101	\$4,098	
Finance, insurance, real estate, rental and leasing		\$1,010	\$2,436	\$3,447	
Wholesale and retail trade		\$921	\$1,739	\$2,660	
Construction		\$2,495	\$86	\$2,582	
Transportation and warehousing		\$747	\$456	\$1,202	
Manufacturing		\$743	\$397	\$1,140	
Government		\$218	\$234	\$453	
Utilities		\$128	\$85	\$213	
Agriculture		\$42	\$148	\$190	
Mining		\$35	\$4	\$39	
Total value added contribution	\$22,772	\$11,467	\$11,417	\$45,656	5.7%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-51. The economic contribution of the oil and natural gas industry in West Virginia, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	27,280			27,280	3.0%
Indirect/induced effects on other industries					
Services		9,370	14,020	23,390	
Wholesale and retail trade		1,910	3,530	5,440	
Finance, insurance, real estate, rental and leasing		1,920	2,040	3,960	
Construction		3,280	180	3,460	
Transportation and warehousing		1,870	730	2,600	
Manufacturing		1,380	520	1,900	
Mining		650	110	760	
Agriculture		130	590	720	
Government		330	350	680	
Information		310	310	620	
Utilities		170	100	270	
Total employment contribution	27,280	21,300	22,500	71,070	7.9%
Labor Income** (\$ Millions)					
Industry direct contribution	\$2,334			\$2,334	4.3%
Indirect/induced effects on other industries					
Services		\$691	\$801	\$1,492	
Wholesale and retail trade		\$147	\$155	\$302	
Finance, insurance, real estate, rental and leasing		\$120	\$109	\$229	
Construction		\$212	\$11	\$224	
Manufacturing		\$132	\$43	\$175	
Transportation and warehousing		\$101	\$38	\$138	
Mining		\$90	\$16	\$106	
Government		\$25	\$27	\$52	
Information		\$25	\$24	\$50	
Utilities		\$28	\$16	\$44	
Agriculture		\$3	\$3	\$6	
Total labor income contribution	\$2,334	\$1,574	\$1,243	\$5,152	9.4%
Value Added (\$ Millions)					
Industry direct contribution	\$9,628			\$9,628	9.4%
Indirect/induced effects on other industries					
Services		\$778	\$984	\$1,762	
Finance, insurance, real estate, rental and leasing		\$383	\$571	\$954	
Wholesale and retail trade		\$241	\$302	\$543	
Mining		\$406	\$77	\$483	
Manufacturing		\$318	\$92	\$410	
Construction		\$352	\$19	\$371	
Transportation and warehousing		\$143	\$54	\$197	
Utilities		\$91	\$51	\$142	
Information		\$44	\$48	\$92	
Government		\$33	\$36	\$69	
Agriculture		\$5	\$11	\$16	
Total value added contribution	\$9,628	\$2,794	\$2,245	\$14,667	14.4%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-52. The economic contribution of the oil and natural gas industry in Wisconsin, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	40,250			40,250	1.0%
Indirect/induced effects on other industries					
Services		13,770	26,130	39,900	
Manufacturing		11,980	5,360	17,340	
Construction		12,310	400	12,710	
Wholesale and retail trade		3,610	7,010	10,620	
Finance, insurance, real estate, rental and leasing		2,900	5,660	8,560	
Transportation and warehousing		4,520	2,330	6,850	
Agriculture		390	1,890	2,280	
Information		920	940	1,860	
Government		480	530	1,010	
Utilities		160	120	280	
Mining		180	30	210	
Total employment contribution	40,250	51,210	50,390	141,840	3.7%
Labor Income** (\$ Millions)					
Industry direct contribution	\$1,513			\$1,513	0.6%
Indirect/induced effects on other industries					
Services		\$1,177	\$1,634	\$2,811	
Manufacturing		\$1,127	\$454	\$1,580	
Construction		\$971	\$31	\$1,002	
Wholesale and retail trade		\$345	\$396	\$741	
Finance, insurance, real estate, rental and leasing		\$234	\$388	\$622	
Transportation and warehousing		\$262	\$133	\$395	
Information		\$122	\$120	\$241	
Agriculture		\$19	\$96	\$115	
Government		\$47	\$53	\$100	
Utilities		\$28	\$21	\$48	
Mining		\$15	\$3	\$18	
Total labor income contribution	\$1,513	\$4,346	\$3,328	\$9,187	3.5%
Value Added (\$ Millions)					
Industry direct contribution	\$4,830			\$4,830	1.1%
Indirect/induced effects on other industries					
Services		\$1,469	\$2,124	\$3,593	
Manufacturing		\$1,728	\$778	\$2,506	
Finance, insurance, real estate, rental and leasing		\$705	\$1,449	\$2,154	
Construction		\$1,311	\$42	\$1,353	
Wholesale and retail trade		\$548	\$725	\$1,273	
Transportation and warehousing		\$354	\$202	\$555	
Information		\$245	\$259	\$504	
Utilities		\$129	\$97	\$227	
Agriculture		\$28	\$146	\$174	
Government		\$60	\$67	\$127	
Mining		\$34	\$6	\$40	
Total value added contribution	\$4,830	\$6,611	\$5,894	\$17,336	4.0%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table B-53. The economic contribution of the oil and natural gas industry in Wyoming, 2023

Sector description	Direct	Indirect	Induced	Total	As a % of state total
Employment*					
Industry direct contribution	22,810			22,810	5.1%
Indirect/induced effects on other industries					
Services		5,160	7,970	13,130	
Finance, insurance, real estate, rental and leasing		2,320	3,820	6,140	
Wholesale and retail trade		1,320	2,610	3,930	
Construction		2,670	170	2,840	
Transportation and warehousing		1,610	570	2,180	
Manufacturing		390	140	530	
Mining		390	70	460	
Agriculture		60	370	430	
Information		170	230	400	
Government		170	180	350	
Utilities		130	60	190	
Total employment contribution	22,810	14,390	16,180	53,380	12.0%
Labor Income** (\$ Millions)					
Industry direct contribution	\$3,685			\$3,685	13.7%
Indirect/induced effects on other industries					
Services		\$337	\$396	\$733	
Wholesale and retail trade		\$99	\$116	\$215	
Construction		\$182	\$12	\$194	
Finance, insurance, real estate, rental and leasing		\$91	\$100	\$191	
Transportation and warehousing		\$96	\$34	\$129	
Mining		\$57	\$11	\$68	
Manufacturing		\$39	\$10	\$49	
Government		\$17	\$19	\$36	
Information		\$13	\$19	\$32	
Utilities		\$19	\$9	\$28	
Agriculture		\$3	\$15	\$17	
Total labor income contribution	\$3,685	\$953	\$739	\$5,378	20.0%
Value Added (\$ Millions)					
Industry direct contribution	\$9,225			\$9,225	17.7%
Indirect/induced effects on other industries					
Services		\$415	\$521	\$935	
Finance, insurance, real estate, rental and leasing		\$256	\$428	\$684	
Wholesale and retail trade		\$167	\$219	\$385	
Construction		\$296	\$19	\$315	
Mining		\$218	\$40	\$258	
Transportation and warehousing		\$191	\$61	\$252	
Manufacturing		\$105	\$19	\$124	
Utilities		\$76	\$36	\$111	
Information		\$25	\$38	\$63	
Government		\$26	\$30	\$56	
Agriculture		\$4	\$24	\$29	
Total value added contribution	\$9,225	\$1,778	\$1,435	\$12,438	23.9%

Source: PwC calculations based on the IMPLAN modeling system (2023 database). Details may not add up to totals due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

** Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Appendix C: Detailed results by congressional district

Table C-1. Economic contribution of the oil and natural gas industry in Alabama, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Alabama	33,120	123,810	4.2%	\$2,412	\$8,264	4.6%	\$8,592	\$18,680	6.1%
AL-1	5,210	21,220	4.9%	\$517	\$1,521	6.4%	\$1,365	\$3,102	7.4%
AL-2	3,880	14,810	3.7%	\$193	\$802	3.7%	\$740	\$1,790	4.3%
AL-3	4,390	14,930	4.1%	\$240	\$790	4.3%	\$876	\$1,827	5.8%
AL-4	5,610	15,400	4.9%	\$500	\$1,058	6.5%	\$1,697	\$2,655	9.7%
AL-5	2,360	15,140	3.1%	\$116	\$996	3.0%	\$384	\$1,876	3.5%
AL-6	3,910	16,870	4.0%	\$237	\$1,220	4.2%	\$1,037	\$2,691	5.7%
AL-7	7,760	25,450	4.8%	\$610	\$1,877	5.3%	\$2,493	\$4,738	7.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-2. Economic contribution of the oil and natural gas industry in Alaska, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Alaska	14,020	37,460	8.0%	\$2,344	\$4,037	10.8%	\$15,891	\$18,758	27.6%
AK-1 (At-large)	14,020	37,460	8.0%	\$2,344	\$4,037	10.8%	\$15,891	\$18,758	27.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-3. Economic contribution of the oil and natural gas industry in Arizona, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Arizona	30,650	151,920	3.5%	\$1,936	\$11,157	3.7%	\$5,553	\$20,974	4.0%
AZ-1	6,380	33,480	3.7%	\$236	\$2,519	3.8%	\$714	\$4,269	4.0%
AZ-2	4,670	15,320	3.7%	\$294	\$960	4.0%	\$795	\$2,075	4.7%
AZ-3	3,530	23,550	3.5%	\$273	\$1,876	3.8%	\$986	\$3,535	4.4%
AZ-4	2,180	19,320	3.2%	\$149	\$1,554	3.4%	\$585	\$2,885	3.8%
AZ-5	1,380	8,060	3.1%	\$64	\$584	3.2%	\$192	\$1,102	3.4%
AZ-6	3,230	13,960	3.2%	\$234	\$911	3.3%	\$585	\$1,812	3.6%
AZ-7	3,600	14,720	3.5%	\$285	\$1,025	3.7%	\$768	\$2,035	4.2%
AZ-8	2,400	12,620	3.3%	\$121	\$934	3.5%	\$271	\$1,637	3.5%
AZ-9	3,290	10,890	3.5%	\$280	\$794	4.1%	\$656	\$1,622	4.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-4. Economic contribution of the oil and natural gas industry in Arkansas, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Arkansas	26,590	88,050	4.9%	\$1,232	\$5,194	5.0%	\$4,771	\$11,557	6.5%
AR-1	5,270	16,970	4.3%	\$219	\$867	4.3%	\$998	\$2,286	5.9%
AR-2	7,900	26,760	5.3%	\$388	\$1,597	5.3%	\$1,130	\$3,150	6.2%
AR-3	4,600	21,960	4.3%	\$181	\$1,530	4.6%	\$790	\$2,877	5.4%
AR-4	8,820	22,370	5.8%	\$444	\$1,201	6.1%	\$1,853	\$3,243	9.0%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-5. Economic contribution of the oil and natural gas industry in California, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
California	173,810	947,650	3.7%	\$24,717	\$97,099	4.3%	\$119,441	\$238,744	6.2%
CA-1	2,260	12,720	3.5%	\$185	\$848	3.7%	\$1,238	\$2,388	5.9%
CA-2	1,750	15,690	3.3%	\$158	\$1,399	3.6%	\$1,047	\$3,014	4.7%
CA-3	2,120	17,200	3.5%	\$220	\$1,360	3.7%	\$924	\$2,801	4.5%
CA-4	2,110	16,760	3.3%	\$206	\$1,325	3.5%	\$1,534	\$3,400	5.3%
CA-5	2,390	16,630	3.4%	\$210	\$1,179	3.6%	\$1,083	\$2,673	4.9%
CA-6	1,450	14,180	3.2%	\$142	\$1,085	3.1%	\$872	\$2,382	4.3%
CA-7	1,630	13,950	3.1%	\$170	\$1,080	2.9%	\$1,376	\$2,883	5.0%
CA-8	4,500	16,320	5.2%	\$954	\$1,863	7.7%	\$11,635	\$13,173	24.6%
CA-9	1,490	13,270	3.7%	\$152	\$968	3.9%	\$935	\$2,256	5.3%
CA-10	2,560	19,170	4.0%	\$432	\$2,062	4.8%	\$4,785	\$7,294	10.0%
CA-11	650	31,240	3.3%	\$61	\$6,229	3.8%	\$122	\$9,545	3.7%
CA-12	860	14,870	3.1%	\$112	\$1,561	3.3%	\$481	\$2,734	3.6%
CA-13	2,460	12,980	3.6%	\$213	\$950	3.9%	\$1,559	\$2,775	6.6%
CA-14	1,480	14,090	3.3%	\$169	\$1,525	3.5%	\$495	\$2,648	3.8%
CA-15	930	16,640	3.2%	\$88	\$3,038	3.4%	\$468	\$5,781	3.5%
CA-16	1,500	21,860	3.3%	\$141	\$3,800	3.5%	\$784	\$6,755	3.8%
CA-17	1,360	25,760	3.3%	\$141	\$4,932	3.2%	\$953	\$9,066	3.5%
CA-18	1,880	12,700	3.4%	\$191	\$1,429	3.6%	\$1,040	\$3,035	4.6%
CA-19	1,930	14,480	3.3%	\$225	\$1,376	3.7%	\$991	\$2,880	4.6%
CA-20	19,320	36,470	7.4%	\$2,164	\$3,320	10.1%	\$9,052	\$10,936	19.0%
CA-21	2,160	11,380	3.6%	\$268	\$859	4.2%	\$1,346	\$2,296	6.7%
CA-22	10,710	20,200	6.7%	\$1,233	\$1,875	9.3%	\$5,628	\$6,670	18.7%
CA-23	3,830	12,540	4.1%	\$455	\$1,038	5.0%	\$1,616	\$2,664	7.2%
CA-24	3,350	19,010	3.9%	\$475	\$1,693	4.7%	\$1,981	\$3,953	6.5%
CA-25	2,460	9,880	3.7%	\$251	\$690	4.2%	\$911	\$1,697	5.9%
CA-26	2,780	18,550	3.7%	\$357	\$1,600	4.3%	\$1,156	\$3,190	5.0%
CA-27	2,200	10,420	3.6%	\$249	\$867	4.1%	\$851	\$1,921	5.1%
CA-28	4,520	21,750	3.6%	\$749	\$2,089	4.7%	\$2,336	\$4,578	6.1%
CA-29	1,470	10,350	3.3%	\$179	\$889	3.7%	\$699	\$1,962	4.5%
CA-30	2,410	24,130	3.2%	\$351	\$2,426	3.7%	\$1,158	\$4,589	4.2%
CA-31	2,560	12,890	3.7%	\$421	\$1,221	4.6%	\$1,288	\$2,671	5.8%
CA-32	3,450	24,590	3.4%	\$530	\$2,289	4.2%	\$1,538	\$4,502	4.8%
CA-33	3,490	14,160	4.6%	\$408	\$1,113	5.4%	\$1,531	\$2,662	7.6%
CA-34	6,260	23,210	4.2%	\$1,232	\$2,682	6.2%	\$3,696	\$6,071	8.5%
CA-35	3,770	22,390	4.3%	\$424	\$1,680	4.9%	\$2,056	\$4,035	7.0%
CA-36	4,230	29,280	3.4%	\$709	\$3,093	4.0%	\$5,460	\$9,403	6.9%
CA-37	1,860	19,350	3.2%	\$185	\$1,771	3.5%	\$700	\$3,356	3.9%
CA-38	3,840	16,530	4.1%	\$676	\$1,679	5.5%	\$2,135	\$3,808	7.2%
CA-39	2,270	14,300	4.1%	\$244	\$974	4.7%	\$1,106	\$2,244	6.6%
CA-40	5,910	25,060	4.2%	\$1,148	\$2,787	5.8%	\$2,952	\$5,609	6.9%
CA-41	3,850	20,590	3.9%	\$408	\$1,393	4.5%	\$1,629	\$3,266	6.2%
CA-42	4,310	19,290	3.8%	\$576	\$1,761	4.5%	\$2,865	\$4,910	7.0%

CA-43	3,900	16,430	4.0%	\$788	\$1,786	5.3%	\$8,008	\$9,667	16.6%
CA-44	7,790	18,650	5.3%	\$1,298	\$2,156	7.8%	\$11,540	\$12,976	23.5%
CA-45	2,170	18,420	3.6%	\$324	\$1,671	4.1%	\$767	\$3,005	4.3%
CA-46	3,780	19,440	4.1%	\$975	\$2,256	6.2%	\$2,679	\$4,764	7.6%
CA-47	3,860	29,370	3.7%	\$630	\$2,926	4.4%	\$1,587	\$5,416	4.8%
CA-48	3,740	13,970	3.8%	\$638	\$1,311	5.0%	\$1,903	\$3,105	6.3%
CA-49	2,390	15,960	3.4%	\$363	\$1,443	3.8%	\$1,064	\$3,013	4.3%
CA-50	4,340	25,700	3.5%	\$890	\$2,647	4.3%	\$2,659	\$5,499	5.2%
CA-51	4,170	23,040	3.5%	\$762	\$2,311	4.1%	\$2,365	\$4,898	5.1%
CA-52	1,340	9,860	3.1%	\$184	\$794	3.3%	\$854	\$1,928	4.3%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-6. Economic contribution of the oil and natural gas industry in Colorado, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Colorado	62,370	324,970	7.7%	\$21,776	\$42,081	12.6%	\$25,409	\$57,540	10.9%
CO-1	13,170	71,300	9.0%	\$15,701	\$21,803	23.9%	\$15,421	\$24,421	18.4%
CO-2	5,750	42,020	6.8%	\$408	\$3,141	6.8%	\$781	\$5,117	7.0%
CO-3	10,590	39,200	8.6%	\$893	\$2,425	9.8%	\$1,629	\$4,310	10.0%
CO-4	12,540	47,150	8.3%	\$1,662	\$4,129	10.6%	\$2,300	\$6,340	9.6%
CO-5	2,900	29,620	6.0%	\$166	\$1,826	5.4%	\$444	\$3,105	6.0%
CO-6	5,310	37,510	7.3%	\$1,435	\$4,100	9.7%	\$1,671	\$5,797	8.7%
CO-7	3,860	28,150	6.6%	\$471	\$2,105	6.9%	\$808	\$3,558	7.0%
CO-8	8,260	30,040	8.0%	\$1,041	\$2,553	9.4%	\$2,355	\$4,893	10.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-7. Economic contribution of the oil and natural gas industry in Connecticut, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Connecticut	13,580	74,900	3.1%	\$2,172	\$7,944	3.9%	\$3,983	\$13,169	3.8%
CT-1	2,470	17,970	3.0%	\$269	\$1,701	3.3%	\$689	\$2,998	3.4%
CT-2	2,330	11,910	3.0%	\$278	\$1,036	3.6%	\$416	\$1,686	3.1%
CT-3	2,940	15,960	3.2%	\$550	\$1,617	4.2%	\$1,086	\$2,819	4.2%
CT-4	3,120	17,520	3.1%	\$862	\$2,600	4.5%	\$1,310	\$3,904	4.4%
CT-5	2,720	11,550	3.3%	\$214	\$989	3.6%	\$482	\$1,762	3.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-8. Economic contribution of the oil and natural gas industry in Delaware, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Delaware	5,740	23,900	3.6%	\$457	\$1,828	3.8%	\$1,117	\$4,012	4.1%
DE-1 (At-large)	5,740	23,900	3.6%	\$457	\$1,828	3.8%	\$1,117	\$4,012	4.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-9. Economic contribution of the oil and natural gas industry in the District of Columbia, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
District of Columbia	2,210	17,900	2.0%	\$431	\$2,547	2.1%	\$1,073	\$4,133	2.3%
DC-1 (At-large)	0	15,690	1.7%	\$0	\$2,117	1.7%	\$0	\$3,060	1.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-10. Economic contribution of the oil and natural gas industry in Florida, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Florida	74,490	464,640	3.1%	\$5,358	\$32,138	3.5%	\$21,439	\$66,160	4.1%
FL-1	4,790	18,400	3.7%	\$233	\$1,117	3.5%	\$399	\$1,879	3.6%
FL-2	3,200	14,570	3.1%	\$203	\$872	3.2%	\$543	\$1,755	3.6%
FL-3	3,330	13,840	3.3%	\$231	\$803	3.5%	\$868	\$1,894	4.6%
FL-4	2,300	15,430	3.3%	\$159	\$1,105	3.5%	\$902	\$2,483	4.5%
FL-5	2,300	17,570	3.1%	\$269	\$1,492	3.6%	\$1,095	\$3,015	4.5%
FL-6	2,730	13,890	3.1%	\$185	\$788	3.6%	\$467	\$1,546	3.8%
FL-7	2,170	15,380	3.2%	\$141	\$1,030	3.6%	\$312	\$1,837	3.5%
FL-8	1,920	13,300	3.0%	\$118	\$877	3.1%	\$452	\$1,703	3.5%
FL-9	2,620	17,530	3.1%	\$169	\$1,079	3.5%	\$764	\$2,334	4.1%
FL-10	3,810	23,270	3.3%	\$179	\$1,643	3.5%	\$627	\$2,925	3.7%
FL-11	3,420	16,170	3.3%	\$153	\$944	3.5%	\$346	\$1,748	3.5%
FL-12	1,340	10,160	2.9%	\$101	\$557	3.4%	\$204	\$1,056	3.3%
FL-13	1,670	15,770	3.1%	\$82	\$1,078	3.4%	\$329	\$2,001	3.5%
FL-14	3,690	28,830	3.3%	\$449	\$2,452	3.9%	\$2,481	\$5,685	5.4%
FL-15	3,090	15,910	3.4%	\$291	\$1,191	3.9%	\$1,225	\$2,750	5.0%
FL-16	2,170	11,870	3.3%	\$162	\$816	3.7%	\$806	\$1,963	4.8%
FL-17	1,540	13,320	3.0%	\$97	\$853	3.4%	\$270	\$1,560	3.4%
FL-18	4,610	15,480	4.6%	\$202	\$841	4.8%	\$730	\$1,820	5.5%
FL-19	2,220	19,460	3.1%	\$146	\$1,278	3.4%	\$407	\$2,280	3.5%
FL-20	2,680	18,680	3.0%	\$216	\$1,402	3.5%	\$795	\$2,736	3.9%
FL-21	2,080	14,760	3.0%	\$143	\$991	3.4%	\$551	\$1,973	3.8%
FL-22	1,360	12,740	2.7%	\$113	\$1,013	3.2%	\$246	\$1,773	3.2%
FL-23	2,060	20,650	2.9%	\$173	\$1,600	3.5%	\$1,029	\$3,237	4.3%
FL-24	2,140	16,120	2.8%	\$198	\$1,103	3.3%	\$1,008	\$2,568	4.2%
FL-25	1,860	14,460	2.8%	\$131	\$1,010	3.2%	\$776	\$2,266	4.1%
FL-26	6,030	23,570	3.8%	\$432	\$1,629	4.2%	\$2,861	\$4,848	7.0%
FL-27	2,000	22,870	2.7%	\$226	\$1,791	3.3%	\$541	\$2,989	3.4%
FL-28	1,350	10,650	2.7%	\$155	\$782	3.2%	\$405	\$1,537	3.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-11. Economic contribution of the oil and natural gas industry in Georgia, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Georgia	48,540	236,650	3.3%	\$3,143	\$16,655	3.6%	\$13,491	\$37,022	4.5%
GA-1	3,520	15,470	3.3%	\$282	\$966	3.4%	\$1,071	\$2,333	4.6%
GA-2	3,790	14,790	3.2%	\$174	\$765	3.0%	\$1,144	\$2,238	5.1%
GA-3	3,650	15,970	3.5%	\$196	\$876	3.7%	\$716	\$1,959	4.5%
GA-4	2,920	14,100	3.2%	\$213	\$999	3.6%	\$786	\$2,149	4.3%
GA-5	3,870	31,340	3.0%	\$451	\$3,283	3.5%	\$1,601	\$6,341	3.9%
GA-6	5,360	24,240	3.7%	\$291	\$2,122	3.9%	\$750	\$3,710	4.0%
GA-7	3,100	20,840	3.3%	\$232	\$1,657	3.7%	\$864	\$3,183	4.2%
GA-8	4,040	13,340	3.5%	\$163	\$620	3.2%	\$715	\$1,605	4.5%
GA-9	3,310	15,290	3.5%	\$217	\$961	3.9%	\$2,030	\$3,314	7.5%
GA-10	3,130	13,370	3.4%	\$161	\$701	3.5%	\$651	\$1,667	4.5%
GA-11	2,820	16,070	3.4%	\$228	\$1,163	3.9%	\$894	\$2,549	4.6%
GA-12	2,930	13,040	3.1%	\$105	\$644	2.8%	\$472	\$1,487	3.6%
GA-13	3,360	15,900	3.4%	\$288	\$1,162	3.9%	\$1,134	\$2,748	4.7%
GA-14	2,760	12,910	3.3%	\$142	\$736	3.5%	\$665	\$1,740	4.5%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-12. Economic contribution of the oil and natural gas industry in Hawaii, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Hawaii	4,520	26,050	2.8%	\$448	\$2,020	3.1%	\$1,973	\$4,757	4.3%
HI-1	1,720	14,040	2.7%	\$174	\$1,139	2.9%	\$792	\$2,444	3.8%
HI-2	2,800	12,000	3.0%	\$274	\$882	3.4%	\$1,178	\$2,310	5.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-13. Economic contribution of the oil and natural gas industry in Idaho, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Idaho	11,130	43,340	3.6%	\$624	\$2,775	3.8%	\$1,816	\$5,260	4.3%
ID-1	4,610	18,890	3.4%	\$251	\$1,147	3.6%	\$616	\$2,108	3.9%
ID-2	6,520	24,450	3.7%	\$374	\$1,628	3.9%	\$1,200	\$3,152	4.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-14. Economic contribution of the oil and natural gas industry in Illinois, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Illinois	63,010	335,290	4.1%	\$13,088	\$36,701	5.7%	\$25,859	\$64,676	5.9%
IL-1	2,850	12,580	4.1%	\$958	\$1,668	7.6%	\$2,172	\$3,442	8.6%
IL-2	2,300	11,680	3.6%	\$191	\$898	3.8%	\$649	\$1,916	4.6%
IL-3	2,410	18,570	3.9%	\$556	\$2,055	5.0%	\$1,058	\$3,480	5.0%
IL-4	2,260	14,160	3.9%	\$1,280	\$2,284	7.8%	\$1,964	\$3,654	7.2%
IL-5	1,590	18,930	3.4%	\$207	\$1,796	4.0%	\$443	\$2,975	4.0%
IL-6	2,810	19,460	4.0%	\$1,099	\$2,633	6.7%	\$2,159	\$4,538	7.0%
IL-7	3,200	47,670	3.6%	\$962	\$6,020	4.8%	\$3,553	\$11,090	5.6%
IL-8	2,090	20,480	3.8%	\$816	\$2,507	5.7%	\$938	\$3,684	4.8%
IL-9	1,190	14,610	3.3%	\$128	\$1,281	3.7%	\$240	\$2,128	3.7%
IL-10	1,360	16,940	3.5%	\$184	\$1,766	3.9%	\$465	\$3,287	3.8%
IL-11	3,190	19,050	4.2%	\$1,544	\$2,783	8.6%	\$2,185	\$4,190	7.5%
IL-12	12,420	27,870	6.8%	\$798	\$1,778	7.4%	\$1,762	\$3,515	8.0%
IL-13	3,720	16,100	4.2%	\$419	\$1,280	5.0%	\$1,531	\$3,020	6.7%
IL-14	5,120	18,470	5.2%	\$2,376	\$3,267	15.1%	\$2,877	\$4,412	11.2%
IL-15	6,530	19,900	4.6%	\$439	\$1,353	4.7%	\$1,184	\$2,800	5.6%
IL-16	7,000	22,740	5.0%	\$925	\$2,065	6.9%	\$1,850	\$3,912	7.0%
IL-17	2,990	16,070	4.1%	\$206	\$1,266	4.5%	\$828	\$2,634	5.5%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-15. Economic contribution of the oil and natural gas industry in Indiana, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Indiana	38,150	168,620	4.0%	\$2,758	\$12,578	4.3%	\$15,177	\$31,577	6.3%
IN-1	5,400	22,100	5.6%	\$762	\$1,928	7.8%	\$7,332	\$9,395	19.6%
IN-2	3,350	17,250	3.6%	\$169	\$1,173	3.7%	\$646	\$2,317	4.4%
IN-3	3,750	18,390	3.8%	\$216	\$1,246	4.1%	\$984	\$2,696	5.2%
IN-4	4,440	16,860	4.0%	\$275	\$1,101	4.3%	\$829	\$2,228	4.9%
IN-5	2,750	17,940	3.3%	\$151	\$1,401	3.6%	\$466	\$2,476	3.8%
IN-6	3,610	15,690	3.7%	\$206	\$1,114	3.8%	\$728	\$2,334	4.3%
IN-7	3,140	19,860	3.5%	\$314	\$2,015	3.7%	\$1,088	\$3,667	4.3%
IN-8	8,410	25,550	5.3%	\$473	\$1,654	5.4%	\$2,425	\$4,482	8.0%
IN-9	3,300	14,970	3.6%	\$192	\$945	4.0%	\$679	\$1,982	4.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-16. Economic contribution of the oil and natural gas industry in Iowa, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Iowa	29,030	88,640	4.2%	\$3,891	\$8,834	6.3%	\$3,150	\$12,013	4.7%
IA-1	7,140	21,840	4.0%	\$287	\$1,448	4.2%	\$748	\$2,809	4.6%
IA-2	8,110	23,370	4.5%	\$1,699	\$2,949	8.8%	\$1,092	\$3,337	5.5%
IA-3	5,770	21,310	3.8%	\$631	\$2,054	5.2%	\$661	\$3,272	4.4%
IA-4	8,010	22,120	4.4%	\$1,274	\$2,383	7.4%	\$648	\$2,596	4.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-17. Economic contribution of the oil and natural gas industry in Kansas, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Kansas	52,660	154,590	7.7%	\$3,427	\$10,889	8.0%	\$9,709	\$21,913	9.6%
KS-1	20,180	42,770	9.6%	\$1,079	\$2,497	9.8%	\$3,477	\$5,954	13.0%
KS-2	11,240	32,920	6.9%	\$574	\$2,071	6.8%	\$2,030	\$4,511	8.8%
KS-3	4,870	35,380	5.9%	\$257	\$2,859	5.8%	\$867	\$5,045	6.2%
KS-4	16,370	43,510	9.3%	\$1,517	\$3,462	11.5%	\$3,335	\$6,403	12.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-18. Economic contribution of the oil and natural gas industry in Kentucky, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Kentucky	29,510	110,590	4.1%	\$1,731	\$7,345	4.4%	\$7,555	\$16,586	5.9%
KY-1	5,260	17,010	3.8%	\$217	\$963	3.6%	\$894	\$2,130	5.0%
KY-2	5,220	17,220	4.2%	\$240	\$1,024	4.3%	\$901	\$2,166	5.4%
KY-3	2,760	19,510	3.4%	\$204	\$1,598	3.8%	\$767	\$2,984	4.2%
KY-4	3,930	17,270	3.7%	\$180	\$1,164	4.1%	\$891	\$2,469	5.0%
KY-5	8,380	20,730	6.6%	\$673	\$1,350	8.7%	\$2,885	\$4,024	14.4%
KY-6	3,960	18,870	3.8%	\$217	\$1,245	4.1%	\$1,216	\$2,812	5.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-19. Economic contribution of the oil and natural gas industry in Louisiana, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Louisiana	100,480	322,320	11.4%	\$12,489	\$25,929	15.1%	\$40,249	\$66,793	21.2%
LA-1	18,580	60,330	11.5%	\$4,300	\$6,986	20.7%	\$9,553	\$13,948	24.7%
LA-2	12,150	52,570	10.0%	\$1,576	\$4,371	12.4%	\$9,139	\$15,636	21.9%
LA-3	26,730	69,350	15.1%	\$2,793	\$5,220	19.7%	\$8,504	\$13,454	25.9%
LA-4	15,260	46,360	10.9%	\$1,037	\$2,670	11.3%	\$3,186	\$6,231	15.2%
LA-5	8,680	34,710	8.8%	\$512	\$1,829	9.0%	\$1,959	\$4,481	12.5%
LA-6	19,070	58,990	11.6%	\$2,271	\$4,853	15.2%	\$7,908	\$13,044	22.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-20. Economic contribution of the oil and natural gas industry in Maine, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Maine	11,630	35,040	3.9%	\$562	\$2,186	3.8%	\$1,526	\$4,137	4.4%
ME-1	4,560	17,230	3.5%	\$156	\$1,112	3.3%	\$703	\$2,214	4.1%
ME-2	7,070	17,810	4.5%	\$390	\$1,057	4.5%	\$823	\$1,923	5.0%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-21. Economic contribution of the oil and natural gas industry in Maryland, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Maryland	18,910	106,270	2.7%	\$1,277	\$8,086	2.6%	\$5,717	\$17,187	3.3%
MD-1	3,580	14,230	3.2%	\$215	\$893	3.2%	\$856	\$2,011	4.2%
MD-2	2,450	14,780	2.8%	\$168	\$1,076	3.0%	\$622	\$2,184	3.5%
MD-3	2,140	15,950	2.5%	\$151	\$1,365	2.4%	\$764	\$2,778	2.9%
MD-4	1,770	10,270	2.6%	\$115	\$669	2.5%	\$368	\$1,339	2.8%
MD-5	2,420	10,040	2.6%	\$156	\$650	2.3%	\$525	\$1,416	2.7%
MD-6	2,780	12,910	2.9%	\$190	\$972	2.9%	\$975	\$2,284	4.1%
MD-7	2,710	15,010	2.8%	\$219	\$1,296	2.8%	\$1,292	\$3,037	4.2%
MD-8	1,060	13,090	2.2%	\$63	\$1,165	2.2%	\$316	\$2,138	2.5%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-22. Economic contribution of the oil and natural gas industry in Massachusetts, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Massachusetts	25,560	158,090	3.1%	\$5,119	\$16,852	3.6%	\$7,652	\$25,352	3.4%
MA-1	3,430	15,050	3.5%	\$401	\$1,094	4.0%	\$641	\$1,739	3.8%
MA-2	3,810	18,270	3.4%	\$1,415	\$2,419	6.4%	\$1,216	\$2,787	4.5%
MA-3	2,070	12,680	3.2%	\$169	\$1,116	3.2%	\$56	\$1,455	2.5%
MA-4	2,930	17,980	3.3%	\$791	\$1,981	4.5%	\$1,068	\$2,803	4.1%
MA-5	3,030	17,380	3.0%	\$484	\$1,894	3.1%	\$1,455	\$3,609	3.7%
MA-6	2,070	17,880	3.0%	\$145	\$1,552	3.1%	\$238	\$2,374	2.9%
MA-7	2,080	19,220	2.7%	\$378	\$2,207	2.6%	\$914	\$3,723	2.8%
MA-8	3,130	24,710	3.1%	\$859	\$3,336	3.6%	\$1,302	\$4,938	3.5%
MA-9	3,000	14,910	3.3%	\$477	\$1,253	4.3%	\$761	\$1,925	3.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-23. Economic contribution of the oil and natural gas industry in Michigan, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Michigan	49,530	232,000	3.9%	\$6,667	\$20,615	5.0%	\$12,393	\$34,451	5.1%
MI-1	9,400	24,210	5.7%	\$480	\$1,358	6.0%	\$921	\$2,400	6.1%
MI-2	6,890	18,250	4.9%	\$422	\$1,130	5.3%	\$1,205	\$2,387	6.5%
MI-3	3,890	24,240	3.9%	\$305	\$1,814	4.4%	\$846	\$3,088	4.8%
MI-4	3,030	14,580	3.7%	\$204	\$1,038	4.0%	\$575	\$1,929	4.5%
MI-5	4,060	16,170	4.0%	\$529	\$1,375	5.4%	\$790	\$2,309	5.1%
MI-6	3,600	18,820	3.3%	\$629	\$1,923	4.5%	\$998	\$3,017	4.4%
MI-7	3,210	15,580	3.7%	\$210	\$1,088	4.0%	\$516	\$1,969	4.1%
MI-8	2,850	14,020	3.8%	\$193	\$964	4.3%	\$624	\$1,858	4.9%
MI-9	3,370	12,610	4.0%	\$211	\$826	4.3%	\$593	\$1,636	4.8%
MI-10	1,370	15,360	3.2%	\$401	\$1,493	4.4%	\$289	\$1,935	3.5%
MI-11	1,630	22,340	3.4%	\$874	\$2,831	5.2%	\$851	\$3,852	4.5%
MI-12	2,440	16,210	3.5%	\$629	\$1,854	5.2%	\$776	\$2,639	4.7%
MI-13	3,780	19,620	4.1%	\$1,579	\$2,921	8.1%	\$3,409	\$5,434	9.2%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-24. Economic contribution of the oil and natural gas industry in Minnesota, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Minnesota	39,700	158,700	4.1%	\$2,723	\$12,911	4.4%	\$10,056	\$26,071	5.4%
MN-1	6,290	19,650	4.2%	\$227	\$1,198	3.9%	\$927	\$2,478	4.9%
MN-2	5,390	22,110	5.6%	\$752	\$2,103	7.5%	\$4,661	\$6,786	13.5%
MN-3	5,260	26,890	3.9%	\$683	\$3,017	4.7%	\$630	\$4,213	4.0%
MN-4	2,420	16,630	3.2%	\$108	\$1,290	3.4%	\$444	\$2,264	3.8%
MN-5	2,910	22,010	3.4%	\$250	\$2,255	3.7%	\$1,008	\$4,076	4.3%
MN-6	4,510	15,200	4.2%	\$185	\$966	4.3%	\$551	\$1,807	4.7%
MN-7	6,500	18,460	4.3%	\$231	\$1,063	4.1%	\$1,012	\$2,366	5.4%
MN-8	6,410	17,750	4.5%	\$286	\$1,018	4.5%	\$824	\$2,080	5.3%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-25. Economic contribution of the oil and natural gas industry in Mississippi, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Mississippi	30,790	97,440	5.7%	\$1,826	\$5,362	6.1%	\$7,816	\$14,011	9.3%
MS-1	3,960	19,580	4.4%	\$172	\$966	4.4%	\$629	\$1,992	5.3%
MS-2	8,360	23,420	5.6%	\$389	\$1,193	5.6%	\$1,503	\$2,917	7.7%
MS-3	10,910	28,670	6.2%	\$603	\$1,589	6.6%	\$1,655	\$3,346	8.2%
MS-4	7,570	25,780	6.9%	\$661	\$1,614	8.0%	\$4,029	\$5,756	16.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-26. Economic contribution of the oil and natural gas industry in Missouri, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Missouri	42,650	154,900	3.9%	\$2,514	\$10,731	4.1%	\$6,563	\$19,782	4.6%
MO-1	5,580	28,080	3.6%	\$554	\$2,623	4.0%	\$1,435	\$4,685	4.4%
MO-2	4,520	19,190	3.7%	\$279	\$1,518	3.9%	\$759	\$2,675	4.3%
MO-3	5,130	16,580	3.7%	\$232	\$926	3.7%	\$738	\$1,912	4.6%
MO-4	5,530	15,290	3.7%	\$250	\$798	3.6%	\$527	\$1,459	4.0%
MO-5	6,070	24,840	4.4%	\$360	\$1,967	4.6%	\$744	\$3,209	4.7%
MO-6	5,970	17,150	4.1%	\$353	\$1,041	4.5%	\$916	\$2,114	5.2%
MO-7	4,210	18,160	3.7%	\$237	\$1,077	4.0%	\$622	\$1,983	4.5%
MO-8	5,640	15,610	4.3%	\$249	\$781	4.4%	\$823	\$1,746	5.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-27. Economic contribution of the oil and natural gas industry in Montana, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Montana	16,480	53,200	7.0%	\$1,262	\$3,645	8.0%	\$4,410	\$8,135	11.1%
MT-1	4,480	18,880	5.2%	\$208	\$1,120	5.3%	\$568	\$1,958	6.0%
MT-2	12,000	34,320	8.7%	\$1,054	\$2,525	10.3%	\$3,842	\$6,177	15.2%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-28. Economic contribution of the oil and natural gas industry in Nebraska, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Nebraska	14,840	69,320	5.0%	\$5,507	\$8,373	8.3%	\$6,667	\$12,013	6.6%
NE-1	3,690	20,020	4.7%	\$1,002	\$1,801	6.3%	\$793	\$2,238	4.5%
NE-2	3,600	25,220	4.9%	\$3,878	\$5,157	12.1%	\$3,899	\$6,191	8.2%
NE-3	7,560	24,080	5.2%	\$626	\$1,414	4.8%	\$1,976	\$3,584	6.3%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-29. Economic contribution of the oil and natural gas industry in Nevada, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Nevada	15,030	73,400	3.5%	\$1,268	\$5,497	3.9%	\$3,636	\$11,169	4.5%
NV-1	3,560	18,980	3.3%	\$269	\$1,317	3.6%	\$1,052	\$2,928	4.6%
NV-2	4,710	21,190	4.1%	\$505	\$1,852	5.0%	\$1,166	\$3,454	5.5%
NV-3	3,000	19,510	3.0%	\$206	\$1,363	3.3%	\$538	\$2,636	3.6%
NV-4	3,760	13,720	3.5%	\$288	\$965	3.7%	\$879	\$2,151	4.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-30. Economic contribution of the oil and natural gas industry in New Hampshire, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
New Hampshire	8,160	32,710	3.5%	\$531	\$2,745	3.6%	\$1,463	\$4,635	4.1%
NH-1	3,780	16,430	3.4%	\$295	\$1,462	3.8%	\$897	\$2,568	4.4%
NH-2	4,380	16,290	3.5%	\$235	\$1,283	3.5%	\$567	\$2,067	3.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-31. Economic contribution of the oil and natural gas industry in New Jersey, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
New Jersey	36,980	200,970	3.3%	\$5,719	\$20,536	4.2%	\$18,824	\$42,155	5.2%
NJ-1	3,710	16,310	4.0%	\$767	\$1,694	6.3%	\$2,018	\$3,490	7.5%
NJ-2	4,550	18,430	3.9%	\$606	\$1,528	5.2%	\$2,610	\$4,151	8.0%
NJ-3	3,950	19,060	3.4%	\$451	\$1,747	3.9%	\$873	\$2,931	3.8%
NJ-4	3,160	16,250	3.3%	\$330	\$1,230	4.2%	\$1,024	\$2,522	4.7%
NJ-5	2,510	16,150	3.1%	\$273	\$1,506	3.7%	\$791	\$2,689	4.1%
NJ-6	2,970	17,070	3.4%	\$412	\$1,718	4.2%	\$1,605	\$3,632	5.4%
NJ-7	3,960	19,020	3.5%	\$1,174	\$2,717	5.7%	\$3,064	\$5,522	6.8%
NJ-8	1,920	13,590	3.1%	\$365	\$1,623	4.0%	\$1,202	\$3,094	4.8%
NJ-9	2,530	15,960	3.2%	\$258	\$1,397	3.8%	\$1,456	\$3,279	5.2%
NJ-10	2,520	12,260	3.2%	\$409	\$1,312	4.0%	\$2,406	\$3,877	6.9%
NJ-11	2,080	19,400	2.9%	\$219	\$2,086	3.3%	\$665	\$3,548	3.5%
NJ-12	3,120	17,470	3.3%	\$455	\$1,977	3.9%	\$1,112	\$3,420	4.2%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-32. Economic contribution of the oil and natural gas industry in New Mexico, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
New Mexico	42,710	100,780	8.6%	\$4,640	\$8,038	10.8%	\$15,906	\$21,922	16.2%
NM-1	3,990	25,060	5.8%	\$219	\$1,508	5.4%	\$890	\$3,093	6.7%
NM-2	18,000	34,710	9.9%	\$2,240	\$3,194	14.3%	\$7,432	\$9,150	21.1%
NM-3	20,720	41,010	10.7%	\$2,180	\$3,335	14.0%	\$7,584	\$9,679	21.3%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-33. Economic contribution of the oil and natural gas industry in New York, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
New York	55,510	358,900	2.7%	\$9,348	\$41,088	3.3%	\$19,665	\$74,181	3.4%
NY-1	2,050	14,790	2.6%	\$321	\$1,376	3.2%	\$914	\$2,719	3.7%
NY-2	2,010	11,050	2.9%	\$307	\$1,054	3.5%	\$1,191	\$2,479	4.6%
NY-3	2,170	15,600	2.6%	\$258	\$1,371	3.1%	\$749	\$2,622	3.5%
NY-4	1,830	12,090	2.6%	\$240	\$1,045	3.1%	\$697	\$2,045	3.6%
NY-5	470	7,680	2.4%	\$42	\$527	2.4%	\$134	\$950	2.5%
NY-6	950	8,110	2.5%	\$118	\$575	2.8%	\$254	\$1,049	2.9%
NY-7	2,150	14,280	2.7%	\$316	\$1,128	3.6%	\$949	\$2,376	4.1%
NY-8	840	7,240	2.4%	\$99	\$477	2.7%	\$337	\$971	3.2%
NY-9	790	7,760	2.3%	\$93	\$505	2.5%	\$261	\$964	2.8%
NY-10	1,880	24,980	2.5%	\$610	\$4,629	3.2%	\$1,187	\$8,460	3.1%
NY-11	800	8,120	2.4%	\$96	\$565	2.7%	\$483	\$1,311	3.5%
NY-12	570	51,610	2.4%	\$1,388	\$11,799	3.2%	\$1,693	\$19,140	2.9%
NY-13	260	5,770	1.9%	\$234	\$807	2.5%	\$217	\$1,403	2.2%
NY-14	670	7,770	2.3%	\$64	\$557	2.4%	\$291	\$1,152	2.9%
NY-15	590	5,580	2.2%	\$91	\$433	2.4%	\$249	\$806	2.8%
NY-16	1,300	11,730	2.5%	\$158	\$1,142	2.8%	\$603	\$2,235	3.2%
NY-17	1,800	12,430	2.7%	\$221	\$1,120	3.0%	\$672	\$2,191	3.4%
NY-18	3,240	12,240	3.2%	\$352	\$956	3.7%	\$836	\$1,896	4.2%
NY-19	3,790	13,560	3.2%	\$348	\$1,002	3.7%	\$712	\$1,833	3.9%
NY-20	2,370	14,390	2.7%	\$228	\$1,228	2.8%	\$867	\$2,620	3.5%
NY-21	4,340	13,570	3.3%	\$454	\$1,066	3.9%	\$1,195	\$2,300	4.6%
NY-22	2,370	13,050	2.9%	\$226	\$1,021	3.1%	\$711	\$2,049	3.7%
NY-23	7,200	19,420	4.9%	\$923	\$1,875	6.9%	\$781	\$2,320	5.0%
NY-24	4,160	12,600	3.4%	\$433	\$1,022	4.1%	\$1,096	\$2,124	4.8%
NY-25	2,080	14,280	2.9%	\$201	\$1,152	3.3%	\$901	\$2,476	4.1%
NY-26	4,820	19,200	3.8%	\$1,528	\$2,656	7.4%	\$1,685	\$3,690	5.5%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-34. Economic contribution of the oil and natural gas industry in North Carolina, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
North Carolina	46,120	217,560	3.2%	\$2,592	\$15,395	3.3%	\$8,662	\$30,248	3.8%
NC-1	3,500	12,140	3.4%	\$138	\$650	3.3%	\$505	\$1,498	3.9%
NC-2	2,340	19,510	2.9%	\$133	\$1,639	3.2%	\$688	\$3,118	3.7%
NC-3	3,560	13,270	2.8%	\$158	\$692	2.4%	\$697	\$1,628	3.6%
NC-4	2,160	14,400	2.7%	\$101	\$1,226	2.7%	\$269	\$2,099	2.8%
NC-5	2,880	13,340	3.2%	\$131	\$814	3.3%	\$377	\$1,564	3.6%
NC-6	6,400	22,680	4.5%	\$284	\$1,430	4.7%	\$539	\$2,445	4.4%
NC-7	3,240	14,500	2.9%	\$149	\$808	2.8%	\$526	\$1,701	3.4%
NC-8	3,930	14,650	3.7%	\$201	\$921	3.9%	\$732	\$1,907	4.7%
NC-9	3,560	12,760	3.1%	\$179	\$746	2.9%	\$743	\$1,718	4.1%
NC-10	2,920	13,630	3.3%	\$141	\$842	3.5%	\$518	\$1,667	4.1%
NC-11	2,640	14,300	3.1%	\$140	\$820	3.3%	\$495	\$1,645	3.9%
NC-12	2,610	13,780	3.2%	\$225	\$1,231	3.6%	\$554	\$2,159	3.8%
NC-13	3,310	12,820	3.4%	\$192	\$876	3.6%	\$943	\$2,127	4.9%
NC-14	3,080	25,780	3.1%	\$423	\$2,700	3.6%	\$1,076	\$4,970	3.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-35. Economic contribution of the oil and natural gas industry in North Dakota, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
North Dakota	32,970	77,040	12.9%	\$3,730	\$6,794	16.2%	\$14,999	\$19,790	26.0%
ND-1 (At-large)	32,970	77,040	12.9%	\$3,730	\$6,794	16.2%	\$14,999	\$19,790	26.0%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-36. Economic contribution of the oil and natural gas industry in Ohio, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Ohio	75,980	336,090	4.5%	\$6,454	\$25,564	5.2%	\$33,931	\$65,995	7.5%
OH-1	3,170	28,020	3.9%	\$248	\$2,465	4.4%	\$1,091	\$4,775	4.8%
OH-2	3,780	14,750	4.2%	\$225	\$923	4.5%	\$631	\$1,857	5.1%
OH-3	3,110	21,610	3.7%	\$334	\$1,871	4.2%	\$1,065	\$3,641	4.8%
OH-4	4,360	22,210	4.3%	\$401	\$1,686	5.1%	\$3,035	\$5,275	8.7%
OH-5	5,840	22,070	4.7%	\$499	\$1,524	5.6%	\$1,389	\$3,211	6.4%
OH-6	11,620	27,860	7.3%	\$881	\$1,870	8.8%	\$5,366	\$7,119	17.3%
OH-7	5,620	24,100	4.6%	\$622	\$2,090	5.6%	\$2,072	\$4,445	6.9%
OH-8	3,100	17,470	4.0%	\$203	\$1,265	4.2%	\$931	\$2,775	5.1%
OH-9	6,290	25,760	5.3%	\$718	\$2,016	6.6%	\$8,283	\$10,504	17.7%
OH-10	2,100	16,280	3.6%	\$195	\$1,213	3.9%	\$685	\$2,277	4.1%
OH-11	2,480	22,200	3.8%	\$264	\$1,987	4.4%	\$1,063	\$3,839	4.9%
OH-12	8,280	23,600	5.6%	\$696	\$1,745	6.9%	\$2,475	\$4,239	9.2%
OH-13	6,800	27,880	5.7%	\$496	\$1,984	6.5%	\$3,606	\$5,981	11.1%
OH-14	4,520	19,150	4.6%	\$234	\$1,168	4.9%	\$796	\$2,427	5.6%
OH-15	4,910	23,130	4.2%	\$438	\$1,759	4.7%	\$1,442	\$3,632	5.5%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-37. Economic contribution of the oil and natural gas industry in Oklahoma, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Oklahoma	115,550	373,560	15.2%	\$29,801	\$45,016	27.3%	\$39,034	\$65,280	25.4%
OK-1	23,690	95,700	18.2%	\$10,059	\$14,980	34.6%	\$12,156	\$20,075	32.0%
OK-2	11,200	47,170	10.9%	\$2,820	\$4,468	18.4%	\$3,289	\$6,573	15.9%
OK-3	34,940	80,400	16.6%	\$3,239	\$5,670	21.0%	\$5,432	\$10,018	21.5%
OK-4	14,400	52,640	12.5%	\$1,061	\$2,953	12.6%	\$1,756	\$5,263	13.9%
OK-5	31,320	97,650	16.4%	\$12,622	\$16,945	36.2%	\$16,400	\$23,351	34.2%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-38. Economic contribution of the oil and natural gas industry in Oregon, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Oregon	17,080	89,000	3.3%	\$1,413	\$7,251	3.6%	\$4,324	\$13,425	4.2%
OR-1	3,600	20,610	3.5%	\$384	\$2,094	3.9%	\$1,235	\$3,918	4.5%
OR-2	3,950	15,460	3.5%	\$237	\$1,005	3.6%	\$767	\$2,005	4.4%
OR-3	2,470	13,960	3.2%	\$222	\$1,166	3.4%	\$805	\$2,249	4.2%
OR-4	2,310	12,120	3.1%	\$230	\$881	3.6%	\$470	\$1,504	3.8%
OR-5	2,540	14,210	3.2%	\$190	\$1,098	3.5%	\$492	\$1,877	3.8%
OR-6	2,220	12,640	3.2%	\$150	\$1,007	3.4%	\$556	\$1,873	4.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-39. Economic contribution of the oil and natural gas industry in Pennsylvania, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Pennsylvania	92,920	399,610	4.9%	\$15,111	\$39,593	6.6%	\$38,705	\$77,047	7.9%
PA-1	2,490	21,770	4.2%	\$1,109	\$2,637	7.1%	\$1,365	\$3,836	6.1%
PA-2	1,220	12,970	3.6%	\$489	\$1,532	5.0%	\$434	\$2,081	4.2%
PA-3	810	18,780	3.6%	\$1,087	\$3,098	5.9%	\$1,082	\$3,980	5.1%
PA-4	3,940	28,120	4.2%	\$583	\$2,734	4.8%	\$879	\$4,482	4.7%
PA-5	2,730	22,590	4.2%	\$845	\$2,580	6.1%	\$2,322	\$5,020	7.0%
PA-6	3,770	21,440	4.6%	\$553	\$2,305	5.7%	\$1,509	\$4,082	6.6%
PA-7	3,200	20,390	4.4%	\$371	\$1,665	5.2%	\$858	\$2,879	5.6%
PA-8	3,840	19,330	4.6%	\$377	\$1,289	5.4%	\$940	\$2,426	6.1%
PA-9	8,400	23,760	6.0%	\$568	\$1,586	6.5%	\$2,467	\$4,103	9.9%
PA-10	5,220	26,200	4.7%	\$762	\$2,354	5.9%	\$1,226	\$3,666	5.8%
PA-11	4,140	21,260	4.7%	\$688	\$1,939	6.2%	\$1,385	\$3,335	6.6%
PA-12	6,400	30,180	4.9%	\$1,945	\$4,039	8.2%	\$3,639	\$6,843	8.7%
PA-13	5,160	19,060	5.0%	\$388	\$1,239	5.6%	\$1,060	\$2,444	6.5%
PA-14	14,870	33,370	8.3%	\$1,808	\$3,161	12.3%	\$8,078	\$10,287	21.0%
PA-15	12,290	30,560	7.0%	\$1,148	\$2,277	9.0%	\$5,075	\$6,896	15.9%
PA-16	6,990	23,680	5.6%	\$543	\$1,648	6.4%	\$2,123	\$3,889	9.0%
PA-17	7,440	26,150	5.7%	\$1,847	\$3,511	9.6%	\$4,264	\$6,799	11.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-40. Economic contribution of the oil and natural gas industry in Rhode Island, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Rhode Island	4,930	22,740	3.3%	\$607	\$1,955	4.1%	\$1,408	\$3,556	4.6%
RI-1	2,270	10,880	3.2%	\$207	\$877	3.5%	\$556	\$1,601	4.0%
RI-2	2,660	11,860	3.5%	\$400	\$1,077	4.6%	\$852	\$1,955	5.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-41. Economic contribution of the oil and natural gas industry in South Carolina, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
South Carolina	26,740	106,160	3.4%	\$1,214	\$6,424	3.4%	\$5,746	\$14,715	4.5%
SC-1	2,760	13,850	3.0%	\$100	\$872	3.0%	\$355	\$1,722	3.4%
SC-2	3,870	14,700	3.4%	\$170	\$878	3.3%	\$1,012	\$2,259	4.9%
SC-3	3,370	12,180	3.4%	\$134	\$655	3.4%	\$525	\$1,445	4.2%
SC-4	4,060	18,890	3.5%	\$264	\$1,298	3.8%	\$1,188	\$2,849	5.0%
SC-5	3,500	13,070	3.6%	\$192	\$830	3.8%	\$740	\$1,841	4.8%
SC-6	6,050	20,400	3.4%	\$233	\$1,218	3.2%	\$1,288	\$2,974	4.7%
SC-7	3,130	13,070	3.3%	\$122	\$674	3.3%	\$639	\$1,625	4.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-42. Economic contribution of the oil and natural gas industry in South Dakota, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
South Dakota	10,570	29,030	4.4%	\$427	\$1,810	4.1%	\$1,308	\$3,541	4.8%
SD-1 (At-large)	10,570	29,030	4.4%	\$427	\$1,810	4.1%	\$1,308	\$3,541	4.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-43. Economic contribution of the oil and natural gas industry in Tennessee, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Tennessee	37,800	166,110	3.6%	\$2,766	\$12,816	4.0%	\$9,218	\$24,726	4.7%
TN-1	3,390	15,280	3.5%	\$191	\$939	3.7%	\$829	\$2,078	4.8%
TN-2	4,140	18,780	3.8%	\$154	\$1,269	3.8%	\$689	\$2,361	4.4%
TN-3	4,070	19,120	3.6%	\$297	\$1,424	3.9%	\$749	\$2,498	4.2%
TN-4	3,860	14,110	3.6%	\$229	\$909	3.9%	\$602	\$1,712	4.1%
TN-5	3,400	15,520	3.5%	\$260	\$1,403	3.8%	\$995	\$2,681	4.6%
TN-6	5,360	18,990	3.8%	\$320	\$1,366	4.1%	\$751	\$2,353	4.4%
TN-7	6,330	28,330	3.6%	\$398	\$2,524	3.8%	\$1,966	\$5,053	5.0%
TN-8	4,240	16,300	3.5%	\$270	\$1,062	3.9%	\$755	\$2,064	4.5%
TN-9	3,000	19,690	3.5%	\$646	\$1,919	4.9%	\$1,883	\$3,925	5.9%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-44. Economic contribution of the oil and natural gas industry in Texas, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Texas	594,510	2,506,630	12.4%	\$137,467	\$275,059	18.9%	\$335,081	\$567,280	22.0%
TX-1	15,230	60,880	12.8%	\$2,484	\$5,049	17.3%	\$5,244	\$9,990	18.8%
TX-2	11,860	56,150	12.0%	\$3,254	\$6,567	18.7%	\$6,351	\$12,903	19.3%
TX-3	4,200	46,680	10.4%	\$719	\$3,956	12.2%	\$1,404	\$6,642	11.6%
TX-4	6,490	60,040	10.4%	\$772	\$4,385	12.0%	\$1,890	\$7,757	12.1%
TX-5	4,150	27,920	9.7%	\$575	\$2,042	11.5%	\$899	\$3,658	11.0%
TX-6	9,070	58,120	11.1%	\$982	\$4,521	12.9%	\$2,867	\$8,723	14.0%
TX-7	71,890	167,750	19.2%	\$33,769	\$42,302	50.8%	\$78,445	\$90,921	63.8%
TX-8	9,090	32,500	11.5%	\$1,149	\$2,660	14.7%	\$2,146	\$5,073	15.1%
TX-9	8,660	47,420	10.6%	\$2,122	\$4,900	15.1%	\$6,639	\$11,416	20.2%
TX-10	12,050	62,890	10.4%	\$1,209	\$4,461	12.2%	\$2,440	\$7,903	12.4%
TX-11	56,980	116,050	24.3%	\$12,426	\$16,241	49.8%	\$21,397	\$27,750	47.5%
TX-12	10,770	48,290	10.3%	\$713	\$2,987	10.6%	\$2,606	\$6,827	12.5%
TX-13	19,750	61,550	15.9%	\$2,101	\$4,541	19.1%	\$8,872	\$15,825	22.5%
TX-14	19,230	69,700	17.1%	\$4,745	\$6,920	37.8%	\$20,480	\$24,101	74.6%
TX-15	14,030	49,770	12.3%	\$1,402	\$3,060	14.0%	\$3,777	\$6,620	17.9%
TX-16	2,600	43,070	9.4%	\$396	\$2,960	10.9%	\$1,187	\$5,670	11.0%
TX-17	6,710	73,760	10.1%	\$1,183	\$7,194	9.6%	\$2,450	\$11,938	9.0%
TX-18	44,460	84,970	18.0%	\$5,525	\$7,735	29.0%	\$16,366	\$20,404	40.6%
TX-19	18,710	67,140	14.4%	\$3,355	\$6,440	21.2%	\$6,274	\$11,379	22.8%
TX-20	3,470	44,060	9.4%	\$551	\$3,094	10.2%	\$1,083	\$5,274	10.6%
TX-21	7,190	65,530	10.3%	\$1,131	\$4,719	12.2%	\$1,826	\$7,608	11.5%
TX-22	10,190	44,570	11.7%	\$2,249	\$4,180	19.6%	\$4,598	\$10,023	21.6%
TX-23	22,890	68,780	12.0%	\$3,708	\$6,352	17.0%	\$8,416	\$13,126	19.2%
TX-24	12,320	118,610	11.1%	\$4,863	\$14,102	15.2%	\$9,117	\$23,134	15.2%
TX-25	17,040	57,330	12.5%	\$1,345	\$3,706	14.1%	\$3,669	\$7,915	15.8%
TX-26	10,850	68,310	11.9%	\$1,580	\$5,519	15.0%	\$2,988	\$9,191	14.4%
TX-27	21,320	70,680	15.2%	\$3,268	\$6,112	21.8%	\$12,423	\$17,729	30.9%
TX-28	16,550	52,480	13.0%	\$1,900	\$3,677	17.0%	\$5,053	\$8,217	20.5%
TX-29	14,090	48,890	12.5%	\$4,196	\$7,001	21.1%	\$11,501	\$16,644	27.9%
TX-30	6,720	70,160	10.5%	\$3,069	\$8,834	14.7%	\$4,936	\$14,246	14.1%
TX-31	3,000	34,900	8.5%	\$119	\$2,026	7.6%	\$355	\$3,667	8.3%
TX-32	10,640	76,280	11.3%	\$4,046	\$10,223	16.1%	\$8,090	\$17,611	16.8%
TX-33	11,290	81,040	11.2%	\$2,358	\$8,334	13.7%	\$5,460	\$14,760	14.5%
TX-34	3,580	35,860	9.2%	\$222	\$1,518	8.9%	\$607	\$2,822	9.8%
TX-35	5,750	51,770	10.2%	\$740	\$4,091	11.5%	\$1,932	\$7,268	12.0%
TX-36	21,590	68,310	13.5%	\$4,234	\$7,893	19.6%	\$18,325	\$26,443	30.7%
TX-37	3,400	94,730	10.5%	\$846	\$9,927	12.2%	\$1,078	\$14,035	10.9%
TX-38	46,690	119,670	16.9%	\$18,159	\$24,834	40.1%	\$41,889	\$52,069	49.8%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-45. Economic contribution of the oil and natural gas industry in Utah, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Utah	22,800	105,760	4.4%	\$2,273	\$8,221	5.2%	\$10,743	\$21,193	7.5%
UT-1	3,840	22,540	3.8%	\$384	\$1,602	4.3%	\$2,715	\$4,916	7.5%
UT-2	6,610	32,490	4.6%	\$904	\$2,773	5.8%	\$5,362	\$8,638	10.0%
UT-3	9,120	29,430	5.2%	\$722	\$2,147	6.2%	\$1,989	\$4,423	7.3%
UT-4	3,230	21,300	3.8%	\$264	\$1,699	4.3%	\$677	\$3,216	4.7%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-46. Economic contribution of the oil and natural gas industry in Vermont, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Vermont	6,610	18,400	4.2%	\$161	\$974	3.5%	\$670	\$1,914	4.4%
VT-1 (At-large)	6,610	18,400	4.2%	\$161	\$974	3.5%	\$670	\$1,914	4.4%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-47. Economic contribution of the oil and natural gas industry in Virginia, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Virginia	45,120	183,950	3.2%	\$2,575	\$14,069	3.2%	\$9,176	\$27,942	3.9%
VA-1	3,650	14,720	3.2%	\$167	\$987	3.2%	\$917	\$2,300	4.4%
VA-2	3,670	14,430	3.3%	\$197	\$868	3.3%	\$920	\$2,113	4.6%
VA-3	3,170	15,870	2.7%	\$153	\$1,051	2.4%	\$527	\$2,066	3.0%
VA-4	5,740	20,310	3.5%	\$368	\$1,568	3.7%	\$1,171	\$3,361	4.2%
VA-5	5,080	17,280	3.4%	\$207	\$1,027	3.4%	\$943	\$2,382	4.4%
VA-6	4,640	17,650	3.7%	\$286	\$1,139	4.0%	\$1,274	\$2,726	5.5%
VA-7	2,980	10,910	3.1%	\$137	\$615	3.0%	\$413	\$1,277	3.5%
VA-8	2,160	15,080	2.5%	\$217	\$1,824	2.6%	\$692	\$3,101	2.9%
VA-9	8,830	20,540	5.2%	\$436	\$1,129	5.5%	\$1,021	\$2,265	6.0%
VA-10	3,100	17,520	3.0%	\$194	\$1,330	3.1%	\$549	\$2,389	3.5%
VA-11	2,100	19,640	2.7%	\$214	\$2,532	3.1%	\$748	\$3,962	3.3%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-48. Economic contribution of the oil and natural gas industry in Washington, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Washington	23,960	157,170	3.2%	\$4,928	\$18,911	4.2%	\$22,772	\$45,656	5.7%
WA-1	1,460	13,940	2.9%	\$313	\$2,018	3.6%	\$819	\$3,905	3.7%
WA-2	4,810	19,700	4.4%	\$1,386	\$2,502	7.5%	\$9,725	\$11,637	17.0%
WA-3	1,800	12,370	3.2%	\$340	\$1,165	4.4%	\$1,084	\$2,570	5.2%
WA-4	2,550	12,680	3.3%	\$489	\$1,182	4.7%	\$2,485	\$3,700	8.0%
WA-5	4,970	20,300	4.2%	\$498	\$1,622	5.1%	\$1,895	\$3,757	6.3%
WA-6	1,880	12,930	2.8%	\$549	\$1,350	4.0%	\$2,072	\$3,463	5.9%
WA-7	1,020	21,570	2.9%	\$184	\$3,578	3.7%	\$857	\$5,620	3.6%
WA-8	2,040	12,130	2.9%	\$426	\$1,478	3.9%	\$1,337	\$3,278	4.5%
WA-9	2,000	21,140	3.1%	\$366	\$2,953	3.7%	\$1,660	\$5,665	4.1%
WA-10	1,410	10,420	2.8%	\$378	\$1,063	3.8%	\$839	\$2,060	4.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-49. Economic contribution of the oil and natural gas industry in West Virginia, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
West Virginia	27,280	71,070	7.9%	\$2,334	\$5,152	9.4%	\$9,628	\$14,667	14.4%
WV-1	14,260	36,000	8.3%	\$947	\$2,393	9.1%	\$3,892	\$6,508	13.0%
WV-2	13,010	35,070	7.5%	\$1,387	\$2,758	9.7%	\$5,736	\$8,159	15.6%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-50. Economic contribution of the oil and natural gas industry in Wisconsin, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Wisconsin	40,250	141,840	3.7%	\$1,513	\$9,187	3.5%	\$4,830	\$17,336	4.0%
WI-1	3,180	13,090	3.4%	\$94	\$797	3.2%	\$309	\$1,475	3.6%
WI-2	4,400	18,780	3.1%	\$132	\$1,332	2.9%	\$406	\$2,432	3.3%
WI-3	7,070	18,480	4.1%	\$187	\$944	3.6%	\$571	\$1,832	4.1%
WI-4	1,590	13,160	2.8%	\$74	\$1,077	3.0%	\$349	\$1,909	3.3%
WI-5	4,470	19,970	3.6%	\$219	\$1,467	3.7%	\$519	\$2,503	3.8%
WI-6	6,660	19,580	4.2%	\$244	\$1,193	3.9%	\$728	\$2,288	4.6%
WI-7	7,200	19,460	4.4%	\$321	\$1,128	4.3%	\$883	\$2,205	5.1%
WI-8	5,670	19,330	4.0%	\$243	\$1,249	3.9%	\$1,065	\$2,691	5.1%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Table C-51. Economic contribution of the oil and natural gas industry in Wyoming, 2023

State / congressional district	Employment (jobs) ⁽¹⁾			Labor income (\$million) ⁽²⁾			Value added (\$million)		
	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district	Direct	Total ⁽³⁾	Total as a % of state / district
Wyoming	22,810	53,380	12.0%	\$3,685	\$5,378	20.0%	\$9,225	\$12,438	23.9%
WY-1 (At-large)	22,810	53,380	12.0%	\$3,685	\$5,378	20.0%	\$9,225	\$12,438	23.9%

Source: PwC calculations using the IMPLAN model and data from the Census Bureau and the Bureau of Labor Statistics.

Note: Details may not add up to totals due to rounding.

(1) Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

(2) Labor income is defined as wages and salaries and benefits as well as proprietors' income.

(3) Total contribution includes direct, indirect, and induced effects. Direct effects are those occurring directly within the oil and natural gas industry. Indirect effects are those occurring within other businesses as part of the supply chain to the oil and natural gas industry. Induced effects are those arising from household spending of income earned from the oil and natural gas industry or its supply chain.

Appendix D: Data sources and methodology

This Appendix describes the methodology used to derive the results for the study. It first discusses the data sources PwC utilized to develop estimates of the US oil and natural gas industry's direct employment, labor income, and value-added contributions and its capital investment and dividend effects. It then describes the development of the indirect and induced contribution estimates.

1. Estimating direct jobs, labor income, and value added

Employment

Throughout this report, consistent with the convention used by the US Bureau of Economic Analysis ("BEA"), the employment figures reported include (1) wage and salary jobs (also known as "paid employment")¹³ and (2) sole proprietorships and general partners (collectively referred to as "self-employment").¹⁴ The *Quarterly Census of Employment and Wages* ("QCEW") by the US Bureau of Labor Statistics ("BLS") provides the most comprehensive data on paid employment. For self-employment, we rely on the BEA's estimates in its *State Annual Personal Income and Employment* database.¹⁵ It is important to note that employment estimates in this report represent a count of jobs, not a count of workers. Thus, all jobs held by a worker are counted.

Both the BEA and the BLS sources have data disclosure issues, as certain data points are suppressed or withheld to maintain the confidentiality of individual survey respondents. This typically occurs when the data for a geographic area, industry, or category are based on a small number of reporting units, making it possible to infer the identity or sensitive information of those entities. PwC employed a two-stage "raking" process to estimate the state-level employment, labor income, and value added (i.e., GDP) for the undisclosed subsectors. The raking process uses information from known sectors within a state and across states to impute information for the sectors with suppressed data.¹⁶

Historically, the BEA published time-series data on state-level paid employment and self-employment by industry annually. However, in September 2024, the BEA discontinued this data series, along with several other tables. PwC utilized the BLS 2023 paid employment data and assumed the same industry-specific

¹³ Wage and salary employment is a measure of the average annual number of full-time and part-time jobs. All jobs for which wages and salaries are paid are counted.

¹⁴ The BEA notes that the self-employment estimates resemble the wage and salary employment estimates in that both measure jobs—as opposed to workers—on a full-time and part-time basis. However, because of limitations in source data, two important measurement differences exist between the two sets of estimates. First, the self-employment estimates are largely on a place-of-residence basis rather than on the preferred place-of-work basis. Second, the self-employment estimates reflect the total number of sole proprietorships or partners active at any time during the year—as opposed to the annual average measure used for wage and salary employment.

¹⁵ For a discussion on how the BEA develops its estimate of self-employment, see: <https://www.bea.gov/sites/default/files/methodologies/SPI-Methodology.pdf>

¹⁶ Oh, H.L. and Scheuren, F. (1987). Modified Raking Ratio Estimation. *Survey Methodology*, vol. 13, no. 2, pp. 209-219.

relationship by state between paid employment and self-employment found in the last historical year available (2022) from the BEA in estimating self-employment in the oil and natural gas industry in 2023.

Labor income

Following the BEA convention, labor income reported in this study includes (1) employee compensation and (2) proprietors' income. Employee compensation is the sum of wages and salaries plus supplements to wages and salaries (also known as "fringe benefits").¹⁷ Proprietors' income is the current-production income of sole proprietorships, partnerships, and of tax-exempt cooperatives.

In cases where there is a one-to-one correspondence between the BEA sectors and the subsectors of the oil and natural gas industry, we used the 2023 BEA data on labor income without any further adjustment. This is the case for three NAICS codes: NAICS code 211 (oil and gas extraction), NAICS code 457 (gasoline stations and fuel dealers), and NAICS code 486 (pipeline transportation).

The remaining subsectors for the oil and natural gas industry are more disaggregated than reported in the BEA data. PwC first scaled the BLS annual wage (without fringe benefits) to match employee compensation (including fringe benefits) totals reported by the BEA at the more aggregated industry level. PwC also allocated proprietors' income (calculated as labor income less employee compensation) at the more disaggregated industry level according to the relationship between labor income and employee compensation from the BEA. Effectively, PwC allocated the more aggregated industry data for proprietors' income from the BEA across the subsectors of the oil and natural gas industry according to each subsector's share of labor income. For example, the BEA's proprietors' income for NAICS code 213 (support activities for mining) was allocated across its five subsectors including NAICS code 213111 (drilling oil and gas wells) and NAICS code 213112 (support activities for oil and gas operations).

Value added

Value added refers to the additional value created at a particular stage of production. It is a measure of the overall importance of an industry and represents the industry's portion of US GDP. Value added consists of

¹⁷ **Wages and salaries** are broadly defined to include commissions, tips, and bonuses; voluntary employee contributions to deferred compensation plans, such as 401(k) plans; employee gains from exercising stock options; and receipts-in-kind that represent income. They are measured before deductions, such as social security contributions, union dues, and voluntary employee contributions to defined contribution pension plans. The BEA's estimates of wages and salaries are based primarily on the QCEW. **Supplements to wages and salaries** consist of employer contributions for employee pension and insurance funds and employer contributions for government social insurance. This data are not available from the QCEW. The BEA has developed its estimates for employer contributions to defined benefit plans and to defined contribution plans based on sources such as the IRS Form 5500 (Annual Return/Report of Employee Benefit Plan). Separate estimates for group health insurance plans, group life insurance plans, supplemental unemployment benefit plans, and privately administered workers compensation plans have also been estimated by the BEA.

employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (including excise taxes, property taxes, fees, licenses, and sales taxes paid by businesses).

Similar to our treatment of labor income, in cases where there is a one-to-one correspondence between the BEA sectors and the subsectors of the oil and natural gas industry, we used the 2023 BEA data on value added without any further adjustment. This is the case for three NAICS codes: NAICS code 211 (oil and gas extraction), NAICS code 457 (gasoline stations and fuel dealers), and NAICS code 486 (pipeline transportation).

For the remaining subsectors for the oil and natural gas industry, PwC utilized the BEA's aggregated sector ratio of total value added to total labor income by state and applied it to the disaggregated subsectors by state to estimate state-level value added for each subsector included in the definition of the oil and natural gas industry. PwC further leveraged the detailed value added estimates from the IMPLAN model to refine our value added estimate for certain subsectors of the oil and natural gas industry, while maintaining consistency with the BEA at the aggregate level.

National totals

Direct employment, labor income, and value added of the oil and natural gas industry were separately estimated for each of the 50 states and the District of Columbia. The totals from all states and the District of Columbia are treated as the national level estimates.

Congressional district breakout

To develop the congressional district level direct employment estimates, PwC used a zip code-to-congressional district mapping from *GreatData* and the *Zip Code Business Patterns* data from the US Census Bureau to develop district-level allocation percentages, which are used to allocate state-level direct employment across the congressional districts.

The IMPLAN congressional district models were used to derive initial estimates of direct labor income and direct value added for each congressional district. The initial estimates were then controlled to the state totals estimated above.

2. Estimating capital investment effect

The Census Bureau's industry-level capital expenditure data from its Annual Capital Expenditures Survey ("ACES") are currently available through 2022 only. This is because the ACES has been transitioned to the

Annual Integrated Economic Survey (“AIES”). The AIES data collection work began in March 2024. Data from the 2023 AIES data collection cycle have not yet been fully released as of this writing.

For the current study, PwC estimated the oil and natural gas industry’s capital expenditures for 2022 based on data from the Census Bureau and then extended the estimate to 2023 based on the National Income and Product Accounts (“NIPA”) data published by the BEA. The industry’s capital spending was then translated into purchases of capital assets by type using the so-called “capital flow matrix” from the BEA.

3. Estimating dividend effect

PwC obtained data on common stock dividend payments by publicly traded companies in the US oil and natural gas industry.¹⁸ Dividend payments were allocated among (1) US households, (2) foreign shareholders, (3) retirement plans, (4) governments, and (5) other businesses using data from the Federal Reserve Board’s *Financial Accounts of the United States*.

For the purpose of estimating the industry’s dividend effect, only dividends paid by publicly traded companies in the oil and natural gas industry to US households and retirement plans are considered. Dividends paid to US households were allocated by income group and across the 50 states and the District of Columbia using tax return data published by the Internal Revenue Service (IRS)’s Statistics of Income Division.

Dividends paid to pension plans and other retirement accounts were allocated across income groups based on data on retirement assets by income quintile obtained from the 2022 *Survey of Consumer Finances*, conducted by the Federal Reserve. The data were then allocated across the 50 states and the District of Columbia using data on the distribution of assets in 401(k) and thrift savings accounts from the *Survey of Income and Program Participation* conducted by the US Census Bureau. These data were combined with the data on dividends paid directly to US households by publicly traded companies in the oil and natural gas industry to derive our estimates of total dividends paid by publicly traded companies in the industry to residents in each state.

To quantify the economic effect resulting from these dividend payments, PwC first converted them into additional household consumption expenditures. For dividends paid directly to households, after-tax dividend income was estimated by income class based on average tax rates on dividend income. The additional consumption from dividends paid directly to households was estimated using published estimates

¹⁸ The measure of dividends used includes cash dividends from all classes of common stock out of income from US operations by publicly traded US corporations in the oil and natural gas industry. It also includes dividends paid to US shareholders out of income from US operations by foreign corporations in the industry. It does not include the dollar value of stock dividends or dividends paid or accrued on preferred stock.

of the marginal propensity to consume out of after-tax dividend income.¹⁹ Similarly, the additional consumption resulting from dividends paid to retirement accounts was estimated based on published estimates of the marginal propensity to consume out of wealth.²⁰ This estimate is done at the national and state level.

At the congressional district level, PwC obtained data on qualified dividends by zip code from the IRS. These zip code level data are then mapped to each congressional district. The state-level estimates on the additional consumption from after-tax dividends are allocated to each congressional district based on the distribution of qualified dividends at the district level.

4. Estimating the indirect and induced economic contributions

The initial round of output, income, and employment generated by the operations of the oil and natural gas industry leads to successive rounds of re-spending in the chain of production and through the personal consumption spending of industry and supplier employees. Such indirect and induced economic contributions can be measured using various approaches. The most common is multiplier analysis. In broad terms, a multiplier is an index that indicates the overall change in the level of economic activity that results from a given initial change. It effectively adds up all the successive rounds of re-spending, based on assumptions that are embedded in the method of estimation.

There are different methods available for calculating multipliers. The method used in this report is *input-output* analysis. It is the most used approach in regional economic footprint studies. The input-output model developed by IMPLAN is a well-known input-output model for regional economic studies in the United States and is widely used by government, academics and private-sector researchers.²¹

The IMPLAN model is built around an “input-output” table that relates the purchases that each industry has made from other industries to the value of the output of each industry. To meet the demand for goods and services from an industry, purchases are made in other industries according to the patterns recorded in the input-output table. These purchases in turn spark still more purchases by the industry’s suppliers, and so on. Additionally, employees and business owners make personal purchases out of the additional income that is generated by this process, sending new demands rippling through the economy. Multipliers describe these

¹⁹ The marginal propensity to consume out of dividend income is a measure of the additional consumption resulting from the last dollar of dividend income earned. The MPCs used for this study were based on Malcolm Baker, Stefan Nagel, and Jeffrey Wurgler, “The Effects of Dividends on Consumption” *Brookings Papers on Economic Activity*, 2007, pgs. 213-291. Using two micro data sets the authors estimated pre-tax MPCs ranging from 0.25 to 0.77. Using the authors’ midpoint estimate of 0.4, PwC estimated the after-tax MPC for each income group as the pre-tax MPC divided by one minus the marginal effective tax rate on dividend income.

²⁰ A review of the literature suggests that each additional dollar of financial wealth increases consumption between two and six cents. To be conservative we have assumed an MPC out of wealth of 0.028 for all income groups (based on Gabriel Chodorow-Reich, Plamen T. Nenov, and Alp Simsek, “Stock Market Wealth and the Real Economy: A Local Labor Market Approach,” working paper, June 7, 2019).

²¹ More information on IMPLAN is available at www.implan.com.

iterations. The Type I multiplier measures the direct and indirect effects of a change in economic activity. It captures the inter-industry effects only, i.e., industries buying from local industries. The Type II (Social Accounting Matrix or SAM) multiplier captures the direct and indirect effects, and, in addition, it also reflects induced effects (i.e., changes in spending from households as income increases or decreases due to the changes in production). The indirect and induced effects by the oil and natural gas industry on other sectors of the economy in terms of employment, labor income (including wages and salaries and benefits as well as proprietors' income), and value added were calculated through the multiplier process built into the model.²²

For this study, PwC built customized IMPLAN input-output models for the national economy, each state and the District of Columbia, and each Congressional District to calculate the oil and natural gas industry's *indirect* and *induced* economic effects on each study area in terms of employment, labor income, and value added.

Because IMPLAN regional models capture only the indirect and induced effects within a study area, the indirect and induced effects crossing state borders ("cross-state spillover effects") are not captured by the IMPLAN state models. PwC quantified the cross-state "spillover effects" and allocated them proportionally to each state. The state indirect and induced effects reported throughout this study include such allocation of the cross-state spillover effects. Similar modeling was performed at the congressional district level to capture cross-district spillover effects.

5. Limitations

A study using input-output models with fixed coefficients has certain limitations.

Firstly, the assumption of fixed coefficients implies that the technology and production processes remain constant over time. However, this may not reflect real-world dynamics, such as technological advancements or changes in production methods in the study period.

Secondly, IO models assume linear relationships between inputs and outputs, whereas in reality, these relationships are often nonlinear and can vary depending on specific circumstances. This can result in less precise model outputs. Additionally, these models do not account for changes in relative prices, substitution effects, or shifts in consumer demand, all of which can significantly influence economic outcomes.

²² Because the IMPLAN models are used for total contribution analysis (as opposed to marginal impact analysis) in this study, necessary adjustments are made to the initial indirect and induced effect estimates to prevent double counting. For instance, any indirect or induced effects from the estimates that are mapped to the oil and natural gas industry are removed.

Thirdly, IO models assume rational behaviors of economic agents. However, the behavior of consumers and firms are influenced by various social, psychological, and cultural factors that may not be fully accounted in these models. As a result, the accuracy of estimates may be affected.

Considering these limitations, it is important to interpret the estimates from IO models with caution. While they can provide valuable insights, actual effects may diverge from the model's estimates due to the complexity and variability of real-world economies.

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