

**THE ECONOMIC IMPACTS OF THE OIL AND
NATURAL GAS INDUSTRY ON THE U.S.
ECONOMY: EMPLOYMENT, LABOR INCOME
AND VALUE ADDED**

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THE ECONOMIC IMPACTS OF THE OIL AND NATURAL GAS INDUSTRY ON THE U.S. ECONOMY: EMPLOYMENT, LABOR INCOME AND VALUE ADDED

Executive Summary

The oil and natural gas industry, a vital link in the nation's energy supply, makes important contributions to the U.S. economy by providing an economical energy source for transportation and the production of other goods and services. The oil and natural gas industry currently supplies more than 60% of the nation's total energy demands and more than 99% of the fuel used by Americans in their cars and trucks¹, while 900 of the next 1000 U.S. power plants are projected to use natural gas.²

In addition to the important products made available by the oil and natural gas industry, the industry also makes significant economic contributions as an employer and purchaser of goods and services. The oil and natural gas industry is one of the largest employers in the country, employing millions of Americans in exploring, producing, processing, transporting, and marketing oil and natural gas. Millions of jobs in other industries are supported by the oil and natural gas industry's purchases of intermediate inputs and capital goods from other U.S. producers. These businesses include equipment suppliers, construction services, management services, food services, and many other types of support services. These supporting businesses, in turn, purchase goods and services, spurring additional economic activities. Further, employees and business owners make personal purchases out of the additional income that is generated by this process, sending more new demands rippling through the economy.

The purpose of this report is to quantify the contribution of the U.S. oil and natural gas industry to the U.S. national and state economies in terms of employment, labor income (including wages and salaries and benefits, as well as proprietors' income), and value added.³ The *direct impact* is measured as the jobs, labor income, and value added within the oil and natural gas industry. The *indirect impact* is measured as the jobs, labor income, and value added occurring within other industries that provide goods and services to the oil and natural gas industry. The *induced impact* is measured as the jobs, labor income, and value added resulting from household spending of income earned either directly or indirectly from the oil and natural gas industry's spending. The combination of these three effects comprises the total contribution of the U.S. oil and natural gas industry. At the national level, this report quantifies both the industry's *operational impact* (due to purchases of intermediate inputs) and *capital investment impact* (due to purchases of new structures and equipment). The report does not address the economic effects of the use of oil and natural gas in the economy.

In 2007, the most recent year for which data are available, PricewaterhouseCoopers estimates that, combining the operational and capital investment impacts, the U.S. oil and natural gas industry's total employment contribution to the national economy amounted to 9.2 million full-time and part-time jobs, accounting for 5.2 percent of the total employment in the country (see **Table E-1**). The associated labor income,

¹ <http://www.api.org/aboutoilgas/> and <http://www.energy.gov/energysources/oil.htm>

² <http://www.energy.gov/energysources/naturalgas.htm>

³ 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. Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (i.e., those borne by consumers rather than producers).

including proprietors' income, was estimated to be \$558 billion, or 6.3 percent of the national labor income total. The industry's total value-added contribution to the national economy was over \$1 trillion, accounting for 7.5 percent of U.S. GDP in 2007.

Table E-1. Total Contribution of the Oil and Natural Gas Industry to the U.S. Economy, 2007

Item	Amount	Percent of U.S. Total
<i>Operational Impact</i>		
Employment*	7,818,437	4.4%
Labor Income (\$ millions)**	477,249	5.4%
Value Added (\$ millions)	915,370	6.6%
<i>Capital Investment Impact</i>		
Employment*	1,418,944	0.8%
Labor Income (\$ millions)**	81,012	0.9%
Value Added (\$ millions)	121,690	0.9%
<i>Total Impacts</i>		
Employment*	9,237,381	5.2%
Labor Income (\$ millions)**	558,260	6.3%
Value Added (\$ millions)	1,037,060	7.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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.

The economic impact of the oil and natural gas industry reaches all 50 states and the District of Columbia. Due to data limitations, this study has only quantified the oil and natural gas industry's operational impact at the state level. The total number of jobs directly or indirectly attributable to the oil and natural gas industry's operations ranged from a low of 12,815 (in the District of Columbia) to more than 1.7 million (in Texas). The top 15 states, in terms of the total number of jobs directly or indirectly attributable to the oil and natural gas industry's operations in 2007 (**Table E-2a**) were Texas, California, Oklahoma, Louisiana, New York, Pennsylvania, Florida, Illinois, Ohio, Colorado, Michigan, Georgia, North Carolina, Virginia, and New Jersey. Combined these states account for nearly 70 percent of the total jobs attributable to the U.S. oil and natural gas industry's operations.

**Table E-2a. Total Operational Impact of the Oil and Natural Gas Industry, 2007
Top 15 States, Ranked by Total Employment Contribution**

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of State Total	(\$ Million)	Percent of State Total	(\$ Million)	Percent of State Total
Texas	1,772,335	13.1%	140,941	19.5%	293,760	24.2%
California	752,614	3.7%	54,122	4.6%	100,958	5.5%
Oklahoma	348,627	16.3%	22,550	24.7%	47,839	31.3%
Louisiana	330,053	13.4%	18,449	16.6%	35,986	20.6%
New York	281,267	2.6%	21,452	3.0%	36,347	3.3%
Pennsylvania	271,250	3.8%	14,494	4.1%	25,772	4.8%
Florida	267,277	2.6%	11,441	2.6%	19,946	2.8%
Illinois	260,001	3.5%	16,953	4.2%	31,323	5.0%
Ohio	229,438	3.4%	11,121	3.7%	20,201	4.5%
Colorado	190,408	6.0%	12,438	7.7%	24,099	9.3%
Michigan	179,495	3.3%	9,820	3.8%	17,711	4.4%
Georgia	145,806	2.7%	6,841	2.7%	12,032	3.0%
North Carolina	145,779	2.7%	6,007	2.6%	10,623	2.9%
Virginia	143,479	3.0%	6,923	2.7%	11,968	3.1%
New Jersey	143,342	2.8%	9,461	3.1%	16,853	3.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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.

The oil and natural gas industry directly and indirectly supported 4 percent or more of the total employment in 15 states in 2007 (see **Table E-2b**): Wyoming (18.8 percent) Oklahoma (16.3 percent), Louisiana (13.4 percent), Texas (13.1 percent), Alaska (9.8 percent), New Mexico (8.1 percent), West Virginia (6.7 percent), Kansas (6.5 percent), Colorado (6.0 percent), North Dakota (5.7 percent), Mississippi (5.5 percent), Montana (5.3 percent), Utah (4.7 percent), Arkansas (4.4 percent) and Nebraska (4.0 percent).

**Table E-2b. Total Operational Impact of the Oil and Natural Gas Industry, 2007
Top 15 States, Ranked by Employment Share of State Total**

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of State Total	(\$ Million)	Percent of State Total	(\$ Million)	Percent of State Total
Wyoming	71,063	18.8%	4,060	24.3%	8,432	29.4%
Oklahoma	348,627	16.3%	22,550	24.7%	47,839	31.3%
Louisiana	330,053	13.4%	18,449	16.6%	35,986	20.6%
Texas	1,772,335	13.1%	140,941	19.5%	293,760	24.2%
Alaska	43,454	9.8%	3,143	13.5%	6,064	16.6%
New Mexico	88,814	8.1%	4,307	9.5%	8,292	12.2%
West Virginia	60,891	6.7%	2,740	7.4%	5,412	9.4%
Kansas	119,051	6.5%	6,738	8.8%	14,029	11.4%
Colorado	190,408	6.0%	12,438	7.7%	24,099	9.3%
North Dakota	27,914	5.7%	1,346	7.6%	2,773	9.6%
Mississippi	83,820	5.5%	3,609	6.5%	7,244	8.4%
Montana	34,210	5.3%	1,584	7.0%	3,324	8.9%
Utah	76,188	4.7%	3,960	5.9%	7,822	7.6%
Arkansas	69,640	4.4%	2,884	4.9%	5,589	6.0%
Nebraska	49,784	4.0%	2,743	5.6%	5,112	6.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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.

THE ECONOMIC IMPACTS OF THE OIL AND NATURAL GAS INDUSTRY ON THE U.S. ECONOMY: EMPLOYMENT, LABOR INCOME AND VALUE ADDED

I. Introduction

The purpose of this report is to quantify the contribution of the U.S. oil and natural gas industry as an employer and purchaser of goods and services to the U.S. national and state economies in terms of employment, labor income (including wages and salaries and benefits, as well as proprietors' income), and value added.⁴ At the national level, this study quantifies both the industry's *operational impact* from its purchase of intermediate inputs and *capital investment impact* from its purchases of new structures and equipment, while at the state level, this study has only quantified the industry's *operational impact* due to data limitations. The economic effects of the use of oil and natural gas in the economy are beyond the scope of this analysis.

In describing the economic impact of the U.S. oil and natural gas industry through its employment and purchases of goods and services, it is standard to consider three separate channels that in aggregate constitute the total economic impact of the oil and natural gas industry: direct impact, indirect impact, and induced impact.

- *Direct impact* is measured as the jobs, labor income, and value added within the oil and natural gas industry.
- *Indirect impact* is measured as the jobs, labor income, and value added occurring within other industries that provide goods and services to the oil and natural gas industry.
- *Induced impact* is measured as the jobs, labor income, and value added resulting from household spending of income earned either directly or indirectly from the oil and natural gas industry's spending.

In total, these three effects result in the oil and natural gas industry having a widespread economic impact throughout all sectors of the U.S. economy and in all geographic areas.

Using the IMPLAN input-output modeling system, PricewaterhouseCoopers has built customized multiplier models for the U.S. as a whole, as well as the 50 states and the District of Columbia. The models document the oil and natural gas industry's economic contributions at the national and state level in 2007, the most recent historical year for which a consistent set of national and state level data are available from the IMPLAN modeling system.⁵ The input-output multiplier models trace all the *backward linkages* among industries in a geographic region.⁶ They do not capture any *forward linkages* (i.e., the link between an industry producing a good or service and the consumers of that good or service).

The rest of this report is organized as follows. Section II defines the oil and natural gas industry for this study. Section III presents the direct impact analysis, followed by

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. Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (i.e., those borne by consumers rather than producers).

⁵ The IMPLAN input-output economic modeling system is supported by the Minnesota IMPLAN Group. Its current users include academia, federal, state, and local governments, and the private sector.

⁶ A backward linkage is between an industry and its suppliers.

indirect and induced impact analysis in Section IV. Detailed state-by-state operational impact results are presented in Appendix A. Data sources and methodology used in this research report are discussed in Appendix B.

II. Industry Definition

In government economic statistics, the oil and natural gas industry encompasses a number of sectors. Oil and natural gas production is included in the “mining” sector; oil refining is part of the “manufacturing” sector; pipeline operations are included in the “transportation” sector; natural gas distribution is in the “utilities” sector; and oil marketing is considered part of the “wholesale and retail trade” sector.

For the economic impact analysis, PricewaterhouseCoopers has defined the oil and natural gas industry based on the *North American Industry Classification System* (NAICS). **Table 1** shows the composition of the industry as defined by PricewaterhouseCoopers, followed by detailed NAICS descriptions.

Table 1. Composition of Oil and Natural Gas Industry

NAICS	IMPLAN SECTOR	Description
211	20	Oil and gas extraction (including NGL extraction)
213111	28	Drilling oil and gas wells
213112	29	Support activities for oil and gas operations
2212	32	Natural gas distribution (private)
2212	432*	Natural gas distribution (public)
23712	36*	Oil and gas pipeline and related structures construction
32411	115	Petroleum refineries
324191	118	Petroleum lubricating oil and grease manufacturing
32412	116,117	Asphalt paving, roofing, and saturated materials manufacturing
4247	319*	Petroleum and petroleum products merchant wholesalers
486	337	Pipeline transportation
44711	326	Gasoline stations with convenience stores
44719	326	Other gasoline stations
45431	331*	Fuel dealers

* Other activities outside the oil and natural gas industry are also included in this IMPLAN sector.

NAICS 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 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 in, drilling in, re-drilling, and directional drilling.

NAICS 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 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 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 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 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 32412. Asphalt paving, roofing, and saturated materials manufacturing. This subsector comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

NAICS 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 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.

NAICS 44711. Gasoline stations with convenience stores. This subsector comprises establishments engaged in retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) in combination with convenience store or food mart items. These establishments can either be in a convenience store (i.e., food mart) setting or a gasoline station setting. These establishments may also provide automotive repair services.

NAICS 44719. Other gasoline stations. This subsector comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/or providing food services

NAICS 45431. Fuel dealers. This subsector comprises establishments primarily engaged in retailing heating oil, liquefied petroleum (LP) gas, and other fuels via direct selling.

III. Total Economic Impact

This section presents the estimated total economic impact of the oil and natural gas industry on the U.S. national and state economies. As shown below, the oil and natural gas industry has a widespread economic impact throughout all sectors of the economy and across all 50 states and the District of Columbia. The total economic impact we have measured includes the *direct impact* (the jobs and value added within the oil and natural gas industry), the *indirect impact* (the jobs and value added occurring within other industries that provide goods and services to the oil and natural gas industry), and the *induced impact* (the jobs and value added resulting from household spending of income earned either directly or indirectly from the oil and natural gas industry's spending). At the national level, both the industry's *operational impact* and *capital investment impacts* are included. At the state level, only the industry's *operational impact* is reported due to data limitations. The analysis was conducted using published government data sources and the IMPLAN input-output modeling system.

A. National Impact

As shown in **Table 2**, the total economic contribution of the oil and natural gas industry in terms of jobs, labor income (including wages and salaries and benefits as well as proprietors' income), and value added is significant.

Employment

PricewaterhouseCoopers estimates that at the national level, each job in the oil and natural gas industry supported more than three jobs elsewhere in the U.S. economy in 2007. In terms of *operational impact*, the oil and natural gas industry directly and indirectly contributed over 7.8 million full-time and part-time jobs to the national economy in 2007. Further, the oil and natural gas industry's capital investment contributed an additional 1.4 million jobs to the national economy. Combining both operational and capital investment impacts, the oil and natural gas industry's total employment contribution to the national economy amounted to 9.2 million full-time and part-time jobs in 2007, accounting for 5.2 percent of the total employment in the country.

Labor Income

The associated labor income (including wages and salaries and benefits, as well as proprietors' income) from the total jobs directly or indirectly supported by the oil and natural gas industry through its operational spending and capital investment was estimated to be \$558 billion, or 6.3 percent of the national total labor income.

Value Added

Value added refers to the additional value created at a particular stage of production. Economists use the value-added method as a way to avoid double counting, i.e., the counting of the same input twice. It is a useful measure of the overall importance of an industry. The sum of value added across all industries in a country or region is, by definition, equivalent to its Gross Domestic Product (GDP). Value added consists of: employee compensation, proprietors' income, income to capital owners from property, and indirect business taxes (i.e., those borne by consumers rather than producers).

PricewaterhouseCoopers estimates that the oil and natural gas industry's *operations* directly or indirectly contributed \$915 billion of value added to the U.S. economy in 2007, and its *capital investment* resulted in an additional \$122 billion of value added. Combining both operational and capital investment impacts, the industry's total value-added contribution to the national economy was over \$1 trillion, accounting for 7.5 percent of U.S. GDP in 2007.

Table 2. Total Contribution of the Oil and Natural Gas Industry to the U.S. Economy, 2007

Item	Amount	Percent of U.S. Total
<i>Operational Impact</i>		
Employment*	7,818,437	4.4%
Labor Income (\$ millions)**	477,249	5.4%
Value Added (\$ millions)	915,370	6.6%
<i>Capital Investment Impact</i>		
Employment*	1,418,944	0.8%
Labor Income (\$ millions)**	81,012	0.9%
Value Added (\$ millions)	121,690	0.9%
<i>Total Impacts</i>		
Employment*	9,237,381	5.2%
Labor Income (\$ millions)**	558,260	6.3%
Value Added (\$ millions)	1,037,060	7.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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.

B. State Impact

The oil and natural gas industry's economic impact reaches all 50 states and the District of Columbia. The impact varies from state to state, depending on factors such as each state's industry mix, wage structure, spending and saving patterns, and connections to other economies.

Table 3a shows the oil and natural gas industry's state-by-state total *operational* impact in terms of jobs, labor income (including wages and salaries and benefits as well as proprietors' income), and value added, where the states are shown alphabetically.

Table 3b is the same as **Table 3a**, except that the states are ranked in order of the industry's total employment contribution as a percent of each state's total employment. The state-level results, as explained earlier, do not include the economic impact of the industry's significant capital investment.

Table 3a. Total Operational Impact of the Oil and Natural Gas Industry by State in 2007 (Sorted Alphabetically)

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of State Total	(\$ Million)	Percent of State Total	(\$ Million)	Percent of State Total
Alabama	94,732	3.7%	4,262	3.9%	7,836	4.7%
Alaska	43,454	9.8%	3,143	13.5%	6,064	16.6%
Arizona	96,685	2.9%	4,653	3.0%	8,278	3.4%
Arkansas	69,640	4.4%	2,884	4.9%	5,589	6.0%
California	752,614	3.7%	54,122	4.6%	100,958	5.5%
Colorado	190,408	6.0%	12,438	7.7%	24,099	9.3%
Connecticut	62,686	2.9%	4,345	3.1%	7,492	3.5%
Delaware	15,437	2.9%	916	3.2%	1,707	4.0%
District of Columbia	12,815	1.5%	1,157	1.4%	1,777	1.7%
Florida	267,277	2.6%	11,441	2.6%	19,946	2.8%
Georgia	145,806	2.7%	6,841	2.7%	12,032	3.0%
Hawaii	18,539	2.1%	855	2.1%	1,533	2.4%
Idaho	24,000	2.6%	928	2.7%	1,700	3.2%
Illinois	260,001	3.5%	16,953	4.2%	31,323	5.0%
Indiana	127,355	3.5%	5,907	3.8%	10,992	4.5%
Iowa	63,254	3.1%	2,295	3.0%	4,069	3.3%
Kansas	119,051	6.5%	6,738	8.8%	14,029	11.4%
Kentucky	87,490	3.6%	3,653	3.7%	6,712	4.4%
Louisiana	330,053	13.4%	18,449	16.6%	35,986	20.6%
Maine	29,897	3.6%	1,051	3.3%	1,948	4.0%
Maryland	78,224	2.3%	3,920	2.1%	6,688	2.4%
Massachusetts	112,086	2.7%	7,242	2.9%	12,197	3.3%
Michigan	179,495	3.3%	9,820	3.8%	17,711	4.4%
Minnesota	113,708	3.2%	5,351	3.2%	9,271	3.6%
Mississippi	83,820	5.5%	3,609	6.5%	7,244	8.4%
Missouri	122,820	3.4%	5,253	3.4%	9,115	3.9%
Montana	34,210	5.3%	1,584	7.0%	3,324	8.9%
Nebraska	49,784	4.0%	2,743	5.6%	5,112	6.7%
Nevada	43,140	2.7%	2,088	2.7%	3,839	3.1%
New Hampshire	26,256	3.1%	1,218	3.1%	2,181	3.6%
New Jersey	143,342	2.8%	9,461	3.1%	16,853	3.5%
New Mexico	88,814	8.1%	4,307	9.5%	8,292	12.2%
New York	281,267	2.6%	21,452	3.0%	36,347	3.3%
North Carolina	145,779	2.7%	6,007	2.6%	10,623	2.9%
North Dakota	27,914	5.7%	1,346	7.6%	2,773	9.6%
Ohio	229,438	3.4%	11,121	3.7%	20,201	4.5%
Oklahoma	348,627	16.3%	22,550	24.7%	47,839	31.3%
Oregon	60,122	2.6%	2,590	2.6%	4,494	3.0%
Pennsylvania	271,250	3.8%	14,494	4.1%	25,772	4.8%
Rhode Island	16,160	2.7%	822	2.8%	1,456	3.4%
South Carolina	68,303	2.8%	2,468	2.5%	4,292	2.8%
South Dakota	19,942	3.6%	763	3.9%	1,459	4.6%
Tennessee	114,194	3.1%	5,048	3.1%	8,750	3.5%
Texas	1,772,335	13.1%	140,941	19.5%	293,760	24.2%
Utah	76,188	4.7%	3,960	5.9%	7,822	7.6%
Vermont	14,159	3.3%	492	3.0%	900	3.6%
Virginia	143,479	3.0%	6,923	2.7%	11,968	3.1%
Washington	106,616	2.7%	5,792	2.9%	10,333	3.4%
West Virginia	60,891	6.7%	2,740	7.4%	5,412	9.4%
Wisconsin	103,821	2.9%	4,053	2.7%	6,837	3.0%
Wyoming	71,063	18.8%	4,060	24.3%	8,432	29.4%
U.S. Total	7,818,437	4.4%	477,249	5.4%	915,370	6.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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 3b. Total Operational Impact of the Oil and Natural Gas Industry by State in 2007 (Sorted by Employment Share of State Total)

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of State Total	(\$ Million)	Percent of State Total	(\$ Million)	Percent of State Total
Wyoming	71,063	18.8%	4,060	24.3%	8,432	29.4%
Oklahoma	348,627	16.3%	22,550	24.7%	47,839	31.3%
Louisiana	330,053	13.4%	18,449	16.6%	35,986	20.6%
Texas	1,772,335	13.1%	140,941	19.5%	293,760	24.2%
Alaska	43,454	9.8%	3,143	13.5%	6,064	16.6%
New Mexico	88,814	8.1%	4,307	9.5%	8,292	12.2%
West Virginia	60,891	6.7%	2,740	7.4%	5,412	9.4%
Kansas	119,051	6.5%	6,738	8.8%	14,029	11.4%
Colorado	190,408	6.0%	12,438	7.7%	24,099	9.3%
North Dakota	27,914	5.7%	1,346	7.6%	2,773	9.6%
Mississippi	83,820	5.5%	3,609	6.5%	7,244	8.4%
Montana	34,210	5.3%	1,584	7.0%	3,324	8.9%
Utah	76,188	4.7%	3,960	5.9%	7,822	7.6%
Arkansas	69,640	4.4%	2,884	4.9%	5,589	6.0%
Nebraska	49,784	4.0%	2,743	5.6%	5,112	6.7%
Pennsylvania	271,250	3.8%	14,494	4.1%	25,772	4.8%
Alabama	94,732	3.7%	4,262	3.9%	7,836	4.7%
California	752,614	3.7%	54,122	4.6%	100,958	5.5%
Kentucky	87,490	3.6%	3,653	3.7%	6,712	4.4%
South Dakota	19,942	3.6%	763	3.9%	1,459	4.6%
Maine	29,897	3.6%	1,051	3.3%	1,948	4.0%
Illinois	260,001	3.5%	16,953	4.2%	31,323	5.0%
Indiana	127,355	3.5%	5,907	3.8%	10,992	4.5%
Ohio	229,438	3.4%	11,121	3.7%	20,201	4.5%
Missouri	122,820	3.4%	5,253	3.4%	9,115	3.9%
Michigan	179,495	3.3%	9,820	3.8%	17,711	4.4%
Vermont	14,159	3.3%	492	3.0%	900	3.6%
Minnesota	113,708	3.2%	5,351	3.2%	9,271	3.6%
Iowa	63,254	3.1%	2,295	3.0%	4,069	3.3%
Tennessee	114,194	3.1%	5,048	3.1%	8,750	3.5%
New Hampshire	26,256	3.1%	1,218	3.1%	2,181	3.6%
Virginia	143,479	3.0%	6,923	2.7%	11,968	3.1%
Wisconsin	103,821	2.9%	4,053	2.7%	6,837	3.0%
Arizona	96,685	2.9%	4,653	3.0%	8,278	3.4%
Delaware	15,437	2.9%	916	3.2%	1,707	4.0%
Connecticut	62,686	2.9%	4,345	3.1%	7,492	3.5%
New Jersey	143,342	2.8%	9,461	3.1%	16,853	3.5%
South Carolina	68,303	2.8%	2,468	2.5%	4,292	2.8%
Washington	106,616	2.7%	5,792	2.9%	10,333	3.4%
North Carolina	145,779	2.7%	6,007	2.6%	10,623	2.9%
Georgia	145,806	2.7%	6,841	2.7%	12,032	3.0%
Nevada	43,140	2.7%	2,088	2.7%	3,839	3.1%
Massachusetts	112,086	2.7%	7,242	2.9%	12,197	3.3%
Rhode Island	16,160	2.7%	822	2.8%	1,456	3.4%
Oregon	60,122	2.6%	2,590	2.6%	4,494	3.0%
Idaho	24,000	2.6%	928	2.7%	1,700	3.2%
Florida	267,277	2.6%	11,441	2.6%	19,946	2.8%
New York	281,267	2.6%	21,452	3.0%	36,347	3.3%
Maryland	78,224	2.3%	3,920	2.1%	6,688	2.4%
Hawaii	18,539	2.1%	855	2.1%	1,533	2.4%
District of Columbia	12,815	1.5%	1,157	1.4%	1,777	1.7%
U.S. Total	7,818,437	4.4%	477,249	5.4%	915,370	6.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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.

Employment

The total number of jobs directly or indirectly attributable to the oil and natural gas industry's operations as a percent of each state's total employment in 2007 ranged from 1.5 percent (the District of Columbia) to nearly one in every five jobs (Wyoming). The oil and natural gas industry directly and indirectly supported more than 5 percent of the total employment in 12 states in 2007: Wyoming (18.8 percent) Oklahoma (16.3 percent), Louisiana (13.4 percent), Texas (13.1 percent), Alaska (9.8 percent), New Mexico (8.1 percent), West Virginia (6.7 percent), Kansas (6.5 percent), Colorado (6.0 percent), North Dakota (5.7 percent), Mississippi (5.5 percent) and Montana (5.3 percent). In these top 12 states, the oil and natural gas industry on average was directly or indirectly responsible for one in every nine jobs.

Labor Income

As a percent of each state's total labor income (including wages and salaries and benefits as well as proprietors' income), the labor income from the total jobs directly and indirectly supported by the oil and natural gas industry's operations ranged from 1.4 percent (the District of Columbia) to one in every four dollars of labor income (Oklahoma) in 2007. The oil and natural gas industry's total labor income contribution exceeded 5 percent of the state total in 14 states: Oklahoma (24.7 percent), Wyoming (24.3 percent), Texas (19.5 percent), Louisiana (16.6 percent), Alaska (13.5 percent), New Mexico (9.5 percent), Kansas (8.8 percent), Colorado (7.7 percent), North Dakota (7.6 percent), West Virginia (7.4 percent), Montana (7.0 percent), Mississippi (6.5 percent), Utah (5.9 percent), and Nebraska (5.6 percent).

Value Added

As a percent of each state's economy, the oil and natural gas industry's total value-added contribution from its operations ranged from 1.7 percent (the District of Columbia) to just under one in every three dollars of value added (Oklahoma) in 2007. The oil and natural gas industry's total value-added contribution accounted for at least 5 percent of the state total in 17 states: Oklahoma (31.3 percent), Wyoming (29.4 percent), Texas (24.2 percent), Louisiana (20.6 percent), Alaska (16.6 percent), New Mexico (12.2 percent), Kansas (11.4 percent), North Dakota (9.6 percent), West Virginia (9.4 percent), Colorado (9.3 percent), Montana (8.9 percent), Mississippi (8.4 percent), Utah (7.6 percent), Nebraska (6.7 percent), Arkansas (6.0 percent), California (5.5 percent), and Illinois (5.0 percent).

IV. Economic Impact Breakdown: Direct, Indirect, and Induced Impacts

As noted earlier, the total economic impact presented in the previous section includes the *direct impact* (the jobs, labor income, and value added within the oil and natural gas industry), the *indirect impact* (the jobs and value added occurring within other industries that provide goods and services to the oil and natural gas industry), and the *induced impact* (the jobs and value added resulting from household spending of income earned either directly or indirectly from the oil and natural gas industry's spending). In this section, the three different economic impacts will be separately identified.

Direct Impact

Table 4 shows the direct impact of the oil and natural gas industry by NAICS subsectors for the country as a whole in terms of employment, labor income (including wages and salaries and benefits as well as proprietors' income), and value added.

In 2007, the oil and natural gas industry directly provided 2.1 million jobs for American workers with approximately \$200 billion in wages and salaries and fringe benefits and proprietors' income. The industry directly contributed over \$450 billion to the national GDP.

Table 4. Direct Impact of the Oil and Natural Gas Industry in the U.S. Economy by Sub-sector, 2007

NAICS	Sub-sector Description	Employment*	Labor Income**	Value Added
		Amount	(\$ Millions)	(\$ Millions)
211	Oil and gas extraction (including NGL extraction)	368,451	67,989	161,763
213111	Drilling oil and gas wells	87,996	8,215	41,986
213112	Support activities for oil and gas operations	205,662	16,843	22,276
2212	Natural gas distribution (private)	108,900	17,892	43,816
2212	Natural gas distribution (public)	8,654	538	770
23712	Oil and gas pipeline and related structures construction	97,817	4,930	5,312
32411	Petroleum refineries	70,410	31,055	85,483
324191	Petroleum lubricating oil and grease manufacturing	9,543	2,351	5,177
32412	Asphalt paving, roofing, and saturated materials manufacturing	26,387	5,740	13,033
4247	Petroleum and petroleum products merchant wholesalers	103,472	7,408	12,536
486	Pipeline transportation	39,377	9,764	12,268
44711, 44719	Gasoline stations	905,803	25,150	48,117
45431	Fuel dealers	<u>90,817</u>	<u>1,470</u>	<u>4,434</u>
	Total Oil and Natural Gas Industry	2,123,291	199,344	456,971

Source: IMPLAN 2007 database, U.S. Census Bureau and U.S. Department of Labor.

* 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 5a shows the direct employment, labor income (including wages and salaries and benefits as well as proprietors' income) and value added impacts of the oil and natural

gas industry as a whole by state, where the states are shown alphabetically. **Table 5b** is the same as **Table 5a**, except that the states are ranked by the oil and natural gas industry's direct employment. In 2007, the ten states with the largest combined direct employment effect generated by the oil and natural gas industry were, in order: Texas, California, Louisiana, Oklahoma, Pennsylvania, Ohio, Florida, New York, Illinois, and Colorado. These top ten states accounted for 54.7 percent of the oil and natural gas industry's national direct employment, 74.0 percent of the oil and natural gas industry's national direct labor income, and 75.3 percent of the oil and natural gas industry's national direct value added in 2007.

Indirect and induced Impacts

The oil and natural gas industry purchases intermediate inputs from a variety of other U.S. industries, supporting jobs in these industries and spurring additional rounds of purchases. Meanwhile, employees and business owners make personal purchases out of the additional income that is generated by this process. The jobs, labor income (including wages and salaries and benefits as well as proprietors' income), and value added supported by this cycle of spending, or multiplier process, are referred to as the indirect and induced economic impacts.

In addition, the oil and natural gas industry purchases capital goods from a variety of U.S. suppliers, which has a similar multiplier effect on the rest of the U.S. economy. Based on data from the Census Bureau and U.S. Department of Commerce, PricewaterhouseCoopers estimates that the oil and natural gas industry invested over \$150 billion in new equipment and structures in 2007.

PricewaterhouseCoopers quantified these indirect and induced impacts of both the oil and natural gas industry's operational and capital spending using the customized impact models PricewaterhouseCoopers has built based on the IMPLAN modeling system.

Table 6 shows the oil and natural gas industry's indirect and induced impacts by sector, separately identifying its *operational* and *capital investment* impacts. PricewaterhouseCoopers estimates that in addition to the 2.1 million direct jobs in the oil and natural gas industry, the industry's purchase of intermediate inputs from other U.S. suppliers supported 5.7 million indirect and induced jobs in other industries across the country in 2007, while its capital investment supported an additional 1.4 million indirect and induced jobs across many sectors of the U.S. economy. Combined, the oil and natural gas industry directly or indirectly contributed more than 9.2 million jobs to the U.S. economy. The service sector received the largest number of indirect and induced jobs from the oil and natural gas industry's spending (3.4 million) in 2007, followed by wholesale and retail trade (1.2 million), finance, insurance, real estate, rental and leasing (0.8 million), and manufacturing (0.7 million).

The estimated nationwide indirect and induced labor income (including wages and salaries and benefits as well as proprietors' income) was \$359 billion and the indirect and induced value added was \$580 billion in 2007.

**Table 5a. Direct Impact of the Oil and Natural Gas Industry by State, 2007
(Sorted Alphabetically)**

State	Direct Employment*		Direct Labor Income**		Direct Value Added	
	Amount	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total
Alabama	32,917	1.6%	1,678	0.8%	3,513	0.8%
Alaska	16,854	0.8%	1,953	1.0%	3,974	0.9%
Arizona	25,157	1.2%	1,261	0.6%	2,592	0.6%
Arkansas	26,533	1.2%	1,248	0.6%	2,850	0.6%
California	159,728	7.5%	19,957	10.0%	45,525	10.0%
Colorado	49,366	2.3%	5,358	2.7%	12,364	2.7%
Connecticut	15,327	0.7%	1,029	0.5%	2,306	0.5%
Delaware	4,548	0.2%	297	0.1%	736	0.2%
District of Columbia	1,713	0.1%	151	0.1%	361	0.1%
Florida	61,914	2.9%	2,291	1.1%	4,636	1.0%
Georgia	41,197	1.9%	1,630	0.8%	3,297	0.7%
Hawaii	4,019	0.2%	219	0.1%	477	0.1%
Idaho	7,765	0.4%	315	0.2%	674	0.1%
Illinois	55,581	2.6%	5,807	2.9%	13,366	2.9%
Indiana	37,898	1.8%	2,069	1.0%	4,651	1.0%
Iowa	22,758	1.1%	704	0.4%	1,374	0.3%
Kansas	38,790	1.8%	3,623	1.8%	8,738	1.9%
Kentucky	32,196	1.5%	1,405	0.7%	2,992	0.7%
Louisiana	109,003	5.1%	9,402	4.7%	20,971	4.6%
Maine	12,712	0.6%	382	0.2%	846	0.2%
Maryland	17,622	0.8%	730	0.4%	1,509	0.3%
Massachusetts	25,070	1.2%	1,690	0.8%	3,754	0.8%
Michigan	45,946	2.2%	3,426	1.7%	7,369	1.6%
Minnesota	33,430	1.6%	1,332	0.7%	2,822	0.6%
Mississippi	32,492	1.5%	1,770	0.9%	4,133	0.9%
Missouri	38,430	1.8%	1,499	0.8%	3,018	0.7%
Montana	12,852	0.6%	854	0.4%	2,028	0.4%
Nebraska	14,465	0.7%	1,364	0.7%	2,874	0.6%
Nevada	13,049	0.6%	594	0.3%	1,227	0.3%
New Hampshire	8,909	0.4%	372	0.2%	821	0.2%
New Jersey	32,434	1.5%	2,378	1.2%	5,433	1.2%
New Mexico	33,116	1.6%	2,183	1.1%	4,812	1.1%
New York	56,149	2.6%	4,767	2.4%	10,544	2.3%
North Carolina	44,040	2.1%	1,461	0.7%	2,925	0.6%
North Dakota	11,788	0.6%	778	0.4%	1,809	0.4%
Ohio	65,413	3.1%	3,795	1.9%	8,442	1.8%
Oklahoma	98,306	4.6%	13,808	6.9%	32,893	7.2%
Oregon	15,707	0.7%	635	0.3%	1,313	0.3%
Pennsylvania	73,792	3.5%	4,418	2.2%	9,661	2.1%
Rhode Island	4,265	0.2%	242	0.1%	533	0.1%
South Carolina	23,372	1.1%	640	0.3%	1,246	0.3%
South Dakota	8,223	0.4%	342	0.2%	715	0.2%
Tennessee	35,187	1.7%	1,371	0.7%	2,743	0.6%
Texas	432,147	20.4%	77,924	39.1%	185,760	40.7%
Utah	21,404	1.0%	1,742	0.9%	4,167	0.9%
Vermont	6,008	0.3%	178	0.1%	384	0.1%
Virginia	47,908	2.3%	1,825	0.9%	3,755	0.8%
Washington	25,362	1.2%	1,489	0.7%	3,300	0.7%
West Virginia	26,420	1.2%	1,438	0.7%	3,188	0.7%
Wisconsin	31,978	1.5%	931	0.5%	1,787	0.4%
Wyoming	32,029	1.5%	2,590	1.3%	5,762	1.3%
U.S. Total	2,123,291	100%	199,344	100%	456,971	100%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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 5b. Direct Impact of the Oil and Natural Gas Industry by State, 2007
(Sorted by Direct Employment)

State	Direct Employment*		Direct Labor Income**		Direct Value Added	
	Amount	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total
Texas	432,147	20.4%	77,924	39.1%	185,760	40.7%
California	159,728	7.5%	19,957	10.0%	45,525	10.0%
Louisiana	109,003	5.1%	9,402	4.7%	20,971	4.6%
Oklahoma	98,306	4.6%	13,808	6.9%	32,893	7.2%
Pennsylvania	73,792	3.5%	4,418	2.2%	9,661	2.1%
Ohio	65,413	3.1%	3,795	1.9%	8,442	1.8%
Florida	61,914	2.9%	2,291	1.1%	4,636	1.0%
New York	56,149	2.6%	4,767	2.4%	10,544	2.3%
Illinois	55,581	2.6%	5,807	2.9%	13,366	2.9%
Colorado	49,366	2.3%	5,358	2.7%	12,364	2.7%
Virginia	47,908	2.3%	1,825	0.9%	3,755	0.8%
Michigan	45,946	2.2%	3,426	1.7%	7,369	1.6%
North Carolina	44,040	2.1%	1,461	0.7%	2,925	0.6%
Georgia	41,197	1.9%	1,630	0.8%	3,297	0.7%
Kansas	38,790	1.8%	3,623	1.8%	8,738	1.9%
Missouri	38,430	1.8%	1,499	0.8%	3,018	0.7%
Indiana	37,898	1.8%	2,069	1.0%	4,651	1.0%
Tennessee	35,187	1.7%	1,371	0.7%	2,743	0.6%
Minnesota	33,430	1.6%	1,332	0.7%	2,822	0.6%
New Mexico	33,116	1.6%	2,183	1.1%	4,812	1.1%
Alabama	32,917	1.6%	1,678	0.8%	3,513	0.8%
Mississippi	32,492	1.5%	1,770	0.9%	4,133	0.9%
New Jersey	32,434	1.5%	2,378	1.2%	5,433	1.2%
Kentucky	32,196	1.5%	1,405	0.7%	2,992	0.7%
Wyoming	32,029	1.5%	2,590	1.3%	5,762	1.3%
Wisconsin	31,978	1.5%	931	0.5%	1,787	0.4%
Arkansas	26,533	1.2%	1,248	0.6%	2,850	0.6%
West Virginia	26,420	1.2%	1,438	0.7%	3,188	0.7%
Washington	25,362	1.2%	1,489	0.7%	3,300	0.7%
Arizona	25,157	1.2%	1,261	0.6%	2,592	0.6%
Massachusetts	25,070	1.2%	1,690	0.8%	3,754	0.8%
South Carolina	23,372	1.1%	640	0.3%	1,246	0.3%
Iowa	22,758	1.1%	704	0.4%	1,374	0.3%
Utah	21,404	1.0%	1,742	0.9%	4,167	0.9%
Maryland	17,622	0.8%	730	0.4%	1,509	0.3%
Alaska	16,854	0.8%	1,953	1.0%	3,974	0.9%
Oregon	15,707	0.7%	635	0.3%	1,313	0.3%
Connecticut	15,327	0.7%	1,029	0.5%	2,306	0.5%
Nebraska	14,465	0.7%	1,364	0.7%	2,874	0.6%
Nevada	13,049	0.6%	594	0.3%	1,227	0.3%
Montana	12,852	0.6%	854	0.4%	2,028	0.4%
Maine	12,712	0.6%	382	0.2%	846	0.2%
North Dakota	11,788	0.6%	778	0.4%	1,809	0.4%
New Hampshire	8,909	0.4%	372	0.2%	821	0.2%
South Dakota	8,223	0.4%	342	0.2%	715	0.2%
Idaho	7,765	0.4%	315	0.2%	674	0.1%
Vermont	6,008	0.3%	178	0.1%	384	0.1%
Delaware	4,548	0.2%	297	0.1%	736	0.2%
Rhode Island	4,265	0.2%	242	0.1%	533	0.1%
Hawaii	4,019	0.2%	219	0.1%	477	0.1%
District of Columbia	1,713	0.1%	151	0.1%	361	0.1%
U.S. Total	2,123,291	100%	199,344	100%	456,971	100%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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 6. The Direct, Indirect, and Induced Impacts of the Oil and Natural Gas Industry to the U.S Economy, 2007

Sector Description	Employment*	Labor Income** (\$ million)	Value Added (\$ million)
Direct Impact of the Oil and Natural Gas Industry	2,123,291	199,344	456,971
Indirect and Induced Impact on Other Industries***:	7,114,090	358,916	580,089
Operational Impact	5,695,146	277,905	458,399
Agriculture	104,549	1,850	4,412
Mining	9,268	873	1,755
Utilities	22,523	3,695	12,637
Construction	207,528	10,507	12,964
Manufacturing	397,299	27,821	42,778
Wholesale and retail trade	892,854	35,359	57,983
Transportation and warehousing	206,629	10,341	14,012
Information	124,081	10,896	21,481
Finance, insurance, real estate, rental and leasing	708,422	40,399	124,795
Services	2,834,634	123,227	151,073
Other	187,359	12,937	14,510
Capital Investment Impact	1,418,944	81,012	121,690
Agriculture	17,993	343	785
Mining	1,630	164	313
Utilities	3,749	614	2,015
Construction	13,395	678	758
Manufacturing	283,535	22,115	30,544
Wholesale and retail trade	281,908	14,352	22,932
Transportation and warehousing	69,863	3,551	4,734
Information	41,778	4,310	7,843
Finance, insurance, real estate, rental and leasing	120,482	7,088	19,507
Services	564,840	26,235	30,647
Other	19,771	1,562	1,612
Total Economic Impact	9,237,381	558,260	1,037,060

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

* 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.

*** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

The remainder of this section provides more detail on the operational economic impacts of the oil and natural gas industry at the state level. Due to data limitations, these state-level impacts exclude economic impacts from capital investment in the oil and natural gas industry.

Table 7a shows the sum of the oil and natural gas industry's indirect and induced effects from its operations (i.e., not including its capital investment impact) in terms of employment, value added, and labor income in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 7b** is the same as **Table 7a** except that the states are ranked in order of the indirect and induced employment effect. In 2007, the five states with the largest combined indirect and induced employment effects generated by the oil and natural gas industry were, in order: Texas, California, Oklahoma, New York, and Louisiana. These top five states accounted for 46.2 percent

of the oil and natural gas industry's national combined indirect and induced employment, 47.4 percent of the oil and natural gas industry's national combined indirect and induced labor income, and 47.8 percent of the oil and natural gas industry's national combined indirect and induced value added in 2007.

Table 8a shows the direct, indirect, induced and total employment contribution of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 8b** is the same as **Table 8a** except that the states are ranked in order of the industry's total employment contribution from its operations as a percent of each state's total employment. Using this metric, the top five states in 2007 were, in order: Wyoming (18.8 percent), Oklahoma (16.3 percent), Louisiana (13.4 percent), Texas (13.1 percent), and Alaska (9.8 percent).

Table 9a shows the direct, indirect, induced and total labor income contribution of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 9b** is the same as **Table 9a** except the states are ranked in order of the industry's total contribution from its operations as a percent of each state's total labor income. The top five states by this metric in 2007 were, in order: Oklahoma (24.7 percent), Wyoming (24.3 percent), Texas (19.5 percent), Louisiana (16.6 percent), and Alaska (13.5 percent).

Table 10a shows the direct, indirect, induced and total value-added contribution of the oil and natural gas industry from its operations in the 50 states and the District of Columbia, where the states are shown alphabetically. **Table 10b** is the same as **Table 10a** except that the states are ranked in order of the industry's total contribution from its operations to each state's GDP. The top five states by this metric in 2007 were, in order: Oklahoma (31.3 percent), Wyoming (29.4 percent), Texas (24.2 percent), Louisiana (20.6 percent), and Alaska (16.6 percent).

More detailed state-by-state operational impact results are included in **Appendix A**.

The primary data source for the direct impact of the oil and natural gas industry is the IMPLAN 2007 database. The IMPLAN database represents a consistent set of economic data processed from various published sources (such as the Bureau of Economic Analysis's National Income and Product Accounts (NIPA) and Regional Economic Information System (REIS), the Census Bureau's County Business Patterns (CBP), and the Bureau of Labor Statistics' Covered Employee and Wages Program (CEW) in a variety of formats and under varying disclosure restrictions.

In cases where a NAICS code in our definition of the oil and natural gas industry does not have a one-to-one correspondence with an IMPLAN sector, employment data from the Department of Labor and Census Bureau for the NAICS code were used and PricewaterhouseCoopers estimated the corresponding value added and labor income using the IMPLAN database. **Appendix B** provides a more detailed discussion of the data sources and estimating methodology.

Table 7a. Indirect and Induced Impacts of the Oil and Natural Gas Industry's Operations by State (Sorted Alphabetically), 2007

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total
Alabama	61,815	1.1%	2,584	0.9%	4,324	0.9%
Alaska	26,600	0.5%	1,190	0.4%	2,090	0.5%
Arizona	71,528	1.3%	3,393	1.2%	5,686	1.2%
Arkansas	43,106	0.8%	1,636	0.6%	2,739	0.6%
California	592,885	10.4%	34,164	12.3%	55,433	12.1%
Colorado	141,042	2.5%	7,080	2.5%	11,735	2.6%
Connecticut	47,359	0.8%	3,316	1.2%	5,186	1.1%
Delaware	10,889	0.2%	619	0.2%	970	0.2%
District of Columbia	11,102	0.2%	1,006	0.4%	1,417	0.3%
Florida	205,363	3.6%	9,150	3.3%	15,311	3.3%
Georgia	104,609	1.8%	5,210	1.9%	8,735	1.9%
Hawaii	14,521	0.3%	636	0.2%	1,056	0.2%
Idaho	16,235	0.3%	612	0.2%	1,027	0.2%
Illinois	204,420	3.6%	11,146	4.0%	17,957	3.9%
Indiana	89,458	1.6%	3,838	1.4%	6,341	1.4%
Iowa	40,496	0.7%	1,591	0.6%	2,696	0.6%
Kansas	80,260	1.4%	3,115	1.1%	5,291	1.2%
Kentucky	55,294	1.0%	2,248	0.8%	3,721	0.8%
Louisiana	221,050	3.9%	9,047	3.3%	15,015	3.3%
Maine	17,185	0.3%	668	0.2%	1,102	0.2%
Maryland	60,602	1.1%	3,190	1.1%	5,178	1.1%
Massachusetts	87,016	1.5%	5,552	2.0%	8,443	1.8%
Michigan	133,549	2.3%	6,394	2.3%	10,342	2.3%
Minnesota	80,278	1.4%	4,019	1.4%	6,449	1.4%
Mississippi	51,328	0.9%	1,838	0.7%	3,111	0.7%
Missouri	84,389	1.5%	3,754	1.4%	6,096	1.3%
Montana	21,357	0.4%	730	0.3%	1,296	0.3%
Nebraska	35,319	0.6%	1,379	0.5%	2,238	0.5%
Nevada	30,091	0.5%	1,494	0.5%	2,612	0.6%
New Hampshire	17,347	0.3%	847	0.3%	1,360	0.3%
New Jersey	110,908	1.9%	7,083	2.5%	11,420	2.5%
New Mexico	55,698	1.0%	2,124	0.8%	3,481	0.8%
New York	225,118	4.0%	16,685	6.0%	25,803	5.6%
North Carolina	101,739	1.8%	4,546	1.6%	7,697	1.7%
North Dakota	16,126	0.3%	569	0.2%	964	0.2%
Ohio	164,025	2.9%	7,326	2.6%	11,759	2.6%
Oklahoma	250,321	4.4%	8,742	3.1%	14,946	3.3%
Oregon	44,415	0.8%	1,955	0.7%	3,180	0.7%
Pennsylvania	197,457	3.5%	10,075	3.6%	16,111	3.5%
Rhode Island	11,895	0.2%	581	0.2%	923	0.2%
South Carolina	44,930	0.8%	1,828	0.7%	3,046	0.7%
South Dakota	11,719	0.2%	422	0.2%	744	0.2%
Tennessee	79,007	1.4%	3,676	1.3%	6,007	1.3%
Texas	1,340,188	23.5%	63,017	22.7%	108,000	23.6%
Utah	54,785	1.0%	2,218	0.8%	3,655	0.8%
Vermont	8,151	0.1%	314	0.1%	516	0.1%
Virginia	95,571	1.7%	5,098	1.8%	8,212	1.8%
Washington	81,254	1.4%	4,303	1.5%	7,032	1.5%
West Virginia	34,471	0.6%	1,302	0.5%	2,224	0.5%
Wisconsin	71,843	1.3%	3,122	1.1%	5,050	1.1%
Wyoming	39,034	0.7%	1,470	0.5%	2,670	0.6%
U.S. Total	5,695,146	100.0%	277,905	100.0%	458,399	100.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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 7b. Indirect and Induced Impacts of the Oil and Natural Gas Industry's Operations by State (Sorted by Employment Impact), 2007

State	Employment*		Labor Income**		Value Added	
	Amount	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total	(\$ Million)	Percent of U.S. Total
Texas	1,340,188	23.5%	63,017	22.7%	108,000	23.6%
California	592,885	10.4%	34,164	12.3%	55,433	12.1%
Oklahoma	250,321	4.4%	8,742	3.1%	14,946	3.3%
New York	225,118	4.0%	16,685	6.0%	25,803	5.6%
Louisiana	221,050	3.9%	9,047	3.3%	15,015	3.3%
Florida	205,363	3.6%	9,150	3.3%	15,311	3.3%
Illinois	204,420	3.6%	11,146	4.0%	17,957	3.9%
Pennsylvania	197,457	3.5%	10,075	3.6%	16,111	3.5%
Ohio	164,025	2.9%	7,326	2.6%	11,759	2.6%
Colorado	141,042	2.5%	7,080	2.5%	11,735	2.6%
Michigan	133,549	2.3%	6,394	2.3%	10,342	2.3%
New Jersey	110,908	1.9%	7,083	2.5%	11,420	2.5%
Georgia	104,609	1.8%	5,210	1.9%	8,735	1.9%
North Carolina	101,739	1.8%	4,546	1.6%	7,697	1.7%
Virginia	95,571	1.7%	5,098	1.8%	8,212	1.8%
Indiana	89,458	1.6%	3,838	1.4%	6,341	1.4%
Massachusetts	87,016	1.5%	5,552	2.0%	8,443	1.8%
Missouri	84,389	1.5%	3,754	1.4%	6,096	1.3%
Washington	81,254	1.4%	4,303	1.5%	7,032	1.5%
Minnesota	80,278	1.4%	4,019	1.4%	6,449	1.4%
Kansas	80,260	1.4%	3,115	1.1%	5,291	1.2%
Tennessee	79,007	1.4%	3,676	1.3%	6,007	1.3%
Wisconsin	71,843	1.3%	3,122	1.1%	5,050	1.1%
Arizona	71,528	1.3%	3,393	1.2%	5,686	1.2%
Alabama	61,815	1.1%	2,584	0.9%	4,324	0.9%
Maryland	60,602	1.1%	3,190	1.1%	5,178	1.1%
New Mexico	55,698	1.0%	2,124	0.8%	3,481	0.8%
Kentucky	55,294	1.0%	2,248	0.8%	3,721	0.8%
Utah	54,785	1.0%	2,218	0.8%	3,655	0.8%
Mississippi	51,328	0.9%	1,838	0.7%	3,111	0.7%
Connecticut	47,359	0.8%	3,316	1.2%	5,186	1.1%
South Carolina	44,930	0.8%	1,828	0.7%	3,046	0.7%
Oregon	44,415	0.8%	1,955	0.7%	3,180	0.7%
Arkansas	43,106	0.8%	1,636	0.6%	2,739	0.6%
Iowa	40,496	0.7%	1,591	0.6%	2,696	0.6%
Wyoming	39,034	0.7%	1,470	0.5%	2,670	0.6%
Nebraska	35,319	0.6%	1,379	0.5%	2,238	0.5%
West Virginia	34,471	0.6%	1,302	0.5%	2,224	0.5%
Nevada	30,091	0.5%	1,494	0.5%	2,612	0.6%
Alaska	26,600	0.5%	1,190	0.4%	2,090	0.5%
Montana	21,357	0.4%	730	0.3%	1,296	0.3%
New Hampshire	17,347	0.3%	847	0.3%	1,360	0.3%
Maine	17,185	0.3%	668	0.2%	1,102	0.2%
Idaho	16,235	0.3%	612	0.2%	1,027	0.2%
North Dakota	16,126	0.3%	569	0.2%	964	0.2%
Hawaii	14,521	0.3%	636	0.2%	1,056	0.2%
Rhode Island	11,895	0.2%	581	0.2%	923	0.2%
South Dakota	11,719	0.2%	422	0.2%	744	0.2%
District of Columbia	11,102	0.2%	1,006	0.4%	1,417	0.3%
Delaware	10,889	0.2%	619	0.2%	970	0.2%
Vermont	8,151	0.1%	314	0.1%	516	0.1%
U.S. Total	5,695,146	100.0%	277,905	100.0%	458,399	100.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total 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 8a. Employment Impact of the Oil and Natural Gas Industry's Operations by State (Sorted Alphabetically), 2007

State	Direct Employment	Indirect Employment	Induced Employment	Total Contribution	Total Contribution as a % of State Total Employment
Alabama	32,917	17,834	43,981	94,732	3.7%
Alaska	16,854	10,010	16,590	43,454	9.8%
Arizona	25,157	19,158	52,370	96,685	2.9%
Arkansas	26,533	14,493	28,613	69,640	4.4%
California	159,728	163,781	429,105	752,614	3.7%
Colorado	49,366	46,439	94,603	190,408	6.0%
Connecticut	15,327	11,841	35,518	62,686	2.9%
Delaware	4,548	3,096	7,793	15,437	2.9%
District of Columbia	1,713	2,614	8,488	12,815	1.5%
Florida	61,914	52,765	152,598	267,277	2.6%
Georgia	41,197	25,632	78,977	145,806	2.7%
Hawaii	4,019	3,406	11,114	18,539	2.1%
Idaho	7,765	4,192	12,043	24,000	2.6%
Illinois	55,581	51,421	152,999	260,001	3.5%
Indiana	37,898	26,315	63,142	127,355	3.5%
Iowa	22,758	10,834	29,662	63,254	3.1%
Kansas	38,790	21,713	58,548	119,051	6.5%
Kentucky	32,196	16,503	38,791	87,490	3.6%
Louisiana	109,003	84,767	136,283	330,053	13.4%
Maine	12,712	4,170	13,015	29,897	3.6%
Maryland	17,622	14,057	46,545	78,224	2.3%
Massachusetts	25,070	20,819	66,197	112,086	2.7%
Michigan	45,946	35,768	97,781	179,495	3.3%
Minnesota	33,430	22,734	57,544	113,708	3.2%
Mississippi	32,492	17,480	33,847	83,820	5.5%
Missouri	38,430	24,602	59,787	122,820	3.4%
Montana	12,852	7,974	13,383	34,210	5.3%
Nebraska	14,465	8,606	26,712	49,784	4.0%
Nevada	13,049	8,254	21,837	43,140	2.7%
New Hampshire	8,909	4,489	12,858	26,256	3.1%
New Jersey	32,434	29,900	81,008	143,342	2.8%
New Mexico	33,116	20,961	34,737	88,814	8.1%
New York	56,149	49,962	175,155	281,267	2.6%
North Carolina	44,040	25,416	76,323	145,779	2.7%
North Dakota	11,788	6,599	9,527	27,914	5.7%
Ohio	65,413	45,629	118,397	229,438	3.4%
Oklahoma	98,306	82,368	167,953	348,627	16.3%
Oregon	15,707	11,536	32,879	60,122	2.6%
Pennsylvania	73,792	55,084	142,374	271,250	3.8%
Rhode Island	4,265	2,714	9,181	16,160	2.7%
South Carolina	23,372	11,368	33,562	68,303	2.8%
South Dakota	8,223	3,224	8,495	19,942	3.6%
Tennessee	35,187	22,045	56,962	114,194	3.1%
Texas	432,147	421,747	918,441	1,772,335	13.1%
Utah	21,404	17,713	37,072	76,188	4.7%
Vermont	6,008	2,120	6,031	14,159	3.3%
Virginia	47,908	25,182	70,388	143,479	3.0%
Washington	25,362	21,724	59,531	106,616	2.7%
West Virginia	26,420	14,085	20,386	60,891	6.7%
Wisconsin	31,978	19,065	52,778	103,821	2.9%
Wyoming	32,029	16,929	22,105	71,063	18.8%
U.S. Total	2,123,291	1,661,138	4,034,007	7,818,437	4.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

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

Table 8b. Employment Impact of the Oil and Natural Gas Industry's Operations by State (Sorted by Employment Share of State Total), 2007

State	Direct Employment	Indirect Employment	Induced Employment	Total Contribution	Total Contribution as a % of State Total Employment
Wyoming	32,029	16,929	22,105	71,063	18.8%
Oklahoma	98,306	82,368	167,953	348,627	16.3%
Louisiana	109,003	84,767	136,283	330,053	13.4%
Texas	432,147	421,747	918,441	1,772,335	13.1%
Alaska	16,854	10,010	16,590	43,454	9.8%
New Mexico	33,116	20,961	34,737	88,814	8.1%
West Virginia	26,420	14,085	20,386	60,891	6.7%
Kansas	38,790	21,713	58,548	119,051	6.5%
Colorado	49,366	46,439	94,603	190,408	6.0%
North Dakota	11,788	6,599	9,527	27,914	5.7%
Mississippi	32,492	17,480	33,847	83,820	5.5%
Montana	12,852	7,974	13,383	34,210	5.3%
Utah	21,404	17,713	37,072	76,188	4.7%
Arkansas	26,533	14,493	28,613	69,640	4.4%
Nebraska	14,465	8,606	26,712	49,784	4.0%
Pennsylvania	73,792	55,084	142,374	271,250	3.8%
Alabama	32,917	17,834	43,981	94,732	3.7%
California	159,728	163,781	429,105	752,614	3.7%
Kentucky	32,196	16,503	38,791	87,490	3.6%
South Dakota	8,223	3,224	8,495	19,942	3.6%
Maine	12,712	4,170	13,015	29,897	3.6%
Illinois	55,581	51,421	152,999	260,001	3.5%
Indiana	37,898	26,315	63,142	127,355	3.5%
Ohio	65,413	45,629	118,397	229,438	3.4%
Missouri	38,430	24,602	59,787	122,820	3.4%
Michigan	45,946	35,768	97,781	179,495	3.3%
Vermont	6,008	2,120	6,031	14,159	3.3%
Minnesota	33,430	22,734	57,544	113,708	3.2%
Iowa	22,758	10,834	29,662	63,254	3.1%
Tennessee	35,187	22,045	56,962	114,194	3.1%
New Hampshire	8,909	4,489	12,858	26,256	3.1%
Virginia	47,908	25,182	70,388	143,479	3.0%
Wisconsin	31,978	19,065	52,778	103,821	2.9%
Arizona	25,157	19,158	52,370	96,685	2.9%
Delaware	4,548	3,096	7,793	15,437	2.9%
Connecticut	15,327	11,841	35,518	62,686	2.9%
New Jersey	32,434	29,900	81,008	143,342	2.8%
South Carolina	23,372	11,368	33,562	68,303	2.8%
Washington	25,362	21,724	59,531	106,616	2.7%
North Carolina	44,040	25,416	76,323	145,779	2.7%
Georgia	41,197	25,632	78,977	145,806	2.7%
Nevada	13,049	8,254	21,837	43,140	2.7%
Massachusetts	25,070	20,819	66,197	112,086	2.7%
Rhode Island	4,265	2,714	9,181	16,160	2.7%
Oregon	15,707	11,536	32,879	60,122	2.6%
Idaho	7,765	4,192	12,043	24,000	2.6%
Florida	61,914	52,765	152,598	267,277	2.6%
New York	56,149	49,962	175,155	281,267	2.6%
Maryland	17,622	14,057	46,545	78,224	2.3%
Hawaii	4,019	3,406	11,114	18,539	2.1%
District of Columbia	1,713	2,614	8,488	12,815	1.5%
U.S. Total	2,123,291	1,661,138	4,034,007	7,818,437	4.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

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

Table 9a. Impact of the Oil and Natural Gas Industry's Operations on Labor Income by State (Sorted Alphabetically), 2007 (\$ Million)

State	Direct Labor Income	Indirect Labor Income	Induced Labor Income	Total Contribution	Total Contribution as a % of State Total Labor Income
Alabama	1,678	879	1,705	4,262	3.9%
Alaska	1,953	525	665	3,143	13.5%
Arizona	1,261	1,067	2,326	4,653	3.0%
Arkansas	1,248	635	1,001	2,884	4.9%
California	19,957	11,423	22,741	54,122	4.6%
Colorado	5,358	2,875	4,205	12,438	7.7%
Connecticut	1,029	1,036	2,280	4,345	3.1%
Delaware	297	207	411	916	3.2%
District of Columbia	151	293	713	1,157	1.4%
Florida	2,291	2,808	6,343	11,441	2.6%
Georgia	1,630	1,546	3,664	6,841	2.7%
Hawaii	219	178	458	855	2.1%
Idaho	315	194	418	928	2.7%
Illinois	5,807	3,609	7,537	16,953	4.2%
Indiana	2,069	1,374	2,464	5,907	3.8%
Iowa	704	512	1,079	2,295	3.0%
Kansas	3,623	1,036	2,079	6,738	8.8%
Kentucky	1,405	791	1,457	3,653	3.7%
Louisiana	9,402	4,079	4,968	18,449	16.6%
Maine	382	190	479	1,051	3.3%
Maryland	730	917	2,274	3,920	2.1%
Massachusetts	1,690	1,671	3,881	7,242	2.9%
Michigan	3,426	2,162	4,232	9,820	3.8%
Minnesota	1,332	1,425	2,594	5,351	3.2%
Mississippi	1,770	711	1,127	3,609	6.5%
Missouri	1,499	1,343	2,411	5,253	3.4%
Montana	854	311	419	1,584	7.0%
Nebraska	1,364	416	963	2,743	5.6%
Nevada	594	505	989	2,088	2.7%
New Hampshire	372	267	580	1,218	3.1%
New Jersey	2,378	2,349	4,734	9,461	3.1%
New Mexico	2,183	930	1,194	4,307	9.5%
New York	4,767	4,795	11,890	21,452	3.0%
North Carolina	1,461	1,384	3,162	6,007	2.6%
North Dakota	778	266	303	1,346	7.6%
Ohio	3,795	2,552	4,774	11,121	3.7%
Oklahoma	13,808	3,390	5,352	22,550	24.7%
Oregon	635	619	1,335	2,590	2.6%
Pennsylvania	4,418	3,502	6,573	14,494	4.1%
Rhode Island	242	167	414	822	2.8%
South Carolina	640	558	1,270	2,468	2.5%
South Dakota	342	135	286	763	3.9%
Tennessee	1,371	1,184	2,492	5,048	3.1%
Texas	77,924	24,742	38,276	140,941	19.5%
Utah	1,742	843	1,375	3,960	5.9%
Vermont	178	94	220	492	3.0%
Virginia	1,825	1,697	3,400	6,923	2.7%
Washington	1,489	1,379	2,924	5,792	2.9%
West Virginia	1,438	613	688	2,740	7.4%
Wisconsin	931	1,026	2,097	4,053	2.7%
Wyoming	2,590	734	736	4,060	24.3%
U.S. Total	199,344	97,947	179,958	477,249	5.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

Labor income includes wages and salaries and benefits as well as proprietors' income.

Table 9b. Impact of the Oil and Natural Gas Industry's Operations on Labor Income by State (Sorted by Labor Income Share of State Total), 2007 (\$ Million)

State	Direct Labor Income	Indirect Labor Income	Induced Labor Income	Total Contribution	Total Contribution as a % of State Total Labor Income
Oklahoma	13,808	3,390	5,352	22,550	24.7%
Wyoming	2,590	734	736	4,060	24.3%
Texas	77,924	24,742	38,276	140,941	19.5%
Louisiana	9,402	4,079	4,968	18,449	16.6%
Alaska	1,953	525	665	3,143	13.5%
New Mexico	2,183	930	1,194	4,307	9.5%
Kansas	3,623	1,036	2,079	6,738	8.8%
Colorado	5,358	2,875	4,205	12,438	7.7%
North Dakota	778	266	303	1,346	7.6%
West Virginia	1,438	613	688	2,740	7.4%
Montana	854	311	419	1,584	7.0%
Mississippi	1,770	711	1,127	3,609	6.5%
Utah	1,742	843	1,375	3,960	5.9%
Nebraska	1,364	416	963	2,743	5.6%
Arkansas	1,248	635	1,001	2,884	4.9%
California	19,957	11,423	22,741	54,122	4.6%
Illinois	5,807	3,609	7,537	16,953	4.2%
Pennsylvania	4,418	3,502	6,573	14,494	4.1%
Alabama	1,678	879	1,705	4,262	3.9%
South Dakota	342	135	286	763	3.9%
Michigan	3,426	2,162	4,232	9,820	3.8%
Indiana	2,069	1,374	2,464	5,907	3.8%
Ohio	3,795	2,552	4,774	11,121	3.7%
Kentucky	1,405	791	1,457	3,653	3.7%
Missouri	1,499	1,343	2,411	5,253	3.4%
Maine	382	190	479	1,051	3.3%
Minnesota	1,332	1,425	2,594	5,351	3.2%
Delaware	297	207	411	916	3.2%
Tennessee	1,371	1,184	2,492	5,048	3.1%
New Jersey	2,378	2,349	4,734	9,461	3.1%
New Hampshire	372	267	580	1,218	3.1%
Connecticut	1,029	1,036	2,280	4,345	3.1%
Vermont	178	94	220	492	3.0%
Arizona	1,261	1,067	2,326	4,653	3.0%
Iowa	704	512	1,079	2,295	3.0%
New York	4,767	4,795	11,890	21,452	3.0%
Massachusetts	1,690	1,671	3,881	7,242	2.9%
Washington	1,489	1,379	2,924	5,792	2.9%
Rhode Island	242	167	414	822	2.8%
Nevada	594	505	989	2,088	2.7%
Wisconsin	931	1,026	2,097	4,053	2.7%
Idaho	315	194	418	928	2.7%
Virginia	1,825	1,697	3,400	6,923	2.7%
Georgia	1,630	1,546	3,664	6,841	2.7%
Oregon	635	619	1,335	2,590	2.6%
North Carolina	1,461	1,384	3,162	6,007	2.6%
Florida	2,291	2,808	6,343	11,441	2.6%
South Carolina	640	558	1,270	2,468	2.5%
Hawaii	219	178	458	855	2.1%
Maryland	730	917	2,274	3,920	2.1%
District of Columbia	151	293	713	1,157	1.4%
U.S. Total	199,344	97,947	179,958	477,249	5.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

Labor income includes wages and salaries and benefits as well as proprietors' income.

Table 10a. Impact of the Oil and Natural Gas Industry's Operations on Value Added by State (Sorted Alphabetically), 2007 (\$ Million)

State	Direct Value Added	Indirect Value Added	Induced Value Added	Total Contribution	Total Contribution as a % of State GDP
Alabama	3,513	1,458	2,866	7,836	4.7%
Alaska	3,974	945	1,145	6,064	16.6%
Arizona	2,592	1,742	3,944	8,278	3.4%
Arkansas	2,850	1,068	1,672	5,589	6.0%
California	45,525	17,719	37,714	100,958	5.5%
Colorado	12,364	4,648	7,087	24,099	9.3%
Connecticut	2,306	1,567	3,619	7,492	3.5%
Delaware	736	320	651	1,707	4.0%
District of Columbia	361	407	1,009	1,777	1.7%
Florida	4,636	4,552	10,758	19,946	2.8%
Georgia	3,297	2,489	6,246	12,032	3.0%
Hawaii	477	289	767	1,533	2.4%
Idaho	674	319	708	1,700	3.2%
Illinois	13,366	5,635	12,322	31,323	5.0%
Indiana	4,651	2,264	4,077	10,992	4.5%
Iowa	1,374	861	1,834	4,069	3.3%
Kansas	8,738	1,774	3,517	14,029	11.4%
Kentucky	2,992	1,294	2,426	6,712	4.4%
Louisiana	20,971	6,760	8,255	35,986	20.6%
Maine	846	315	787	1,948	4.0%
Maryland	1,509	1,432	3,746	6,688	2.4%
Massachusetts	3,754	2,454	5,989	12,197	3.3%
Michigan	7,369	3,367	6,975	17,711	4.4%
Minnesota	2,822	2,220	4,228	9,271	3.6%
Mississippi	4,133	1,215	1,897	7,244	8.4%
Missouri	3,018	2,129	3,968	9,115	3.9%
Montana	2,028	557	740	3,324	8.9%
Nebraska	2,874	662	1,576	5,112	6.7%
Nevada	1,227	859	1,753	3,839	3.1%
New Hampshire	821	422	939	2,181	3.6%
New Jersey	5,433	3,635	7,785	16,853	3.5%
New Mexico	4,812	1,501	1,980	8,292	12.2%
New York	10,544	7,161	18,642	36,347	3.3%
North Carolina	2,925	2,251	5,447	10,623	2.9%
North Dakota	1,809	450	514	2,773	9.6%
Ohio	8,442	4,013	7,746	20,201	4.5%
Oklahoma	32,893	5,932	9,015	47,839	31.3%
Oregon	1,313	984	2,196	4,494	3.0%
Pennsylvania	9,661	5,470	10,641	25,772	4.8%
Rhode Island	533	264	660	1,456	3.4%
South Carolina	1,246	928	2,118	4,292	2.8%
South Dakota	715	243	501	1,459	4.6%
Tennessee	2,743	1,927	4,081	8,750	3.5%
Texas	185,760	42,108	65,893	293,760	24.2%
Utah	4,167	1,383	2,272	7,822	7.6%
Vermont	384	157	360	900	3.6%
Virginia	3,755	2,570	5,642	11,968	3.1%
Washington	3,300	2,178	4,854	10,333	3.4%
West Virginia	3,188	1,067	1,157	5,412	9.4%
Wisconsin	1,787	1,625	3,425	6,837	3.0%
Wyoming	5,762	1,349	1,321	8,432	29.4%
U.S. Total	456,971	158,934	299,464	915,370	6.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

Table 10b. Impact of the Oil and Natural Gas Industry's Operations on Value Added by State (Sorted by Value Added Share of State Total), 2007 (\$ Million)

State	Direct Value Added	Indirect Value Added	Induced Value Added	Total Contribution	Total Contribution as a % of State GDP
Oklahoma	32,893	5,932	9,015	47,839	31.3%
Wyoming	5,762	1,349	1,321	8,432	29.4%
Texas	185,760	42,108	65,893	293,760	24.2%
Louisiana	20,971	6,760	8,255	35,986	20.6%
Alaska	3,974	945	1,145	6,064	16.6%
New Mexico	4,812	1,501	1,980	8,292	12.2%
Kansas	8,738	1,774	3,517	14,029	11.4%
North Dakota	1,809	450	514	2,773	9.6%
West Virginia	3,188	1,067	1,157	5,412	9.4%
Colorado	12,364	4,648	7,087	24,099	9.3%
Montana	2,028	557	740	3,324	8.9%
Mississippi	4,133	1,215	1,897	7,244	8.4%
Utah	4,167	1,383	2,272	7,822	7.6%
Nebraska	2,874	662	1,576	5,112	6.7%
Arkansas	2,850	1,068	1,672	5,589	6.0%
California	45,525	17,719	37,714	100,958	5.5%
Illinois	13,366	5,635	12,322	31,323	5.0%
Pennsylvania	9,661	5,470	10,641	25,772	4.8%
Alabama	3,513	1,458	2,866	7,836	4.7%
South Dakota	715	243	501	1,459	4.6%
Indiana	4,651	2,264	4,077	10,992	4.5%
Ohio	8,442	4,013	7,746	20,201	4.5%
Michigan	7,369	3,367	6,975	17,711	4.4%
Kentucky	2,992	1,294	2,426	6,712	4.4%
Maine	846	315	787	1,948	4.0%
Delaware	736	320	651	1,707	4.0%
Missouri	3,018	2,129	3,968	9,115	3.9%
Vermont	384	157	360	900	3.6%
Minnesota	2,822	2,220	4,228	9,271	3.6%
New Hampshire	821	422	939	2,181	3.6%
New Jersey	5,433	3,635	7,785	16,853	3.5%
Tennessee	2,743	1,927	4,081	8,750	3.5%
Connecticut	2,306	1,567	3,619	7,492	3.5%
Arizona	2,592	1,742	3,944	8,278	3.4%
Rhode Island	533	264	660	1,456	3.4%
Washington	3,300	2,178	4,854	10,333	3.4%
Massachusetts	3,754	2,454	5,989	12,197	3.3%
Iowa	1,374	861	1,834	4,069	3.3%
New York	10,544	7,161	18,642	36,347	3.3%
Idaho	674	319	708	1,700	3.2%
Nevada	1,227	859	1,753	3,839	3.1%
Virginia	3,755	2,570	5,642	11,968	3.1%
Oregon	1,313	984	2,196	4,494	3.0%
Wisconsin	1,787	1,625	3,425	6,837	3.0%
Georgia	3,297	2,489	6,246	12,032	3.0%
North Carolina	2,925	2,251	5,447	10,623	2.9%
South Carolina	1,246	928	2,118	4,292	2.8%
Florida	4,636	4,552	10,758	19,946	2.8%
Hawaii	477	289	767	1,533	2.4%
Maryland	1,509	1,432	3,746	6,688	2.4%
District of Columbia	361	407	1,009	1,777	1.7%
U.S. Total	456,971	158,934	299,464	915,370	6.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

Numbers may not add to total due to rounding.

Appendix A: Detailed State-by-State Operational Impact Results

The Economic Impact of the Oil and Natural Gas Industry in Alabama, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,917			32,917	1.3%
Indirect and Induced Impacts on Other Industries**:		17,834	43,981	61,815	2.4%
<i>Services</i>		7,712	21,357	29,069	
<i>Wholesale and retail trade</i>		1,104	7,678	8,782	
<i>Manufacturing</i>		3,196	4,370	7,566	
<i>Finance, insurance, real estate, rental and leasing</i>		1,993	4,626	6,619	
<i>Transportation and warehousing</i>		972	1,477	2,448	
<i>Construction</i>		1,581	410	1,992	
<i>Agriculture</i>		154	1,218	1,371	
<i>Information</i>		346	712	1,058	
<i>Utilities</i>		150	232	382	
<i>Mining</i>		155	71	226	
<i>Other</i>		472	1,830	2,302	
Total Impact	32,917	17,834	43,981	94,732	3.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,513			3,513	2.1%
Indirect and Induced Impacts on Other Industries**:		1,458	2,866	4,324	2.6%
<i>Services</i>		381	843	1,224	
<i>Finance, insurance, real estate, rental and leasing</i>		328	746	1,075	
<i>Manufacturing</i>		331	358	689	
<i>Wholesale and retail trade</i>		92	406	498	
<i>Utilities</i>		55	92	146	
<i>Transportation and warehousing</i>		56	87	143	
<i>Information</i>		42	84	126	
<i>Construction</i>		80	20	100	
<i>Agriculture</i>		8	62	70	
<i>Mining</i>		32	15	47	
<i>Other</i>		53	154	207	
Total Impact	3,513	1,458	2,866	7,836	4.7%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,678			1,678	1.5%
Indirect and Induced Impacts on Other Industries**:		879	1,705	2,584	2.4%
<i>Services</i>		324	698	1,022	
<i>Manufacturing</i>		207	250	457	
<i>Wholesale and retail trade</i>		55	252	307	
<i>Finance, insurance, real estate, rental and leasing</i>		93	201	294	
<i>Transportation and warehousing</i>		41	63	104	
<i>Construction</i>		65	16	81	
<i>Information</i>		19	37	56	
<i>Utilities</i>		15	26	41	
<i>Agriculture</i>		5	32	37	
<i>Mining</i>		18	8	26	
<i>Other</i>		37	121	159	
Total Impact	1,678	879	1,705	4,262	3.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Alaska, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	16,854			16,854	3.8%
Indirect and Induced Impacts on Other Industries**:		10,010	16,590	26,600	6.0%
<i>Services</i>		4,708	8,736	13,444	
<i>Wholesale and retail trade</i>		723	3,069	3,792	
<i>Finance, insurance, real estate, rental and leasing</i>		1,602	1,697	3,300	
<i>Construction</i>		1,397	123	1,520	
<i>Transportation and warehousing</i>		468	531	1,000	
<i>Agriculture</i>		151	524	675	
<i>Manufacturing</i>		150	509	659	
<i>Information</i>		279	307	586	
<i>Utilities</i>		117	83	200	
<i>Mining</i>		100	34	134	
<i>Other</i>		313	978	1,292	
Total Impact	16,854	10,010	16,590	43,454	9.8%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,974			3,974	10.9%
Indirect and Induced Impacts on Other Industries**:		945	1,145	2,090	5.7%
<i>Services</i>		283	393	677	
<i>Finance, insurance, real estate, rental and leasing</i>		283	307	589	
<i>Wholesale and retail trade</i>		53	165	218	
<i>Construction</i>		117	10	127	
<i>Information</i>		43	47	90	
<i>Utilities</i>		48	32	80	
<i>Transportation and warehousing</i>		37	42	79	
<i>Mining</i>		31	11	42	
<i>Manufacturing</i>		14	27	41	
<i>Agriculture</i>		6	20	25	
<i>Other</i>		31	92	123	
Total Impact	3,974	945	1,145	6,064	16.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,953			1,953	8.4%
Indirect and Induced Impacts on Other Industries**:		525	665	1,190	5.1%
<i>Services</i>		221	312	533	
<i>Finance, insurance, real estate, rental and leasing</i>		71	73	145	
<i>Wholesale and retail trade</i>		32	103	135	
<i>Construction</i>		94	8	103	
<i>Transportation and warehousing</i>		27	31	58	
<i>Information</i>		16	18	34	
<i>Manufacturing</i>		9	23	33	
<i>Utilities</i>		14	9	23	
<i>Mining</i>		10	3	13	
<i>Agriculture</i>		2	8	10	
<i>Other</i>		27	77	103	
Total Impact	1,953	525	665	3,143	13.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Arizona, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	25,157			25,157	0.8%
Indirect and Induced Impacts on Other Industries**:		19,158	52,370	71,528	2.1%
<i>Services</i>		9,483	27,067	36,550	
<i>Finance, insurance, real estate, rental and leasing</i>		2,957	8,077	11,034	
<i>Wholesale and retail trade</i>		985	8,803	9,789	
<i>Manufacturing</i>		1,822	2,295	4,117	
<i>Transportation and warehousing</i>		825	1,500	2,325	
<i>Construction</i>		1,541	517	2,058	
<i>Information</i>		481	1,052	1,534	
<i>Agriculture</i>		79	671	750	
<i>Mining</i>		281	126	407	
<i>Utilities</i>		110	201	311	
<i>Other</i>		593	2,062	2,654	
Total Impact	25,157	19,158	52,370	96,685	2.9%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,592			2,592	1.1%
Indirect and Induced Impacts on Other Industries**:		1,742	3,944	5,686	2.3%
<i>Services</i>		590	1,330	1,920	
<i>Finance, insurance, real estate, rental and leasing</i>		462	1,221	1,683	
<i>Wholesale and retail trade</i>		100	579	679	
<i>Manufacturing</i>		180	217	397	
<i>Information</i>		62	132	194	
<i>Transportation and warehousing</i>		57	106	162	
<i>Construction</i>		108	34	142	
<i>Utilities</i>		38	72	110	
<i>Mining</i>		71	32	103	
<i>Agriculture</i>		5	38	43	
<i>Other</i>		68	184	252	
Total Impact	2,592	1,742	3,944	8,278	3.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,261			1,261	0.8%
Indirect and Induced Impacts on Other Industries**:		1,067	2,326	3,393	2.2%
<i>Services</i>		488	1,072	1,560	
<i>Finance, insurance, real estate, rental and leasing</i>		149	373	521	
<i>Wholesale and retail trade</i>		60	352	411	
<i>Manufacturing</i>		116	158	274	
<i>Transportation and warehousing</i>		42	78	120	
<i>Construction</i>		88	28	115	
<i>Information</i>		30	64	94	
<i>Mining</i>		26	12	38	
<i>Utilities</i>		11	21	32	
<i>Agriculture</i>		3	21	24	
<i>Other</i>		55	150	205	
Total Impact	1,261	1,067	2,326	4,653	3.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Arkansas, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	26,533			26,533	1.7%
Indirect and Induced Impacts on Other Industries**:		14,493	28,613	43,106	2.7%
<i>Services</i>		6,077	13,628	19,704	
<i>Wholesale and retail trade</i>		1,115	4,927	6,042	
<i>Manufacturing</i>		2,111	2,787	4,898	
<i>Finance, insurance, real estate, rental and leasing</i>		1,652	2,732	4,384	
<i>Transportation and warehousing</i>		1,003	1,325	2,328	
<i>Construction</i>		1,560	245	1,806	
<i>Agriculture</i>		197	1,231	1,429	
<i>Information</i>		298	480	778	
<i>Utilities</i>		127	134	261	
<i>Mining</i>		65	25	90	
<i>Other</i>		288	1,099	1,386	
Total Impact	26,533	14,493	28,613	69,640	4.4%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,850			2,850	3.1%
Indirect and Induced Impacts on Other Industries**:		1,068	1,672	2,739	2.9%
<i>Services</i>		301	494	794	
<i>Finance, insurance, real estate, rental and leasing</i>		223	368	591	
<i>Manufacturing</i>		184	192	376	
<i>Wholesale and retail trade</i>		83	235	318	
<i>Information</i>		71	113	184	
<i>Transportation and warehousing</i>		58	77	135	
<i>Utilities</i>		42	42	83	
<i>Agriculture</i>		11	65	76	
<i>Construction</i>		65	10	75	
<i>Mining</i>		8	3	11	
<i>Other</i>		23	73	96	
Total Impact	2,850	1,068	1,672	5,589	6.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,248			1,248	2.1%
Indirect and Induced Impacts on Other Industries**:		635	1,001	1,636	2.8%
<i>Services</i>		250	410	659	
<i>Manufacturing</i>		112	134	246	
<i>Wholesale and retail trade</i>		50	147	197	
<i>Finance, insurance, real estate, rental and leasing</i>		59	95	154	
<i>Transportation and warehousing</i>		42	56	98	
<i>Information</i>		28	44	72	
<i>Construction</i>		53	8	61	
<i>Agriculture</i>		5	30	36	
<i>Utilities</i>		12	12	24	
<i>Mining</i>		4	2	6	
<i>Other</i>		21	64	84	
Total Impact	1,248	635	1,001	2,884	4.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in California, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	159,728			159,728	0.8%
Indirect and Induced Impacts on Other Industries**:		163,781	429,105	592,885	2.9%
<i>Services</i>		80,907	219,878	300,785	
<i>Wholesale and retail trade</i>		14,087	76,818	90,905	
<i>Finance, insurance, real estate, rental and leasing</i>		20,698	56,172	76,871	
<i>Manufacturing</i>		16,158	24,162	40,319	
<i>Transportation and warehousing</i>		7,487	11,977	19,465	
<i>Information</i>		5,304	11,942	17,246	
<i>Construction</i>		12,974	3,015	15,989	
<i>Agriculture</i>		995	8,751	9,746	
<i>Utilities</i>		536	697	1,234	
<i>Mining</i>		170	78	248	
<i>Other</i>		4,464	15,614	20,079	
Total Impact	159,728	163,781	429,105	752,614	3.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	45,525			45,525	2.5%
Indirect and Induced Impacts on Other Industries**:		17,719	37,714	55,433	3.0%
<i>Services</i>		6,371	12,431	18,801	
<i>Finance, insurance, real estate, rental and leasing</i>		4,093	11,001	15,094	
<i>Wholesale and retail trade</i>		1,540	5,513	7,053	
<i>Manufacturing</i>		1,929	2,626	4,555	
<i>Information</i>		1,189	2,601	3,790	
<i>Transportation and warehousing</i>		556	902	1,458	
<i>Construction</i>		1,133	255	1,388	
<i>Utilities</i>		389	470	859	
<i>Agriculture</i>		69	541	610	
<i>Mining</i>		23	11	33	
<i>Other</i>		426	1,364	1,790	
Total Impact	45,525	17,719	37,714	100,958	5.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	19,957			19,957	1.7%
Indirect and Induced Impacts on Other Industries**:		11,423	22,741	34,164	2.9%
<i>Services</i>		5,284	10,087	15,371	
<i>Finance, insurance, real estate, rental and leasing</i>		1,419	3,459	4,878	
<i>Wholesale and retail trade</i>		918	3,390	4,308	
<i>Manufacturing</i>		1,261	1,882	3,144	
<i>Information</i>		637	1,375	2,012	
<i>Construction</i>		919	207	1,126	
<i>Transportation and warehousing</i>		415	674	1,090	
<i>Agriculture</i>		39	303	342	
<i>Utilities</i>		112	141	253	
<i>Mining</i>		14	6	20	
<i>Other</i>		404	1,218	1,622	
Total Impact	19,957	11,423	22,741	54,122	4.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Colorado, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	49,366			49,366	1.6%
Indirect and Induced Impacts on Other Industries**:		46,439	94,603	141,042	4.4%
<i>Services</i>		21,104	48,923	70,026	
<i>Wholesale and retail trade</i>		3,889	18,970	22,859	
<i>Finance, insurance, real estate, rental and leasing</i>		7,140	12,604	19,744	
<i>Construction</i>		6,438	774	7,212	
<i>Manufacturing</i>		2,971	3,295	6,266	
<i>Transportation and warehousing</i>		1,921	2,537	4,458	
<i>Information</i>		1,154	1,959	3,113	
<i>Agriculture</i>		306	1,433	1,739	
<i>Utilities</i>		309	286	596	
<i>Mining</i>		261	85	346	
<i>Other</i>		947	3,737	4,684	
Total Impact	49,366	46,439	94,603	190,408	6.0%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	12,364			12,364	4.8%
Indirect and Induced Impacts on Other Industries**:		4,648	7,087	11,735	4.5%
<i>Services</i>		1,615	2,363	3,978	
<i>Finance, insurance, real estate, rental and leasing</i>		1,172	2,022	3,194	
<i>Wholesale and retail trade</i>		368	1,122	1,490	
<i>Information</i>		325	542	867	
<i>Manufacturing</i>		319	330	649	
<i>Construction</i>		418	50	468	
<i>Transportation and warehousing</i>		125	166	291	
<i>Utilities</i>		131	115	246	
<i>Mining</i>		85	28	112	
<i>Agriculture</i>		15	68	83	
<i>Other</i>		76	281	357	
Total Impact	12,364	4,648	7,087	24,099	9.3%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	5,358			5,358	3.3%
Indirect and Induced Impacts on Other Industries**:		2,875	4,205	7,080	4.4%
<i>Services</i>		1,339	1,899	3,237	
<i>Finance, insurance, real estate, rental and leasing</i>		358	627	984	
<i>Wholesale and retail trade</i>		220	688	908	
<i>Information</i>		174	289	463	
<i>Manufacturing</i>		204	226	431	
<i>Construction</i>		339	40	379	
<i>Transportation and warehousing</i>		92	122	214	
<i>Utilities</i>		38	34	71	
<i>Mining</i>		36	12	48	
<i>Agriculture</i>		5	23	28	
<i>Other</i>		71	246	317	
Total Impact	5,358	2,875	4,205	12,438	7.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Connecticut, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	15,327			15,327	0.7%
Indirect and Induced Impacts on Other Industries**:		11,841	35,518	47,359	2.2%
<i>Services</i>		5,448	18,766	24,214	
<i>Finance, insurance, real estate, rental and leasing</i>		1,745	5,460	7,205	
<i>Wholesale and retail trade</i>		510	5,461	5,970	
<i>Manufacturing</i>		2,300	2,406	4,705	
<i>Transportation and warehousing</i>		566	951	1,518	
<i>Information</i>		358	890	1,248	
<i>Construction</i>		512	259	771	
<i>Agriculture</i>		25	181	206	
<i>Utilities</i>		56	102	158	
<i>Mining</i>		21	10	31	
<i>Other</i>		301	1,032	1,334	
Total Impact	15,327	11,841	35,518	62,686	2.9%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,306			2,306	1.1%
Indirect and Induced Impacts on Other Industries**:		1,567	3,619	5,186	2.4%
<i>Finance, insurance, real estate, rental and leasing</i>		427	1,238	1,665	
<i>Services</i>		535	1,127	1,662	
<i>Manufacturing</i>		320	405	725	
<i>Wholesale and retail trade</i>		70	434	504	
<i>Information</i>		72	172	243	
<i>Transportation and warehousing</i>		40	68	108	
<i>Utilities</i>		32	62	94	
<i>Construction</i>		41	19	59	
<i>Agriculture</i>		1	8	9	
<i>Mining</i>		4	2	6	
<i>Other</i>		26	85	111	
Total Impact	2,306	1,567	3,619	7,492	3.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,029			1,029	0.7%
Indirect and Induced Impacts on Other Industries**:		1,036	2,280	3,316	2.3%
<i>Services</i>		434	924	1,358	
<i>Finance, insurance, real estate, rental and leasing</i>		216	594	810	
<i>Manufacturing</i>		208	252	459	
<i>Wholesale and retail trade</i>		41	256	296	
<i>Information</i>		38	89	127	
<i>Transportation and warehousing</i>		30	51	80	
<i>Construction</i>		33	15	48	
<i>Utilities</i>		9	18	27	
<i>Agriculture</i>		1	4	4	
<i>Mining</i>		3	1	4	
<i>Other</i>		25	77	101	
Total Impact	1,029	1,036	2,280	4,345	3.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Delaware, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,548			4,548	0.9%
Indirect and Induced Impacts on Other Industries**:		3,096	7,793	10,889	2.0%
<i>Services</i>		1,550	3,935	5,485	
<i>Finance, insurance, real estate, rental and leasing</i>		434	1,327	1,761	
<i>Wholesale and retail trade</i>		240	1,229	1,468	
<i>Manufacturing</i>		256	480	736	
<i>Transportation and warehousing</i>		238	228	466	
<i>Construction</i>		196	72	268	
<i>Information</i>		58	145	203	
<i>Agriculture</i>		9	72	80	
<i>Utilities</i>		42	33	75	
<i>Mining</i>		4	2	6	
<i>Other</i>		69	270	339	
Total Impact	4,548	3,096	7,793	15,437	2.9%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	736			736	1.7%
Indirect and Induced Impacts on Other Industries**:		320	651	970	2.2%
<i>Services</i>		117	215	333	
<i>Finance, insurance, real estate, rental and leasing</i>		82	229	312	
<i>Wholesale and retail trade</i>		25	75	100	
<i>Manufacturing</i>		36	55	91	
<i>Utilities</i>		17	13	30	
<i>Transportation and warehousing</i>		14	14	28	
<i>Information</i>		7	18	25	
<i>Construction</i>		13	4	17	
<i>Agriculture</i>		1	6	6	
<i>Mining</i>		0	0	1	
<i>Other</i>		6	22	28	
Total Impact	736	320	651	1,707	4.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	297			297	1.0%
Indirect and Induced Impacts on Other Industries**:		207	411	619	2.2%
<i>Services</i>		98	179	277	
<i>Finance, insurance, real estate, rental and leasing</i>		36	98	134	
<i>Manufacturing</i>		22	38	61	
<i>Wholesale and retail trade</i>		15	46	61	
<i>Transportation and warehousing</i>		10	10	20	
<i>Information</i>		4	10	14	
<i>Construction</i>		11	4	14	
<i>Utilities</i>		5	4	8	
<i>Agriculture</i>		1	4	5	
<i>Mining</i>		0	0	0	
<i>Other</i>		5	18	23	
Total Impact	297	207	411	916	3.2%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in the District of Columbia, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of District Total
Direct Impact of the Oil and Natural Gas Industry	1,713			1,713	0.2%
Indirect and Induced Impacts on Other Industries**:		2,614	8,488	11,102	1.3%
<i>Services</i>		1,846	5,985	7,831	
<i>Finance, insurance, real estate, rental and leasing</i>		253	707	960	
<i>Information</i>		171	482	653	
<i>Wholesale and retail trade</i>		43	293	337	
<i>Transportation and warehousing</i>		44	83	127	
<i>Construction</i>		81	24	105	
<i>Manufacturing</i>		17	26	43	
<i>Utilities</i>		12	20	32	
<i>Agriculture</i>		0	1	1	
<i>Mining</i>		0	0	0	
<i>Other</i>		148	865	1,013	
Total Impact	1,713	2,614	8,488	12,815	1.5%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of District Total
Direct Impact of the Oil and Natural Gas Industry	361			361	0.3%
Indirect and Induced Impacts on Other Industries**:		407	1,009	1,417	1.4%
<i>Services</i>		254	539	793	
<i>Finance, insurance, real estate, rental and leasing</i>		80	222	302	
<i>Information</i>		37	99	137	
<i>Wholesale and retail trade</i>		6	22	28	
<i>Utilities</i>		4	8	13	
<i>Transportation and warehousing</i>		3	7	10	
<i>Construction</i>		6	2	8	
<i>Manufacturing</i>		2	4	7	
<i>Agriculture</i>		0	0	0	
<i>Mining</i>		0	0	0	
<i>Other</i>		13	106	119	
Total Impact	361	407	1,009	1,777	1.7%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of District Total
Direct Impact of the Oil and Natural Gas Industry	151			151	0.2%
Indirect and Induced Impacts on Other Industries**:		293	713	1,006	1.2%
<i>Services</i>		210	454	664	
<i>Finance, insurance, real estate, rental and leasing</i>		33	78	111	
<i>Information</i>		21	55	76	
<i>Wholesale and retail trade</i>		4	13	17	
<i>Construction</i>		5	1	7	
<i>Transportation and warehousing</i>		2	4	6	
<i>Manufacturing</i>		2	2	4	
<i>Utilities</i>		1	2	4	
<i>Agriculture</i>		0	0	0	
<i>Mining</i>		0	0	0	
<i>Other</i>		15	102	118	
Total Impact	151	293	713	1,157	1.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Florida, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	61,914			61,914	0.6%
Indirect and Induced Impacts on Other Industries**:		52,765	152,598	205,363	2.0%
<i>Services</i>		26,874	82,357	109,231	
<i>Finance, insurance, real estate, rental and leasing</i>		8,400	23,080	31,480	
<i>Wholesale and retail trade</i>		2,998	24,739	27,737	
<i>Manufacturing</i>		4,196	5,145	9,341	
<i>Transportation and warehousing</i>		2,430	4,862	7,292	
<i>Construction</i>		4,692	1,406	6,098	
<i>Information</i>		1,562	3,639	5,200	
<i>Agriculture</i>		320	2,724	3,044	
<i>Utilities</i>		285	413	699	
<i>Mining</i>		97	46	143	
<i>Other</i>		911	4,187	5,098	
Total Impact	61,914	52,765	152,598	267,277	2.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,636			4,636	0.7%
Indirect and Induced Impacts on Other Industries**:		4,552	10,758	15,311	2.2%
<i>Services</i>		1,748	3,941	5,689	
<i>Finance, insurance, real estate, rental and leasing</i>		1,263	3,309	4,572	
<i>Wholesale and retail trade</i>		280	1,515	1,796	
<i>Manufacturing</i>		376	501	877	
<i>Information</i>		219	494	713	
<i>Transportation and warehousing</i>		138	284	422	
<i>Construction</i>		298	84	382	
<i>Utilities</i>		110	160	270	
<i>Agriculture</i>		15	117	132	
<i>Mining</i>		20	10	30	
<i>Other</i>		85	344	429	
Total Impact	4,636	4,552	10,758	19,946	2.8%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,291			2,291	0.5%
Indirect and Induced Impacts on Other Industries**:		2,808	6,343	9,150	2.0%
<i>Services</i>		1,408	3,135	4,543	
<i>Finance, insurance, real estate, rental and leasing</i>		404	1,021	1,425	
<i>Wholesale and retail trade</i>		167	926	1,092	
<i>Manufacturing</i>		248	327	575	
<i>Information</i>		110	244	354	
<i>Construction</i>		241	68	309	
<i>Transportation and warehousing</i>		100	207	307	
<i>Utilities</i>		31	47	78	
<i>Agriculture</i>		8	58	66	
<i>Mining</i>		12	5	17	
<i>Other</i>		79	305	384	
Total Impact	2,291	2,808	6,343	11,441	2.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Georgia, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	41,197			41,197	0.8%
Indirect and Induced Impacts on Other Industries**:		25,632	78,977	104,609	2.0%
<i>Services</i>		12,248	38,545	50,793	
<i>Wholesale and retail trade</i>		1,489	13,564	15,054	
<i>Finance, insurance, real estate, rental and leasing</i>		3,344	9,830	13,173	
<i>Manufacturing</i>		3,753	6,506	10,259	
<i>Transportation and warehousing</i>		1,418	3,141	4,559	
<i>Information</i>		960	2,390	3,350	
<i>Construction</i>		1,370	674	2,044	
<i>Agriculture</i>		149	1,327	1,475	
<i>Utilities</i>		196	355	550	
<i>Mining</i>		148	70	219	
<i>Other</i>		558	2,574	3,132	
Total Impact	41,197	25,632	78,977	145,806	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,297			3,297	0.8%
Indirect and Induced Impacts on Other Industries**:		2,489	6,246	8,735	2.2%
<i>Services</i>		821	1,796	2,617	
<i>Finance, insurance, real estate, rental and leasing</i>		579	1,642	2,220	
<i>Manufacturing</i>		366	676	1,042	
<i>Wholesale and retail trade</i>		161	872	1,033	
<i>Information</i>		218	524	743	
<i>Transportation and warehousing</i>		108	249	358	
<i>Utilities</i>		78	164	242	
<i>Construction</i>		83	37	120	
<i>Agriculture</i>		11	83	93	
<i>Mining</i>		21	10	31	
<i>Other</i>		44	192	236	
Total Impact	3,297	2,489	6,246	12,032	3.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,630			1,630	0.6%
Indirect and Induced Impacts on Other Industries**:		1,546	3,664	5,210	2.0%
<i>Services</i>		683	1,472	2,154	
<i>Finance, insurance, real estate, rental and leasing</i>		201	523	724	
<i>Manufacturing</i>		229	399	628	
<i>Wholesale and retail trade</i>		95	531	626	
<i>Information</i>		109	257	366	
<i>Transportation and warehousing</i>		80	184	264	
<i>Construction</i>		67	30	97	
<i>Utilities</i>		22	47	69	
<i>Agriculture</i>		6	44	49	
<i>Mining</i>		12	6	18	
<i>Other</i>		43	171	213	
Total Impact	1,630	1,546	3,664	6,841	2.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Hawaii, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,019			4,019	0.5%
Indirect and Induced Impacts on Other Industries**:		3,406	11,114	14,521	1.7%
<i>Services</i>		1,826	6,124	7,950	
<i>Finance, insurance, real estate, rental and leasing</i>		497	1,344	1,841	
<i>Wholesale and retail trade</i>		229	1,610	1,839	
<i>Transportation and warehousing</i>		207	469	676	
<i>Manufacturing</i>		117	280	397	
<i>Information</i>		102	235	337	
<i>Construction</i>		241	87	329	
<i>Agriculture</i>		25	214	240	
<i>Utilities</i>		36	46	82	
<i>Mining</i>		6	3	9	
<i>Other</i>		120	701	821	
Total Impact	4,019	3,406	11,114	18,539	2.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	477			477	0.8%
Indirect and Induced Impacts on Other Industries**:		289	767	1,056	1.7%
<i>Services</i>		109	303	412	
<i>Finance, insurance, real estate, rental and leasing</i>		74	199	273	
<i>Wholesale and retail trade</i>		17	84	101	
<i>Information</i>		14	31	44	
<i>Transportation and warehousing</i>		13	30	43	
<i>Manufacturing</i>		14	20	34	
<i>Construction</i>		21	7	28	
<i>Utilities</i>		11	15	27	
<i>Agriculture</i>		1	7	8	
<i>Mining</i>		2	1	2	
<i>Other</i>		13	70	83	
Total Impact	477	289	767	1,533	2.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	219			219	0.5%
Indirect and Induced Impacts on Other Industries**:		178	458	636	1.6%
<i>Services</i>		89	233	321	
<i>Finance, insurance, real estate, rental and leasing</i>		20	50	70	
<i>Wholesale and retail trade</i>		10	52	63	
<i>Transportation and warehousing</i>		9	21	31	
<i>Manufacturing</i>		9	14	24	
<i>Construction</i>		17	6	23	
<i>Information</i>		6	14	21	
<i>Utilities</i>		3	4	7	
<i>Agriculture</i>		1	4	5	
<i>Mining</i>		1	0	1	
<i>Other</i>		12	59	71	
Total Impact	219	178	458	855	2.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Idaho, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	7,765			7,765	0.8%
Indirect and Induced Impacts on Other Industries**:		4,192	12,043	16,235	1.8%
<i>Services</i>		1,920	5,839	7,759	
<i>Wholesale and retail trade</i>		235	2,021	2,256	
<i>Finance, insurance, real estate, rental and leasing</i>		600	1,435	2,035	
<i>Manufacturing</i>		532	808	1,340	
<i>Agriculture</i>		83	763	846	
<i>Transportation and warehousing</i>		236	393	628	
<i>Construction</i>		334	140	474	
<i>Information</i>		112	255	367	
<i>Mining</i>		66	30	96	
<i>Utilities</i>		13	28	41	
<i>Other</i>		62	333	394	
Total Impact	7,765	4,192	12,043	24,000	2.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	674			674	1.3%
Indirect and Induced Impacts on Other Industries**:		319	708	1,027	1.9%
<i>Services</i>		114	228	342	
<i>Finance, insurance, real estate, rental and leasing</i>		75	171	246	
<i>Wholesale and retail trade</i>		18	107	126	
<i>Manufacturing</i>		42	59	102	
<i>Agriculture</i>		7	54	61	
<i>Transportation and warehousing</i>		13	21	34	
<i>Information</i>		10	22	32	
<i>Construction</i>		18	7	25	
<i>Mining</i>		13	6	19	
<i>Utilities</i>		5	10	15	
<i>Other</i>		5	22	26	
Total Impact	674	319	708	1,700	3.2%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	315			315	0.9%
Indirect and Induced Impacts on Other Industries**:		194	418	612	1.8%
<i>Services</i>		93	186	279	
<i>Wholesale and retail trade</i>		11	65	76	
<i>Manufacturing</i>		28	44	72	
<i>Finance, insurance, real estate, rental and leasing</i>		21	48	69	
<i>Transportation and warehousing</i>		9	15	24	
<i>Agriculture</i>		3	19	22	
<i>Construction</i>		15	6	20	
<i>Information</i>		5	10	15	
<i>Mining</i>		5	2	7	
<i>Utilities</i>		1	3	4	
<i>Other</i>		4	19	23	
Total Impact	315	194	418	928	2.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Illinois, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	55,581			55,581	0.7%
Indirect and Induced Impacts on Other Industries**:		51,421	152,999	204,420	2.7%
<i>Services</i>		22,823	79,993	102,815	
<i>Wholesale and retail trade</i>		3,751	27,615	31,366	
<i>Finance, insurance, real estate, rental and leasing</i>		6,179	19,245	25,424	
<i>Manufacturing</i>		8,676	9,406	18,082	
<i>Transportation and warehousing</i>		2,553	5,785	8,338	
<i>Construction</i>		4,735	1,039	5,774	
<i>Information</i>		1,147	2,880	4,028	
<i>Agriculture</i>		182	1,814	1,995	
<i>Utilities</i>		299	439	738	
<i>Mining</i>		188	87	274	
<i>Other</i>		888	4,697	5,585	
Total Impact	55,581	51,421	152,999	260,001	3.5%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	13,366			13,366	2.1%
Indirect and Induced Impacts on Other Industries**:		5,635	12,322	17,957	2.9%
<i>Services</i>		1,991	4,153	6,144	
<i>Finance, insurance, real estate, rental and leasing</i>		1,265	3,722	4,987	
<i>Wholesale and retail trade</i>		393	1,787	2,180	
<i>Manufacturing</i>		1,003	1,029	2,032	
<i>Information</i>		193	467	660	
<i>Transportation and warehousing</i>		172	401	573	
<i>Construction</i>		354	75	429	
<i>Utilities</i>		149	225	374	
<i>Agriculture</i>		11	90	100	
<i>Mining</i>		30	14	43	
<i>Other</i>		76	358	434	
Total Impact	13,366	5,635	12,322	31,323	5.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	5,807			5,807	1.4%
Indirect and Induced Impacts on Other Industries**:		3,609	7,537	11,146	2.8%
<i>Services</i>		1,633	3,414	5,047	
<i>Finance, insurance, real estate, rental and leasing</i>		466	1,325	1,792	
<i>Manufacturing</i>		630	697	1,327	
<i>Wholesale and retail trade</i>		234	1,088	1,323	
<i>Transportation and warehousing</i>		125	294	419	
<i>Construction</i>		287	61	348	
<i>Information</i>		97	232	329	
<i>Utilities</i>		42	64	106	
<i>Agriculture</i>		3	24	27	
<i>Mining</i>		16	8	24	
<i>Other</i>		75	330	405	
Total Impact	5,807	3,609	7,537	16,953	4.2%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Indiana, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	37,898			37,898	1.0%
Indirect and Induced Impacts on Other Industries**:		26,315	63,142	89,458	2.4%
<i>Services</i>		10,075	30,667	40,742	
<i>Wholesale and retail trade</i>		1,966	11,377	13,343	
<i>Manufacturing</i>		6,315	6,712	13,027	
<i>Finance, insurance, real estate, rental and leasing</i>		2,708	6,594	9,302	
<i>Transportation and warehousing</i>		1,631	2,591	4,223	
<i>Construction</i>		2,126	503	2,629	
<i>Information</i>		500	1,043	1,543	
<i>Agriculture</i>		148	1,363	1,511	
<i>Utilities</i>		211	268	479	
<i>Mining</i>		150	69	219	
<i>Other</i>		485	1,955	2,441	
Total Impact	37,898	26,315	63,142	127,355	3.5%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,651			4,651	1.9%
Indirect and Induced Impacts on Other Industries**:		2,264	4,077	6,341	2.6%
<i>Services</i>		524	1,238	1,762	
<i>Manufacturing</i>		747	716	1,463	
<i>Finance, insurance, real estate, rental and leasing</i>		396	940	1,336	
<i>Wholesale and retail trade</i>		159	579	738	
<i>Transportation and warehousing</i>		97	156	253	
<i>Utilities</i>		81	100	180	
<i>Information</i>		57	116	173	
<i>Construction</i>		126	29	154	
<i>Agriculture</i>		8	63	71	
<i>Mining</i>		30	14	44	
<i>Other</i>		39	127	167	
Total Impact	4,651	2,264	4,077	10,992	4.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,069			2,069	1.3%
Indirect and Induced Impacts on Other Industries**:		1,374	2,464	3,838	2.4%
<i>Services</i>		431	1,011	1,442	
<i>Manufacturing</i>		456	477	933	
<i>Wholesale and retail trade</i>		95	355	450	
<i>Finance, insurance, real estate, rental and leasing</i>		114	261	375	
<i>Transportation and warehousing</i>		70	114	184	
<i>Construction</i>		102	23	125	
<i>Information</i>		26	53	79	
<i>Utilities</i>		23	29	53	
<i>Mining</i>		17	8	25	
<i>Agriculture</i>		2	18	20	
<i>Other</i>		37	115	152	
Total Impact	2,069	1,374	2,464	5,907	3.8%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Iowa, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	22,758			22,758	1.1%
Indirect and Induced Impacts on Other Industries**:		10,834	29,662	40,496	2.0%
<i>Services</i>		4,242	13,541	17,784	
<i>Wholesale and retail trade</i>		696	4,985	5,681	
<i>Finance, insurance, real estate, rental and leasing</i>		1,401	3,543	4,944	
<i>Manufacturing</i>		2,171	2,718	4,889	
<i>Agriculture</i>		189	1,778	1,967	
<i>Transportation and warehousing</i>		637	1,144	1,782	
<i>Construction</i>		803	227	1,030	
<i>Information</i>		330	698	1,027	
<i>Utilities</i>		81	119	200	
<i>Mining</i>		47	22	70	
<i>Other</i>		237	887	1,124	
Total Impact	22,758	10,834	29,662	63,254	3.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,374			1,374	1.1%
Indirect and Induced Impacts on Other Industries**:		861	1,834	2,696	2.2%
<i>Finance, insurance, real estate, rental and leasing</i>		207	489	696	
<i>Services</i>		199	482	681	
<i>Manufacturing</i>		218	234	452	
<i>Wholesale and retail trade</i>		54	247	301	
<i>Agriculture</i>		16	130	147	
<i>Transportation and warehousing</i>		36	66	102	
<i>Information</i>		33	67	100	
<i>Utilities</i>		28	44	72	
<i>Construction</i>		44	12	55	
<i>Mining</i>		7	3	10	
<i>Other</i>		20	60	79	
Total Impact	1,374	861	1,834	4,069	3.3%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	704			704	0.9%
Indirect and Induced Impacts on Other Industries**:		512	1,079	1,591	2.1%
<i>Services</i>		164	392	556	
<i>Manufacturing</i>		129	161	290	
<i>Finance, insurance, real estate, rental and leasing</i>		75	178	253	
<i>Wholesale and retail trade</i>		32	150	183	
<i>Transportation and warehousing</i>		26	48	74	
<i>Information</i>		17	34	51	
<i>Construction</i>		35	9	45	
<i>Agriculture</i>		5	38	43	
<i>Utilities</i>		8	13	21	
<i>Mining</i>		3	2	5	
<i>Other</i>		18	53	71	
Total Impact	704	512	1,079	2,295	3.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Kansas, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	38,790			38,790	2.1%
Indirect and Induced Impacts on Other Industries**:		21,713	58,548	80,260	4.4%
<i>Services</i>		8,551	28,846	37,397	
<i>Wholesale and retail trade</i>		2,186	12,131	14,317	
<i>Finance, insurance, real estate, rental and leasing</i>		3,055	6,481	9,535	
<i>Manufacturing</i>		2,136	3,397	5,533	
<i>Construction</i>		3,189	406	3,596	
<i>Transportation and warehousing</i>		1,115	1,860	2,974	
<i>Agriculture</i>		197	1,758	1,955	
<i>Information</i>		598	1,100	1,698	
<i>Utilities</i>		222	225	446	
<i>Mining</i>		33	15	48	
<i>Other</i>		431	2,330	2,761	
Total Impact	38,790	21,713	58,548	119,051	6.5%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	8,738			8,738	7.1%
Indirect and Induced Impacts on Other Industries**:		1,774	3,517	5,291	4.3%
<i>Services</i>		479	1,081	1,560	
<i>Finance, insurance, real estate, rental and leasing</i>		422	860	1,283	
<i>Wholesale and retail trade</i>		170	595	765	
<i>Manufacturing</i>		206	292	498	
<i>Information</i>		125	226	351	
<i>Transportation and warehousing</i>		71	120	192	
<i>Construction</i>		165	21	186	
<i>Utilities</i>		85	86	170	
<i>Agriculture</i>		10	81	91	
<i>Mining</i>		5	2	7	
<i>Other</i>		35	154	189	
Total Impact	8,738	1,774	3,517	14,029	11.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,623			3,623	4.7%
Indirect and Induced Impacts on Other Industries**:		1,036	2,079	3,115	4.1%
<i>Services</i>		397	884	1,281	
<i>Wholesale and retail trade</i>		102	370	473	
<i>Finance, insurance, real estate, rental and leasing</i>		113	240	353	
<i>Manufacturing</i>		131	219	350	
<i>Construction</i>		133	17	150	
<i>Information</i>		49	88	137	
<i>Transportation and warehousing</i>		50	85	135	
<i>Utilities</i>		24	24	48	
<i>Agriculture</i>		3	21	24	
<i>Mining</i>		3	1	4	
<i>Other</i>		30	130	161	
Total Impact	3,623	1,036	2,079	6,738	8.8%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Kentucky, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,196			32,196	1.3%
Indirect and Induced Impacts on Other Industries**:		16,503	38,791	55,294	2.3%
<i>Services</i>		6,653	18,354	25,006	
<i>Wholesale and retail trade</i>		1,188	6,655	7,843	
<i>Manufacturing</i>		2,860	3,386	6,246	
<i>Finance, insurance, real estate, rental and leasing</i>		1,788	3,924	5,712	
<i>Agriculture</i>		311	2,125	2,435	
<i>Transportation and warehousing</i>		807	1,620	2,427	
<i>Construction</i>		1,624	310	1,934	
<i>Information</i>		374	715	1,089	
<i>Mining</i>		459	211	670	
<i>Utilities</i>		106	126	232	
<i>Other</i>		335	1,365	1,700	
Total Impact	32,196	16,503	38,791	87,490	3.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,992			2,992	2.0%
Indirect and Induced Impacts on Other Industries**:		1,294	2,426	3,721	2.4%
<i>Services</i>		357	733	1,091	
<i>Finance, insurance, real estate, rental and leasing</i>		254	535	789	
<i>Manufacturing</i>		278	395	673	
<i>Wholesale and retail trade</i>		96	341	437	
<i>Transportation and warehousing</i>		55	113	168	
<i>Information</i>		37	69	106	
<i>Mining</i>		70	32	102	
<i>Construction</i>		77	14	91	
<i>Utilities</i>		32	38	69	
<i>Agriculture</i>		7	47	54	
<i>Other</i>		33	109	142	
Total Impact	2,992	1,294	2,426	6,712	4.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,405			1,405	1.4%
Indirect and Induced Impacts on Other Industries**:		791	1,457	2,248	2.3%
<i>Services</i>		283	594	878	
<i>Manufacturing</i>		176	215	391	
<i>Wholesale and retail trade</i>		57	212	269	
<i>Finance, insurance, real estate, rental and leasing</i>		77	162	239	
<i>Transportation and warehousing</i>		40	83	122	
<i>Construction</i>		62	12	74	
<i>Mining</i>		38	18	56	
<i>Information</i>		17	32	50	
<i>Agriculture</i>		5	30	35	
<i>Utilities</i>		9	11	20	
<i>Other</i>		26	89	114	
Total Impact	1,405	791	1,457	3,653	3.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Louisiana, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	109,003			109,003	4.4%
Indirect and Induced Impacts on Other Industries**:		84,767	136,283	221,050	9.0%
<i>Services</i>		42,171	74,617	116,789	
<i>Wholesale and retail trade</i>		8,625	28,230	36,855	
<i>Finance, insurance, real estate, rental and leasing</i>		11,083	14,654	25,737	
<i>Construction</i>		10,768	1,120	11,888	
<i>Manufacturing</i>		4,641	3,567	8,207	
<i>Transportation and warehousing</i>		2,786	2,700	5,485	
<i>Information</i>		1,715	2,000	3,715	
<i>Agriculture</i>		789	2,412	3,201	
<i>Utilities</i>		733	567	1,300	
<i>Mining</i>		57	18	75	
<i>Other</i>		1,399	6,398	7,797	
Total Impact	109,003	84,767	136,283	330,053	13.4%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	20,971			20,971	12.0%
Indirect and Induced Impacts on Other Industries**:		6,760	8,255	15,015	8.6%
<i>Services</i>		2,357	3,002	5,359	
<i>Finance, insurance, real estate, rental and leasing</i>		1,603	2,162	3,765	
<i>Wholesale and retail trade</i>		665	1,393	2,059	
<i>Manufacturing</i>		494	329	823	
<i>Transportation and warehousing</i>		347	337	684	
<i>Construction</i>		612	63	675	
<i>Utilities</i>		337	216	553	
<i>Information</i>		196	228	424	
<i>Agriculture</i>		33	103	136	
<i>Mining</i>		11	4	15	
<i>Other</i>		106	417	523	
Total Impact	20,971	6,760	8,255	35,986	20.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	9,402			9,402	8.5%
Indirect and Induced Impacts on Other Industries**:		4,079	4,968	9,047	8.1%
<i>Services</i>		1,830	2,380	4,210	
<i>Wholesale and retail trade</i>		402	878	1,280	
<i>Finance, insurance, real estate, rental and leasing</i>		450	583	1,033	
<i>Transportation and warehousing</i>		288	279	567	
<i>Construction</i>		495	51	547	
<i>Manufacturing</i>		307	217	523	
<i>Information</i>		96	111	207	
<i>Utilities</i>		97	66	163	
<i>Agriculture</i>		14	44	58	
<i>Mining</i>		6	2	8	
<i>Other</i>		94	357	452	
Total Impact	9,402	4,079	4,968	18,449	16.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Maine, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	12,712			12,712	1.5%
Indirect and Induced Impacts on Other Industries**:		4,170	13,015	17,185	2.1%
<i>Services</i>		1,867	6,716	8,584	
<i>Wholesale and retail trade</i>		246	2,202	2,448	
<i>Finance, insurance, real estate, rental and leasing</i>		559	1,366	1,926	
<i>Manufacturing</i>		610	922	1,533	
<i>Transportation and warehousing</i>		305	368	672	
<i>Agriculture</i>		54	458	513	
<i>Information</i>		133	289	422	
<i>Construction</i>		215	130	345	
<i>Utilities</i>		32	40	72	
<i>Mining</i>		5	2	7	
<i>Other</i>		143	522	665	
Total Impact	12,712	4,170	13,015	29,897	3.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	846			846	1.8%
Indirect and Induced Impacts on Other Industries**:		315	787	1,102	2.3%
<i>Services</i>		91	264	355	
<i>Finance, insurance, real estate, rental and leasing</i>		81	190	271	
<i>Manufacturing</i>		58	83	141	
<i>Wholesale and retail trade</i>		20	117	137	
<i>Information</i>		12	26	38	
<i>Transportation and warehousing</i>		15	19	34	
<i>Agriculture</i>		4	28	31	
<i>Utilities</i>		12	15	26	
<i>Construction</i>		10	5	15	
<i>Mining</i>		0	0	1	
<i>Other</i>		12	41	53	
Total Impact	846	315	787	1,948	4.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	382			382	1.2%
Indirect and Induced Impacts on Other Industries**:		190	479	668	2.1%
<i>Services</i>		74	217	291	
<i>Manufacturing</i>		38	57	95	
<i>Finance, insurance, real estate, rental and leasing</i>		24	56	81	
<i>Wholesale and retail trade</i>		12	67	79	
<i>Transportation and warehousing</i>		11	14	25	
<i>Information</i>		6	13	19	
<i>Construction</i>		8	4	12	
<i>Agriculture</i>		1	9	10	
<i>Utilities</i>		3	4	8	
<i>Mining</i>		0	0	0	
<i>Other</i>		11	37	48	
Total Impact	382	190	479	1,051	3.3%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Maryland, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	17,622			17,622	0.5%
Indirect and Induced Impacts on Other Industries**:		14,057	46,545	60,602	1.8%
<i>Services</i>		7,529	25,916	33,445	
<i>Finance, insurance, real estate, rental and leasing</i>		1,921	6,151	8,072	
<i>Wholesale and retail trade</i>		712	7,299	8,012	
<i>Manufacturing</i>		1,264	1,771	3,035	
<i>Transportation and warehousing</i>		807	1,521	2,328	
<i>Information</i>		445	1,164	1,609	
<i>Construction</i>		896	446	1,342	
<i>Agriculture</i>		43	369	412	
<i>Utilities</i>		84	159	243	
<i>Mining</i>		36	17	53	
<i>Other</i>		320	1,731	2,051	
Total Impact	17,622	14,057	46,545	78,224	2.3%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,509			1,509	0.5%
Indirect and Induced Impacts on Other Industries**:		1,432	3,746	5,178	1.9%
<i>Services</i>		550	1,345	1,895	
<i>Finance, insurance, real estate, rental and leasing</i>		355	1,093	1,448	
<i>Wholesale and retail trade</i>		75	448	523	
<i>Manufacturing</i>		153	197	350	
<i>Information</i>		81	202	283	
<i>Utilities</i>		65	148	213	
<i>Transportation and warehousing</i>		44	85	129	
<i>Construction</i>		72	32	104	
<i>Agriculture</i>		3	19	22	
<i>Mining</i>		5	3	8	
<i>Other</i>		30	174	203	
Total Impact	1,509	1,432	3,746	6,688	2.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	730			730	0.4%
Indirect and Induced Impacts on Other Industries**:		917	2,274	3,190	1.7%
<i>Services</i>		472	1,125	1,596	
<i>Finance, insurance, real estate, rental and leasing</i>		121	338	459	
<i>Wholesale and retail trade</i>		45	276	321	
<i>Manufacturing</i>		96	133	230	
<i>Information</i>		42	103	145	
<i>Transportation and warehousing</i>		33	64	97	
<i>Construction</i>		58	26	84	
<i>Utilities</i>		18	43	61	
<i>Agriculture</i>		1	7	8	
<i>Mining</i>		3	1	5	
<i>Other</i>		28	157	185	
Total Impact	730	917	2,274	3,920	2.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Massachusetts, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	25,070			25,070	0.6%
Indirect and Induced Impacts on Other Industries**:		20,819	66,197	87,016	2.1%
<i>Services</i>		10,590	37,467	48,057	
<i>Finance, insurance, real estate, rental and leasing</i>		2,589	8,214	10,804	
<i>Wholesale and retail trade</i>		1,004	9,785	10,789	
<i>Manufacturing</i>		2,851	3,638	6,489	
<i>Information</i>		703	1,852	2,555	
<i>Transportation and warehousing</i>		832	1,631	2,462	
<i>Construction</i>		1,221	472	1,693	
<i>Agriculture</i>		38	371	409	
<i>Utilities</i>		86	143	229	
<i>Mining</i>		33	15	48	
<i>Other</i>		872	2,609	3,481	
Total Impact	25,070	20,819	66,197	112,086	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,754			3,754	1.0%
Indirect and Induced Impacts on Other Industries**:		2,454	5,989	8,443	2.3%
<i>Services</i>		957	2,222	3,179	
<i>Finance, insurance, real estate, rental and leasing</i>		646	1,918	2,564	
<i>Wholesale and retail trade</i>		126	707	833	
<i>Manufacturing</i>		353	409	762	
<i>Information</i>		132	335	467	
<i>Transportation and warehousing</i>		50	100	150	
<i>Utilities</i>		45	82	127	
<i>Construction</i>		92	33	126	
<i>Agriculture</i>		3	23	26	
<i>Mining</i>		4	2	7	
<i>Other</i>		45	157	201	
Total Impact	3,754	2,454	5,989	12,197	3.3%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,690			1,690	0.7%
Indirect and Induced Impacts on Other Industries**:		1,671	3,881	5,552	2.2%
<i>Services</i>		813	1,866	2,679	
<i>Finance, insurance, real estate, rental and leasing</i>		290	800	1,089	
<i>Manufacturing</i>		230	298	528	
<i>Wholesale and retail trade</i>		74	424	498	
<i>Information</i>		69	171	239	
<i>Transportation and warehousing</i>		37	74	111	
<i>Construction</i>		75	27	102	
<i>Utilities</i>		13	24	37	
<i>Agriculture</i>		1	11	12	
<i>Mining</i>		3	1	4	
<i>Other</i>		67	186	253	
Total Impact	1,690	1,671	3,881	7,242	2.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Michigan, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	45,946			45,946	0.9%
Indirect and Induced Impacts on Other Industries**:		35,768	97,781	133,549	2.5%
<i>Services</i>		16,439	52,162	68,601	
<i>Wholesale and retail trade</i>		2,105	17,464	19,569	
<i>Manufacturing</i>		7,004	7,625	14,629	
<i>Finance, insurance, real estate, rental and leasing</i>		3,871	10,647	14,517	
<i>Transportation and warehousing</i>		1,420	2,648	4,068	
<i>Construction</i>		3,026	667	3,692	
<i>Information</i>		734	1,679	2,413	
<i>Agriculture</i>		208	1,628	1,836	
<i>Utilities</i>		240	366	607	
<i>Mining</i>		94	44	138	
<i>Other</i>		628	2,851	3,479	
Total Impact	45,946	35,768	97,781	179,495	3.3%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	7,369			7,369	1.9%
Indirect and Induced Impacts on Other Industries**:		3,367	6,975	10,342	2.6%
<i>Services</i>		1,169	2,359	3,528	
<i>Finance, insurance, real estate, rental and leasing</i>		712	1,912	2,625	
<i>Manufacturing</i>		743	852	1,595	
<i>Wholesale and retail trade</i>		179	943	1,121	
<i>Information</i>		97	216	313	
<i>Utilities</i>		115	193	308	
<i>Transportation and warehousing</i>		94	179	273	
<i>Construction</i>		182	39	221	
<i>Agriculture</i>		9	68	77	
<i>Mining</i>		16	8	23	
<i>Other</i>		50	208	257	
Total Impact	7,369	3,367	6,975	17,711	4.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,426			3,426	1.3%
Indirect and Induced Impacts on Other Industries**:		2,162	4,232	6,394	2.5%
<i>Services</i>		987	1,966	2,953	
<i>Manufacturing</i>		506	621	1,128	
<i>Finance, insurance, real estate, rental and leasing</i>		203	515	717	
<i>Wholesale and retail trade</i>		107	583	691	
<i>Transportation and warehousing</i>		69	133	202	
<i>Construction</i>		148	32	179	
<i>Information</i>		48	105	153	
<i>Utilities</i>		33	55	88	
<i>Agriculture</i>		4	25	29	
<i>Mining</i>		8	4	12	
<i>Other</i>		49	193	242	
Total Impact	3,426	2,162	4,232	9,820	3.8%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Minnesota, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	33,430			33,430	0.9%
Indirect and Induced Impacts on Other Industries**:		22,734	57,544	80,278	2.3%
<i>Services</i>		10,658	29,395	40,053	
<i>Wholesale and retail trade</i>		1,698	9,650	11,348	
<i>Finance, insurance, real estate, rental and leasing</i>		2,660	7,054	9,714	
<i>Manufacturing</i>		3,678	4,271	7,948	
<i>Transportation and warehousing</i>		1,121	1,829	2,949	
<i>Agriculture</i>		202	1,811	2,013	
<i>Construction</i>		1,444	412	1,856	
<i>Information</i>		569	1,271	1,839	
<i>Utilities</i>		165	207	372	
<i>Mining</i>		126	60	186	
<i>Other</i>		414	1,585	1,999	
Total Impact	33,430	22,734	57,544	113,708	3.2%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,822			2,822	1.1%
Indirect and Induced Impacts on Other Industries**:		2,220	4,228	6,449	2.5%
<i>Services</i>		825	1,426	2,251	
<i>Finance, insurance, real estate, rental and leasing</i>		471	1,189	1,661	
<i>Wholesale and retail trade</i>		178	590	768	
<i>Manufacturing</i>		365	398	763	
<i>Information</i>		75	164	239	
<i>Transportation and warehousing</i>		73	122	195	
<i>Utilities</i>		62	82	144	
<i>Construction</i>		91	25	116	
<i>Agriculture</i>		13	101	113	
<i>Mining</i>		29	14	42	
<i>Other</i>		37	118	155	
Total Impact	2,822	2,220	4,228	9,271	3.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,332			1,332	0.8%
Indirect and Induced Impacts on Other Industries**:		1,425	2,594	4,019	2.4%
<i>Services</i>		658	1,157	1,815	
<i>Finance, insurance, real estate, rental and leasing</i>		177	433	610	
<i>Manufacturing</i>		248	287	534	
<i>Wholesale and retail trade</i>		106	354	460	
<i>Transportation and warehousing</i>		54	89	143	
<i>Information</i>		40	85	125	
<i>Construction</i>		74	20	94	
<i>Utilities</i>		17	23	41	
<i>Agriculture</i>		5	35	40	
<i>Mining</i>		13	6	19	
<i>Other</i>		34	105	139	
Total Impact	1,332	1,425	2,594	5,351	3.2%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Mississippi, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,492			32,492	2.1%
Indirect and Induced Impacts on Other Industries**:		17,480	33,847	51,328	3.4%
<i>Services</i>		7,128	16,228	23,356	
<i>Wholesale and retail trade</i>		1,641	6,404	8,045	
<i>Finance, insurance, real estate, rental and leasing</i>		2,007	3,271	5,279	
<i>Manufacturing</i>		1,988	2,632	4,620	
<i>Transportation and warehousing</i>		1,351	1,336	2,687	
<i>Construction</i>		2,146	284	2,430	
<i>Agriculture</i>		232	1,356	1,588	
<i>Information</i>		348	520	868	
<i>Utilities</i>		224	203	427	
<i>Mining</i>		21	10	30	
<i>Other</i>		395	1,603	1,998	
Total Impact	32,492	17,480	33,847	83,820	5.5%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,133			4,133	4.8%
Indirect and Induced Impacts on Other Industries**:		1,215	1,897	3,111	3.6%
<i>Services</i>		329	608	937	
<i>Finance, insurance, real estate, rental and leasing</i>		279	455	734	
<i>Wholesale and retail trade</i>		122	305	427	
<i>Manufacturing</i>		165	166	331	
<i>Transportation and warehousing</i>		73	72	145	
<i>Utilities</i>		73	58	131	
<i>Construction</i>		95	12	107	
<i>Information</i>		35	52	87	
<i>Agriculture</i>		11	62	73	
<i>Mining</i>		2	1	4	
<i>Other</i>		30	104	135	
Total Impact	4,133	1,215	1,897	7,244	8.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,770			1,770	3.2%
Indirect and Induced Impacts on Other Industries**:		711	1,127	1,838	3.3%
<i>Services</i>		268	487	755	
<i>Wholesale and retail trade</i>		74	190	264	
<i>Manufacturing</i>		101	120	221	
<i>Finance, insurance, real estate, rental and leasing</i>		69	109	177	
<i>Transportation and warehousing</i>		53	53	106	
<i>Construction</i>		77	10	87	
<i>Information</i>		15	23	38	
<i>Utilities</i>		21	17	38	
<i>Agriculture</i>		5	28	33	
<i>Mining</i>		2	1	3	
<i>Other</i>		27	90	117	
Total Impact	1,770	711	1,127	3,609	6.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Missouri, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	38,430			38,430	1.1%
Indirect and Induced Impacts on Other Industries**:		24,602	59,787	84,389	2.3%
<i>Services</i>		11,235	29,600	40,835	
<i>Wholesale and retail trade</i>		1,488	10,006	11,494	
<i>Finance, insurance, real estate, rental and leasing</i>		3,427	7,351	10,779	
<i>Manufacturing</i>		3,393	4,098	7,491	
<i>Transportation and warehousing</i>		1,339	2,219	3,558	
<i>Agriculture</i>		290	2,276	2,566	
<i>Construction</i>		1,906	487	2,393	
<i>Information</i>		666	1,374	2,040	
<i>Utilities</i>		140	192	332	
<i>Mining</i>		132	57	189	
<i>Other</i>		586	2,127	2,713	
Total Impact	38,430	24,602	59,787	122,820	3.4%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,018			3,018	1.3%
Indirect and Induced Impacts on Other Industries**:		2,129	3,968	6,096	2.6%
<i>Services</i>		781	1,358	2,139	
<i>Finance, insurance, real estate, rental and leasing</i>		456	946	1,402	
<i>Manufacturing</i>		334	456	790	
<i>Wholesale and retail trade</i>		131	556	686	
<i>Information</i>		102	205	308	
<i>Transportation and warehousing</i>		82	138	220	
<i>Construction</i>		111	27	138	
<i>Utilities</i>		44	61	106	
<i>Agriculture</i>		8	60	69	
<i>Mining</i>		34	14	48	
<i>Other</i>		45	145	191	
Total Impact	3,018	2,129	3,968	9,115	3.9%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,499			1,499	1.0%
Indirect and Induced Impacts on Other Industries**:		1,343	2,411	3,754	2.5%
<i>Services</i>		640	1,107	1,747	
<i>Manufacturing</i>		204	265	469	
<i>Finance, insurance, real estate, rental and leasing</i>		148	303	451	
<i>Wholesale and retail trade</i>		78	337	415	
<i>Transportation and warehousing</i>		59	100	159	
<i>Information</i>		50	99	149	
<i>Construction</i>		90	22	112	
<i>Utilities</i>		13	18	30	
<i>Agriculture</i>		3	22	25	
<i>Mining</i>		15	6	22	
<i>Other</i>		44	131	175	
Total Impact	1,499	1,343	2,411	5,253	3.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Montana, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	12,852			12,852	2.0%
Indirect and Induced Impacts on Other Industries**:		7,974	13,383	21,357	3.3%
<i>Services</i>		3,676	7,125	10,801	
<i>Wholesale and retail trade</i>		715	2,303	3,019	
<i>Finance, insurance, real estate, rental and leasing</i>		1,016	1,455	2,470	
<i>Construction</i>		975	135	1,109	
<i>Transportation and warehousing</i>		473	388	860	
<i>Agriculture</i>		125	676	800	
<i>Manufacturing</i>		393	368	761	
<i>Information</i>		190	245	435	
<i>Mining</i>		140	56	196	
<i>Utilities</i>		88	64	152	
<i>Other</i>		183	569	752	
Total Impact	12,852	7,974	13,383	34,210	5.3%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,028			2,028	5.5%
Indirect and Induced Impacts on Other Industries**:		557	740	1,296	3.5%
<i>Services</i>		143	242	385	
<i>Finance, insurance, real estate, rental and leasing</i>		145	212	357	
<i>Wholesale and retail trade</i>		48	105	153	
<i>Utilities</i>		42	28	69	
<i>Transportation and warehousing</i>		32	26	57	
<i>Manufacturing</i>		32	24	56	
<i>Construction</i>		46	6	52	
<i>Mining</i>		34	13	47	
<i>Information</i>		17	22	40	
<i>Agriculture</i>		5	24	28	
<i>Other</i>		14	38	51	
Total Impact	2,028	557	740	3,324	8.9%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	854			854	3.8%
Indirect and Induced Impacts on Other Industries**:		311	419	730	3.2%
<i>Services</i>		119	197	316	
<i>Wholesale and retail trade</i>		29	65	94	
<i>Finance, insurance, real estate, rental and leasing</i>		38	53	91	
<i>Construction</i>		37	5	42	
<i>Transportation and warehousing</i>		21	17	39	
<i>Manufacturing</i>		20	17	36	
<i>Utilities</i>		12	8	20	
<i>Information</i>		8	10	18	
<i>Mining</i>		13	5	18	
<i>Agriculture</i>		2	8	10	
<i>Other</i>		12	32	44	
Total Impact	854	311	419	1,584	7.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Nebraska, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	14,465			14,465	1.2%
Indirect and Induced Impacts on Other Industries**:		8,606	26,712	35,319	2.9%
<i>Services</i>		4,015	13,127	17,141	
<i>Wholesale and retail trade</i>		560	5,037	5,597	
<i>Finance, insurance, real estate, rental and leasing</i>		1,195	3,005	4,200	
<i>Manufacturing</i>		886	1,589	2,475	
<i>Transportation and warehousing</i>		512	1,146	1,658	
<i>Agriculture</i>		109	1,098	1,207	
<i>Construction</i>		804	190	994	
<i>Information</i>		225	477	701	
<i>Mining</i>		18	9	27	
<i>Utilities</i>		4	8	11	
<i>Other</i>		278	1,028	1,306	
Total Impact	14,465	8,606	26,712	49,784	4.0%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,874			2,874	3.8%
Indirect and Induced Impacts on Other Industries**:		662	1,576	2,238	2.9%
<i>Services</i>		233	506	739	
<i>Finance, insurance, real estate, rental and leasing</i>		155	383	538	
<i>Wholesale and retail trade</i>		42	244	287	
<i>Manufacturing</i>		76	118	194	
<i>Transportation and warehousing</i>		38	88	126	
<i>Agriculture</i>		10	84	94	
<i>Information</i>		26	53	78	
<i>Construction</i>		45	10	55	
<i>Utilities</i>		3	6	10	
<i>Mining</i>		5	2	7	
<i>Other</i>		28	80	109	
Total Impact	2,874	662	1,576	5,112	6.7%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,364			1,364	2.8%
Indirect and Induced Impacts on Other Industries**:		416	963	1,379	2.8%
<i>Services</i>		182	409	591	
<i>Finance, insurance, real estate, rental and leasing</i>		54	126	180	
<i>Wholesale and retail trade</i>		25	148	173	
<i>Manufacturing</i>		47	85	133	
<i>Transportation and warehousing</i>		25	58	83	
<i>Information</i>		15	31	46	
<i>Construction</i>		36	8	45	
<i>Agriculture</i>		3	28	31	
<i>Mining</i>		3	1	4	
<i>Utilities</i>		1	2	3	
<i>Other</i>		23	67	90	
Total Impact	1,364	416	963	2,743	5.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Nevada, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	13,049			13,049	0.8%
Indirect and Induced Impacts on Other Industries**:		8,254	21,837	30,091	1.9%
<i>Services</i>		3,899	12,291	16,190	
<i>Finance, insurance, real estate, rental and leasing</i>		1,377	3,402	4,779	
<i>Wholesale and retail trade</i>		398	3,193	3,591	
<i>Transportation and warehousing</i>		489	854	1,343	
<i>Manufacturing</i>		648	652	1,300	
<i>Construction</i>		799	262	1,061	
<i>Information</i>		194	396	590	
<i>Mining</i>		284	132	416	
<i>Agriculture</i>		12	97	110	
<i>Utilities</i>		46	58	105	
<i>Other</i>		108	501	609	
Total Impact	13,049	8,254	21,837	43,140	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,227			1,227	1.0%
Indirect and Induced Impacts on Other Industries**:		859	1,753	2,612	2.1%
<i>Services</i>		332	792	1,124	
<i>Finance, insurance, real estate, rental and leasing</i>		197	467	664	
<i>Wholesale and retail trade</i>		37	207	244	
<i>Mining</i>		87	41	128	
<i>Manufacturing</i>		60	58	119	
<i>Construction</i>		66	20	87	
<i>Transportation and warehousing</i>		28	50	78	
<i>Information</i>		23	47	70	
<i>Utilities</i>		17	22	39	
<i>Agriculture</i>		1	6	7	
<i>Other</i>		10	44	54	
Total Impact	1,227	859	1,753	3,839	3.1%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	594			594	0.8%
Indirect and Induced Impacts on Other Industries**:		505	989	1,494	2.0%
<i>Services</i>		258	553	811	
<i>Finance, insurance, real estate, rental and leasing</i>		58	135	193	
<i>Wholesale and retail trade</i>		22	123	145	
<i>Manufacturing</i>		39	42	81	
<i>Construction</i>		54	16	70	
<i>Transportation and warehousing</i>		21	38	59	
<i>Mining</i>		28	13	40	
<i>Information</i>		11	22	33	
<i>Utilities</i>		5	6	11	
<i>Agriculture</i>		0	2	2	
<i>Other</i>		9	38	48	
Total Impact	594	505	989	2,088	2.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in New Hampshire, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	8,909			8,909	1.1%
Indirect and Induced Impacts on Other Industries**:		4,489	12,858	17,347	2.1%
<i>Services</i>		1,944	6,731	8,676	
<i>Wholesale and retail trade</i>		223	2,400	2,623	
<i>Finance, insurance, real estate, rental and leasing</i>		625	1,618	2,243	
<i>Manufacturing</i>		901	880	1,781	
<i>Transportation and warehousing</i>		215	308	523	
<i>Construction</i>		294	120	414	
<i>Information</i>		116	277	393	
<i>Agriculture</i>		20	139	159	
<i>Utilities</i>		36	51	87	
<i>Mining</i>		18	8	26	
<i>Other</i>		97	325	423	
Total Impact	8,909	4,489	12,858	26,256	3.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	821			821	1.4%
Indirect and Induced Impacts on Other Industries**:		422	939	1,360	2.3%
<i>Services</i>		138	331	469	
<i>Finance, insurance, real estate, rental and leasing</i>		99	244	343	
<i>Wholesale and retail trade</i>		25	161	186	
<i>Manufacturing</i>		90	89	179	
<i>Information</i>		16	38	55	
<i>Utilities</i>		14	21	35	
<i>Transportation and warehousing</i>		11	16	27	
<i>Construction</i>		17	6	24	
<i>Agriculture</i>		1	9	11	
<i>Mining</i>		2	1	2	
<i>Other</i>		7	22	30	
Total Impact	821	422	939	2,181	3.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	372			372	0.9%
Indirect and Induced Impacts on Other Industries**:		267	580	847	2.1%
<i>Services</i>		114	272	387	
<i>Manufacturing</i>		61	63	124	
<i>Finance, insurance, real estate, rental and leasing</i>		34	83	117	
<i>Wholesale and retail trade</i>		15	95	109	
<i>Information</i>		8	19	27	
<i>Transportation and warehousing</i>		8	12	20	
<i>Construction</i>		14	5	19	
<i>Utilities</i>		4	6	10	
<i>Agriculture</i>		1	3	4	
<i>Mining</i>		1	1	2	
<i>Other</i>		7	21	28	
Total Impact	372	267	580	1,218	3.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in New Jersey, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,434			32,434	0.6%
Indirect and Induced Impacts on Other Industries**:		29,900	81,008	110,908	2.2%
<i>Services</i>		14,942	41,995	56,937	
<i>Wholesale and retail trade</i>		2,552	13,894	16,446	
<i>Finance, insurance, real estate, rental and leasing</i>		3,511	11,211	14,722	
<i>Manufacturing</i>		3,705	4,550	8,255	
<i>Transportation and warehousing</i>		2,046	3,312	5,358	
<i>Information</i>		897	2,211	3,108	
<i>Construction</i>		1,311	544	1,855	
<i>Agriculture</i>		48	415	462	
<i>Utilities</i>		139	183	322	
<i>Mining</i>		36	17	53	
<i>Other</i>		713	2,677	3,391	
Total Impact	32,434	29,900	81,008	143,342	2.8%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	5,433			5,433	1.1%
Indirect and Induced Impacts on Other Industries**:		3,635	7,785	11,420	2.4%
<i>Services</i>		1,366	2,579	3,945	
<i>Finance, insurance, real estate, rental and leasing</i>		716	2,196	2,912	
<i>Wholesale and retail trade</i>		326	1,125	1,451	
<i>Manufacturing</i>		605	746	1,351	
<i>Information</i>		219	519	738	
<i>Transportation and warehousing</i>		138	227	364	
<i>Utilities</i>		76	96	172	
<i>Construction</i>		112	43	155	
<i>Agriculture</i>		2	16	18	
<i>Mining</i>		9	4	13	
<i>Other</i>		69	234	302	
Total Impact	5,433	3,635	7,785	16,853	3.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,378			2,378	0.8%
Indirect and Induced Impacts on Other Industries**:		2,349	4,734	7,083	2.3%
<i>Services</i>		1,094	2,065	3,159	
<i>Finance, insurance, real estate, rental and leasing</i>		301	822	1,123	
<i>Wholesale and retail trade</i>		193	676	869	
<i>Manufacturing</i>		362	455	817	
<i>Information</i>		111	259	370	
<i>Transportation and warehousing</i>		104	172	276	
<i>Construction</i>		90	35	125	
<i>Utilities</i>		22	29	51	
<i>Agriculture</i>		1	8	9	
<i>Mining</i>		5	2	7	
<i>Other</i>		66	210	276	
Total Impact	2,378	2,349	4,734	9,461	3.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in New Mexico, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	33,116			33,116	3.0%
Indirect and Induced Impacts on Other Industries**:		20,961	34,737	55,698	5.1%
<i>Services</i>		10,754	19,420	30,173	
<i>Wholesale and retail trade</i>		1,642	6,284	7,926	
<i>Finance, insurance, real estate, rental and leasing</i>		2,825	3,636	6,461	
<i>Construction</i>		2,455	305	2,760	
<i>Transportation and warehousing</i>		1,010	925	1,935	
<i>Manufacturing</i>		775	890	1,666	
<i>Information</i>		502	664	1,166	
<i>Agriculture</i>		179	669	848	
<i>Utilities</i>		189	162	351	
<i>Mining</i>		175	56	231	
<i>Other</i>		455	1,725	2,180	
Total Impact	33,116	20,961	34,737	88,814	8.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,812			4,812	7.1%
Indirect and Induced Impacts on Other Industries**:		1,501	1,980	3,481	5.1%
<i>Services</i>		560	742	1,302	
<i>Finance, insurance, real estate, rental and leasing</i>		381	496	877	
<i>Wholesale and retail trade</i>		110	312	422	
<i>Construction</i>		127	16	142	
<i>Manufacturing</i>		71	67	138	
<i>Utilities</i>		67	53	120	
<i>Transportation and warehousing</i>		62	57	119	
<i>Information</i>		49	65	114	
<i>Agriculture</i>		10	36	46	
<i>Mining</i>		30	10	39	
<i>Other</i>		35	127	162	
Total Impact	4,812	1,501	1,980	8,292	12.2%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,183			2,183	4.8%
Indirect and Induced Impacts on Other Industries**:		930	1,194	2,124	4.7%
<i>Services</i>		484	605	1,089	
<i>Wholesale and retail trade</i>		66	193	259	
<i>Finance, insurance, real estate, rental and leasing</i>		95	119	214	
<i>Construction</i>		102	13	115	
<i>Manufacturing</i>		45	50	94	
<i>Transportation and warehousing</i>		44	41	85	
<i>Information</i>		22	29	51	
<i>Utilities</i>		19	15	34	
<i>Agriculture</i>		4	15	20	
<i>Mining</i>		15	5	19	
<i>Other</i>		32	110	143	
Total Impact	2,183	930	1,194	4,307	9.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in New York, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	56,149			56,149	0.5%
Indirect and Induced Impacts on Other Industries**:		49,962	175,155	225,118	2.1%
<i>Services</i>		24,008	96,426	120,434	
<i>Finance, insurance, real estate, rental and leasing</i>		7,058	24,148	31,206	
<i>Wholesale and retail trade</i>		2,963	26,288	29,252	
<i>Manufacturing</i>		6,054	8,060	14,114	
<i>Transportation and warehousing</i>		2,847	5,865	8,712	
<i>Information</i>		2,271	6,048	8,319	
<i>Construction</i>		3,235	1,062	4,297	
<i>Agriculture</i>		144	1,240	1,384	
<i>Utilities</i>		390	671	1,061	
<i>Mining</i>		124	58	182	
<i>Other</i>		869	5,289	6,158	
Total Impact	56,149	49,962	175,155	281,267	2.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	10,544			10,544	1.0%
Indirect and Induced Impacts on Other Industries**:		7,161	18,642	25,803	2.3%
<i>Finance, insurance, real estate, rental and leasing</i>		2,282	7,183	9,465	
<i>Services</i>		2,592	5,837	8,429	
<i>Wholesale and retail trade</i>		351	1,928	2,280	
<i>Information</i>		547	1,398	1,945	
<i>Manufacturing</i>		697	1,002	1,699	
<i>Utilities</i>		180	357	537	
<i>Transportation and warehousing</i>		158	335	493	
<i>Construction</i>		245	76	321	
<i>Agriculture</i>		7	57	64	
<i>Mining</i>		20	9	29	
<i>Other</i>		83	459	542	
Total Impact	10,544	7,161	18,642	36,347	3.3%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,767			4,767	0.7%
Indirect and Induced Impacts on Other Industries**:		4,795	11,890	16,685	2.3%
<i>Services</i>		2,084	4,756	6,841	
<i>Finance, insurance, real estate, rental and leasing</i>		1,270	3,691	4,961	
<i>Wholesale and retail trade</i>		207	1,147	1,354	
<i>Information</i>		340	852	1,192	
<i>Manufacturing</i>		439	602	1,041	
<i>Transportation and warehousing</i>		117	249	367	
<i>Construction</i>		198	61	260	
<i>Utilities</i>		51	102	153	
<i>Agriculture</i>		3	24	27	
<i>Mining</i>		11	5	16	
<i>Other</i>		74	400	474	
Total Impact	4,767	4,795	11,890	21,452	3.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in North Carolina, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	44,040			44,040	0.8%
Indirect and Induced Impacts on Other Industries**:		25,416	76,323	101,739	1.9%
<i>Services</i>		11,461	38,280	49,742	
<i>Wholesale and retail trade</i>		1,416	12,649	14,065	
<i>Manufacturing</i>		4,749	7,768	12,517	
<i>Finance, insurance, real estate, rental and leasing</i>		3,108	8,499	11,607	
<i>Transportation and warehousing</i>		1,438	2,523	3,961	
<i>Construction</i>		1,698	741	2,439	
<i>Information</i>		656	1,600	2,256	
<i>Agriculture</i>		176	1,499	1,674	
<i>Utilities</i>		126	203	330	
<i>Mining</i>		89	42	131	
<i>Other</i>		497	2,519	3,017	
Total Impact	44,040	25,416	76,323	145,779	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,925			2,925	0.8%
Indirect and Induced Impacts on Other Industries**:		2,251	5,447	7,697	2.1%
<i>Services</i>		703	1,598	2,301	
<i>Finance, insurance, real estate, rental and leasing</i>		561	1,454	2,015	
<i>Manufacturing</i>		479	912	1,391	
<i>Wholesale and retail trade</i>		130	718	848	
<i>Information</i>		93	218	310	
<i>Transportation and warehousing</i>		79	142	221	
<i>Construction</i>		90	36	126	
<i>Utilities</i>		45	78	124	
<i>Agriculture</i>		11	85	96	
<i>Mining</i>		16	8	24	
<i>Other</i>		44	197	241	
Total Impact	2,925	2,251	5,447	10,623	2.9%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,461			1,461	0.6%
Indirect and Induced Impacts on Other Industries**:		1,384	3,162	4,546	2.0%
<i>Services</i>		585	1,318	1,903	
<i>Manufacturing</i>		300	476	776	
<i>Finance, insurance, real estate, rental and leasing</i>		174	437	611	
<i>Wholesale and retail trade</i>		77	442	519	
<i>Transportation and warehousing</i>		59	106	164	
<i>Information</i>		48	112	160	
<i>Construction</i>		73	29	102	
<i>Agriculture</i>		7	49	55	
<i>Utilities</i>		13	22	35	
<i>Mining</i>		8	4	12	
<i>Other</i>		41	168	208	
Total Impact	1,461	1,384	3,162	6,007	2.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in North Dakota, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	11,788			11,788	2.4%
Indirect and Induced Impacts on Other Industries**:		6,599	9,527	16,126	3.3%
<i>Services</i>		3,128	4,798	7,926	
<i>Wholesale and retail trade</i>		549	1,763	2,312	
<i>Finance, insurance, real estate, rental and leasing</i>		841	916	1,757	
<i>Manufacturing</i>		450	326	776	
<i>Transportation and warehousing</i>		465	305	769	
<i>Agriculture</i>		97	653	750	
<i>Construction</i>		609	69	678	
<i>Information</i>		177	185	362	
<i>Utilities</i>		62	53	115	
<i>Mining</i>		45	17	63	
<i>Other</i>		177	442	620	
Total Impact	11,788	6,599	9,527	27,914	5.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,809			1,809	6.3%
Indirect and Induced Impacts on Other Industries**:		450	514	964	3.3%
<i>Services</i>		134	162	296	
<i>Finance, insurance, real estate, rental and leasing</i>		107	116	222	
<i>Wholesale and retail trade</i>		40	83	122	
<i>Manufacturing</i>		40	23	63	
<i>Transportation and warehousing</i>		30	20	50	
<i>Utilities</i>		24	20	44	
<i>Agriculture</i>		6	36	42	
<i>Information</i>		19	19	38	
<i>Construction</i>		32	4	36	
<i>Mining</i>		7	3	10	
<i>Other</i>		12	28	41	
Total Impact	1,809	450	514	2,773	9.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	778			778	4.4%
Indirect and Induced Impacts on Other Industries**:		266	303	569	3.2%
<i>Services</i>		109	134	243	
<i>Wholesale and retail trade</i>		24	51	74	
<i>Finance, insurance, real estate, rental and leasing</i>		30	33	63	
<i>Manufacturing</i>		24	18	41	
<i>Transportation and warehousing</i>		21	14	34	
<i>Construction</i>		26	3	29	
<i>Information</i>		9	10	19	
<i>Utilities</i>		7	6	13	
<i>Agriculture</i>		2	10	12	
<i>Mining</i>		4	2	6	
<i>Other</i>		11	24	34	
Total Impact	778	266	303	1,346	7.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Ohio, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	65,413			65,413	1.0%
Indirect and Induced Impacts on Other Industries**:		45,629	118,397	164,025	2.4%
<i>Services</i>		19,939	61,830	81,769	
<i>Wholesale and retail trade</i>		1,878	20,041	21,918	
<i>Manufacturing</i>		10,176	9,681	19,857	
<i>Finance, insurance, real estate, rental and leasing</i>		5,015	13,190	18,205	
<i>Transportation and warehousing</i>		2,393	4,366	6,759	
<i>Construction</i>		3,679	846	4,524	
<i>Information</i>		951	2,129	3,080	
<i>Agriculture</i>		241	1,963	2,205	
<i>Utilities</i>		290	389	679	
<i>Mining</i>		154	71	225	
<i>Other</i>		913	3,891	4,804	
Total Impact	65,413	45,629	118,397	229,438	3.4%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	8,442			8,442	1.9%
Indirect and Induced Impacts on Other Industries**:		4,013	7,746	11,759	2.6%
<i>Services</i>		1,333	2,683	4,016	
<i>Finance, insurance, real estate, rental and leasing</i>		785	1,967	2,752	
<i>Manufacturing</i>		1,087	1,000	2,087	
<i>Wholesale and retail trade</i>		134	1,026	1,159	
<i>Transportation and warehousing</i>		144	269	413	
<i>Information</i>		123	266	389	
<i>Utilities</i>		106	147	253	
<i>Construction</i>		204	45	249	
<i>Agriculture</i>		10	70	79	
<i>Mining</i>		21	10	31	
<i>Other</i>		68	263	331	
Total Impact	8,442	4,013	7,746	20,201	4.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,795			3,795	1.3%
Indirect and Induced Impacts on Other Industries**:		2,552	4,774	7,326	2.5%
<i>Services</i>		1,092	2,203	3,295	
<i>Manufacturing</i>		690	666	1,356	
<i>Finance, insurance, real estate, rental and leasing</i>		246	605	851	
<i>Wholesale and retail trade</i>		80	624	704	
<i>Transportation and warehousing</i>		106	199	305	
<i>Construction</i>		165	37	202	
<i>Information</i>		57	123	180	
<i>Utilities</i>		30	42	72	
<i>Agriculture</i>		3	22	25	
<i>Mining</i>		12	5	17	
<i>Other</i>		71	249	319	
Total Impact	3,795	2,552	4,774	11,121	3.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Oklahoma, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	98,306			98,306	4.6%
Indirect and Induced Impacts on Other Industries**:		82,368	167,953	250,321	11.7%
<i>Services</i>		35,687	86,838	122,525	
<i>Wholesale and retail trade</i>		7,284	35,123	42,406	
<i>Finance, insurance, real estate, rental and leasing</i>		12,523	18,142	30,665	
<i>Construction</i>		13,695	1,172	14,866	
<i>Manufacturing</i>		4,455	5,266	9,722	
<i>Agriculture</i>		1,419	7,300	8,719	
<i>Transportation and warehousing</i>		3,433	4,279	7,712	
<i>Information</i>		1,683	2,224	3,907	
<i>Utilities</i>		688	625	1,313	
<i>Mining</i>		93	35	128	
<i>Other</i>		1,409	6,950	8,359	
Total Impact	98,306	82,368	167,953	348,627	16.3%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,893			32,893	21.6%
Indirect and Induced Impacts on Other Industries**:		5,932	9,015	14,946	9.8%
<i>Services</i>		1,808	3,122	4,930	
<i>Finance, insurance, real estate, rental and leasing</i>		1,604	2,286	3,890	
<i>Wholesale and retail trade</i>		514	1,687	2,200	
<i>Manufacturing</i>		515	414	929	
<i>Utilities</i>		350	294	644	
<i>Construction</i>		569	49	617	
<i>Information</i>		213	281	493	
<i>Transportation and warehousing</i>		213	266	478	
<i>Agriculture</i>		28	145	173	
<i>Mining</i>		14	5	19	
<i>Other</i>		105	466	572	
Total Impact	32,893	5,932	9,015	47,839	31.3%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	13,808			13,808	15.1%
Indirect and Induced Impacts on Other Industries**:		3,390	5,352	8,742	9.6%
<i>Services</i>		1,445	2,522	3,967	
<i>Wholesale and retail trade</i>		311	1,057	1,368	
<i>Finance, insurance, real estate, rental and leasing</i>		394	577	971	
<i>Manufacturing</i>		315	294	609	
<i>Construction</i>		461	39	500	
<i>Transportation and warehousing</i>		157	196	353	
<i>Information</i>		98	129	226	
<i>Utilities</i>		100	87	187	
<i>Agriculture</i>		10	50	60	
<i>Mining</i>		7	3	10	
<i>Other</i>		92	399	491	
Total Impact	13,808	3,390	5,352	22,550	24.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Oregon, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	15,707			15,707	0.7%
Indirect and Induced Impacts on Other Industries**:		11,536	32,879	44,415	1.9%
<i>Services</i>		5,293	16,640	21,933	
<i>Wholesale and retail trade</i>		628	5,294	5,923	
<i>Finance, insurance, real estate, rental and leasing</i>		1,451	3,745	5,196	
<i>Manufacturing</i>		1,946	2,403	4,349	
<i>Agriculture</i>		163	1,475	1,638	
<i>Transportation and warehousing</i>		543	1,049	1,592	
<i>Information</i>		333	784	1,117	
<i>Construction</i>		797	274	1,071	
<i>Utilities</i>		42	67	109	
<i>Mining</i>		56	26	83	
<i>Other</i>		284	1,123	1,407	
Total Impact	15,707	11,536	32,879	60,122	2.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,313			1,313	0.9%
Indirect and Induced Impacts on Other Industries**:		984	2,196	3,180	2.1%
<i>Services</i>		330	725	1,055	
<i>Finance, insurance, real estate, rental and leasing</i>		216	533	749	
<i>Wholesale and retail trade</i>		65	330	395	
<i>Manufacturing</i>		182	204	386	
<i>Information</i>		43	97	139	
<i>Agriculture</i>		13	102	115	
<i>Transportation and warehousing</i>		34	67	100	
<i>Construction</i>		50	16	66	
<i>Utilities</i>		19	30	49	
<i>Mining</i>		7	3	11	
<i>Other</i>		27	88	115	
Total Impact	1,313	984	2,196	4,494	3.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	635			635	0.6%
Indirect and Induced Impacts on Other Industries**:		619	1,335	1,955	2.0%
<i>Services</i>		267	585	852	
<i>Manufacturing</i>		122	147	269	
<i>Wholesale and retail trade</i>		38	199	237	
<i>Finance, insurance, real estate, rental and leasing</i>		66	158	224	
<i>Information</i>		23	51	73	
<i>Transportation and warehousing</i>		24	49	73	
<i>Construction</i>		41	13	54	
<i>Agriculture</i>		6	43	48	
<i>Utilities</i>		5	9	14	
<i>Mining</i>		4	2	6	
<i>Other</i>		24	79	103	
Total Impact	635	619	1,335	2,590	2.6%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Pennsylvania, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	73,792			73,792	1.0%
Indirect and Induced Impacts on Other Industries**:		55,084	142,374	197,457	2.7%
<i>Services</i>		25,546	76,085	101,630	
<i>Wholesale and retail trade</i>		3,893	25,338	29,231	
<i>Finance, insurance, real estate, rental and leasing</i>		5,590	14,960	20,550	
<i>Manufacturing</i>		9,266	9,624	18,890	
<i>Transportation and warehousing</i>		3,125	5,233	8,358	
<i>Construction</i>		4,112	1,046	5,158	
<i>Information</i>		1,245	2,718	3,963	
<i>Agriculture</i>		240	1,877	2,117	
<i>Utilities</i>		305	418	723	
<i>Mining</i>		400	182	582	
<i>Other</i>		1,363	4,892	6,255	
Total Impact	73,792	55,084	142,374	271,250	3.8%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	9,661			9,661	1.8%
Indirect and Induced Impacts on Other Industries**:		5,470	10,641	16,111	3.0%
<i>Services</i>		1,923	3,809	5,732	
<i>Finance, insurance, real estate, rental and leasing</i>		1,079	2,798	3,877	
<i>Manufacturing</i>		1,098	1,076	2,173	
<i>Wholesale and retail trade</i>		376	1,491	1,867	
<i>Information</i>		193	411	605	
<i>Transportation and warehousing</i>		190	324	514	
<i>Utilities</i>		172	234	406	
<i>Construction</i>		275	68	343	
<i>Mining</i>		62	28	91	
<i>Agriculture</i>		11	77	88	
<i>Other</i>		91	324	416	
Total Impact	9,661	5,470	10,641	25,772	4.8%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,418			4,418	1.2%
Indirect and Induced Impacts on Other Industries**:		3,502	6,573	10,075	2.8%
<i>Services</i>		1,580	3,146	4,726	
<i>Manufacturing</i>		678	684	1,362	
<i>Finance, insurance, real estate, rental and leasing</i>		367	904	1,271	
<i>Wholesale and retail trade</i>		223	898	1,121	
<i>Transportation and warehousing</i>		140	239	379	
<i>Information</i>		100	210	309	
<i>Construction</i>		223	55	278	
<i>Utilities</i>		49	68	117	
<i>Mining</i>		34	15	49	
<i>Agriculture</i>		5	36	41	
<i>Other</i>		103	318	422	
Total Impact	4,418	3,502	6,573	14,494	4.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Rhode Island, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,265			4,265	0.7%
Indirect and Induced Impacts on Other Industries**:		2,714	9,181	11,895	2.0%
<i>Services</i>		1,241	5,195	6,436	
<i>Finance, insurance, real estate, rental and leasing</i>		411	1,175	1,587	
<i>Wholesale and retail trade</i>		107	1,278	1,384	
<i>Manufacturing</i>		529	658	1,187	
<i>Transportation and warehousing</i>		129	211	339	
<i>Information</i>		89	229	319	
<i>Construction</i>		120	67	187	
<i>Agriculture</i>		6	53	59	
<i>Utilities</i>		6	13	19	
<i>Mining</i>		8	4	12	
<i>Other</i>		68	299	367	
Total Impact	4,265	2,714	9,181	16,160	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	533			533	1.2%
Indirect and Induced Impacts on Other Industries**:		264	660	923	2.1%
<i>Services</i>		89	247	336	
<i>Finance, insurance, real estate, rental and leasing</i>		68	187	256	
<i>Manufacturing</i>		56	61	117	
<i>Wholesale and retail trade</i>		11	80	91	
<i>Information</i>		12	29	40	
<i>Transportation and warehousing</i>		7	11	18	
<i>Utilities</i>		4	10	14	
<i>Construction</i>		8	4	12	
<i>Agriculture</i>		0	3	3	
<i>Mining</i>		1	0	1	
<i>Other</i>		7	29	36	
Total Impact	533	264	660	1,456	3.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	242			242	0.8%
Indirect and Induced Impacts on Other Industries**:		167	414	581	2.0%
<i>Services</i>		75	204	279	
<i>Finance, insurance, real estate, rental and leasing</i>		25	63	89	
<i>Manufacturing</i>		34	42	76	
<i>Wholesale and retail trade</i>		7	48	55	
<i>Information</i>		6	15	21	
<i>Transportation and warehousing</i>		5	8	13	
<i>Construction</i>		7	3	10	
<i>Utilities</i>		1	3	4	
<i>Agriculture</i>		0	1	1	
<i>Mining</i>		0	0	1	
<i>Other</i>		7	25	32	
Total Impact	242	167	414	822	2.8%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in South Carolina, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	23,372			23,372	1.0%
Indirect and Induced Impacts on Other Industries**:		11,368	33,562	44,930	1.8%
<i>Services</i>		4,605	16,328	20,933	
<i>Wholesale and retail trade</i>		508	5,691	6,199	
<i>Manufacturing</i>		2,616	3,387	6,004	
<i>Finance, insurance, real estate, rental and leasing</i>		1,487	3,971	5,458	
<i>Transportation and warehousing</i>		647	1,101	1,749	
<i>Construction</i>		740	331	1,071	
<i>Information</i>		284	663	947	
<i>Agriculture</i>		93	686	779	
<i>Utilities</i>		122	206	327	
<i>Mining</i>		32	15	46	
<i>Other</i>		234	1,183	1,417	
Total Impact	23,372	11,368	33,562	68,303	2.8%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,246			1,246	0.8%
Indirect and Induced Impacts on Other Industries**:		928	2,118	3,046	2.0%
<i>Services</i>		237	640	877	
<i>Finance, insurance, real estate, rental and leasing</i>		216	552	768	
<i>Manufacturing</i>		261	290	552	
<i>Wholesale and retail trade</i>		44	301	345	
<i>Information</i>		33	75	109	
<i>Utilities</i>		34	65	99	
<i>Transportation and warehousing</i>		34	59	93	
<i>Construction</i>		41	17	57	
<i>Agriculture</i>		4	30	35	
<i>Mining</i>		4	2	5	
<i>Other</i>		20	87	107	
Total Impact	1,246	928	2,118	4,292	2.8%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	640			640	0.7%
Indirect and Induced Impacts on Other Industries**:		558	1,270	1,828	1.9%
<i>Services</i>		198	519	716	
<i>Manufacturing</i>		165	206	371	
<i>Finance, insurance, real estate, rental and leasing</i>		64	158	223	
<i>Wholesale and retail trade</i>		26	186	212	
<i>Transportation and warehousing</i>		25	44	69	
<i>Information</i>		15	34	49	
<i>Construction</i>		33	13	46	
<i>Utilities</i>		10	19	28	
<i>Agriculture</i>		2	16	18	
<i>Mining</i>		2	1	3	
<i>Other</i>		18	75	93	
Total Impact	640	558	1,270	2,468	2.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in South Dakota, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	8,223			8,223	1.5%
Indirect and Induced Impacts on Other Industries**:		3,224	8,495	11,719	2.1%
<i>Services</i>		1,226	3,994	5,220	
<i>Wholesale and retail trade</i>		245	1,428	1,673	
<i>Finance, insurance, real estate, rental and leasing</i>		490	1,044	1,534	
<i>Manufacturing</i>		413	532	945	
<i>Agriculture</i>		67	620	688	
<i>Transportation and warehousing</i>		224	277	501	
<i>Construction</i>		321	72	392	
<i>Information</i>		92	167	260	
<i>Utilities</i>		33	38	71	
<i>Mining</i>		24	10	34	
<i>Other</i>		89	313	402	
Total Impact	8,223	3,224	8,495	19,942	3.6%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	715			715	2.3%
Indirect and Induced Impacts on Other Industries**:		243	501	744	2.3%
<i>Finance, insurance, real estate, rental and leasing</i>		75	144	220	
<i>Services</i>		54	143	197	
<i>Wholesale and retail trade</i>		18	69	88	
<i>Manufacturing</i>		33	37	69	
<i>Agriculture</i>		5	37	42	
<i>Information</i>		10	18	28	
<i>Transportation and warehousing</i>		12	15	27	
<i>Utilities</i>		11	13	23	
<i>Construction</i>		15	3	18	
<i>Mining</i>		3	1	5	
<i>Other</i>		7	21	27	
Total Impact	715	243	501	1,459	4.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	342			342	1.8%
Indirect and Induced Impacts on Other Industries**:		135	286	422	2.2%
<i>Services</i>		44	118	162	
<i>Finance, insurance, real estate, rental and leasing</i>		22	45	67	
<i>Wholesale and retail trade</i>		11	42	53	
<i>Manufacturing</i>		21	27	48	
<i>Transportation and warehousing</i>		9	11	20	
<i>Construction</i>		12	3	15	
<i>Agriculture</i>		1	11	12	
<i>Information</i>		4	8	12	
<i>Utilities</i>		3	4	7	
<i>Mining</i>		2	1	2	
<i>Other</i>		6	18	24	
Total Impact	342	135	286	763	3.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Tennessee, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	35,187			35,187	1.0%
Indirect and Induced Impacts on Other Industries**:		22,045	56,962	79,007	2.2%
<i>Services</i>		8,859	27,660	36,520	
<i>Wholesale and retail trade</i>		1,485	9,712	11,197	
<i>Manufacturing</i>		4,119	5,002	9,121	
<i>Finance, insurance, real estate, rental and leasing</i>		2,656	6,379	9,035	
<i>Transportation and warehousing</i>		1,492	2,782	4,274	
<i>Construction</i>		1,878	502	2,379	
<i>Agriculture</i>		208	1,694	1,903	
<i>Information</i>		550	1,189	1,739	
<i>Mining</i>		109	44	153	
<i>Utilities</i>		45	61	107	
<i>Other</i>		643	1,936	2,579	
Total Impact	35,187	22,045	56,962	114,194	3.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,743			2,743	1.1%
Indirect and Induced Impacts on Other Industries**:		1,927	4,081	6,007	2.4%
<i>Services</i>		537	1,339	1,876	
<i>Finance, insurance, real estate, rental and leasing</i>		449	1,036	1,484	
<i>Manufacturing</i>		417	520	937	
<i>Wholesale and retail trade</i>		139	595	734	
<i>Transportation and warehousing</i>		104	198	302	
<i>Information</i>		68	143	211	
<i>Construction</i>		98	25	123	
<i>Agriculture</i>		5	36	41	
<i>Utilities</i>		14	19	33	
<i>Mining</i>		18	7	25	
<i>Other</i>		79	163	242	
Total Impact	2,743	1,927	4,081	8,750	3.5%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,371			1,371	0.8%
Indirect and Induced Impacts on Other Industries**:		1,184	2,492	3,676	2.3%
<i>Services</i>		444	1,091	1,535	
<i>Manufacturing</i>		261	332	593	
<i>Finance, insurance, real estate, rental and leasing</i>		144	326	470	
<i>Wholesale and retail trade</i>		83	363	446	
<i>Transportation and warehousing</i>		75	145	220	
<i>Information</i>		35	72	107	
<i>Construction</i>		79	20	100	
<i>Agriculture</i>		2	13	15	
<i>Mining</i>		9	4	12	
<i>Utilities</i>		4	6	10	
<i>Other</i>		49	120	168	
Total Impact	1,371	1,184	2,492	5,048	3.1%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Texas, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	432,147			432,147	3.2%
Indirect and Induced Impacts on Other Industries**:		421,747	918,441	1,340,188	9.9%
<i>Services</i>		189,790	456,200	645,991	
<i>Wholesale and retail trade</i>		42,091	213,166	255,257	
<i>Finance, insurance, real estate, rental and leasing</i>		61,647	106,893	168,541	
<i>Construction</i>		62,091	5,900	67,991	
<i>Manufacturing</i>		24,198	34,031	58,229	
<i>Transportation and warehousing</i>		18,372	26,270	44,642	
<i>Agriculture</i>		4,156	22,648	26,804	
<i>Information</i>		8,611	12,308	20,919	
<i>Utilities</i>		2,271	2,381	4,652	
<i>Mining</i>		612	189	801	
<i>Other</i>		7,908	38,455	46,363	
Total Impact	432,147	421,747	918,441	1,772,335	13.1%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	185,760			185,760	15.3%
Indirect and Induced Impacts on Other Industries**:		42,108	65,893	108,000	8.9%
<i>Services</i>		13,213	20,228	33,441	
<i>Finance, insurance, real estate, rental and leasing</i>		11,550	19,292	30,841	
<i>Wholesale and retail trade</i>		4,108	12,728	16,836	
<i>Manufacturing</i>		3,162	3,617	6,779	
<i>Utilities</i>		2,436	2,164	4,600	
<i>Construction</i>		3,958	375	4,333	
<i>Information</i>		1,516	2,155	3,671	
<i>Transportation and warehousing</i>		1,309	1,879	3,188	
<i>Agriculture</i>		131	710	841	
<i>Mining</i>		95	29	124	
<i>Other</i>		631	2,715	3,346	
Total Impact	185,760	42,108	65,893	293,760	24.2%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	77,924			77,924	10.8%
Indirect and Induced Impacts on Other Industries**:		24,742	38,276	63,017	8.7%
<i>Services</i>		10,907	16,378	27,285	
<i>Wholesale and retail trade</i>		2,465	7,885	10,350	
<i>Finance, insurance, real estate, rental and leasing</i>		3,113	5,506	8,619	
<i>Manufacturing</i>		1,966	2,472	4,438	
<i>Construction</i>		3,209	304	3,513	
<i>Transportation and warehousing</i>		958	1,376	2,335	
<i>Information</i>		728	1,034	1,762	
<i>Utilities</i>		713	663	1,376	
<i>Agriculture</i>		51	276	327	
<i>Mining</i>		54	17	70	
<i>Other</i>		578	2,365	2,943	
Total Impact	77,924	24,742	38,276	140,941	19.5%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Utah, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	21,404			21,404	1.3%
Indirect and Induced Impacts on Other Industries**:		17,713	37,072	54,785	3.4%
<i>Services</i>		8,077	18,471	26,548	
<i>Finance, insurance, real estate, rental and leasing</i>		2,757	5,446	8,203	
<i>Wholesale and retail trade</i>		1,480	6,615	8,095	
<i>Manufacturing</i>		1,815	2,099	3,914	
<i>Transportation and warehousing</i>		813	1,105	1,918	
<i>Construction</i>		1,506	330	1,836	
<i>Information</i>		481	859	1,341	
<i>Agriculture</i>		137	586	722	
<i>Mining</i>		173	65	238	
<i>Utilities</i>		97	99	196	
<i>Other</i>		377	1,397	1,774	
Total Impact	21,404	17,713	37,072	76,188	4.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	4,167			4,167	4.0%
Indirect and Induced Impacts on Other Industries**:		1,383	2,272	3,655	3.5%
<i>Services</i>		447	747	1,193	
<i>Finance, insurance, real estate, rental and leasing</i>		310	602	912	
<i>Wholesale and retail trade</i>		127	386	513	
<i>Manufacturing</i>		194	181	376	
<i>Transportation and warehousing</i>		60	83	143	
<i>Information</i>		49	85	134	
<i>Construction</i>		88	19	106	
<i>Utilities</i>		40	39	79	
<i>Mining</i>		36	13	49	
<i>Agriculture</i>		5	22	27	
<i>Other</i>		28	96	123	
Total Impact	4,167	1,383	2,272	7,822	7.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,742			1,742	2.6%
Indirect and Induced Impacts on Other Industries**:		843	1,375	2,218	3.3%
<i>Services</i>		366	611	978	
<i>Wholesale and retail trade</i>		76	232	307	
<i>Finance, insurance, real estate, rental and leasing</i>		93	178	271	
<i>Manufacturing</i>		111	121	232	
<i>Transportation and warehousing</i>		44	60	104	
<i>Construction</i>		71	15	86	
<i>Information</i>		25	44	69	
<i>Mining</i>		17	6	23	
<i>Utilities</i>		11	11	23	
<i>Agriculture</i>		2	7	9	
<i>Other</i>		28	89	117	
Total Impact	1,742	843	1,375	3,960	5.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Vermont, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	6,008			6,008	1.4%
Indirect and Induced Impacts on Other Industries**:		2,120	6,031	8,151	1.9%
<i>Services</i>		931	3,280	4,211	
<i>Wholesale and retail trade</i>		100	937	1,037	
<i>Finance, insurance, real estate, rental and leasing</i>		262	560	821	
<i>Manufacturing</i>		330	430	760	
<i>Transportation and warehousing</i>		124	153	276	
<i>Construction</i>		149	64	212	
<i>Information</i>		66	142	208	
<i>Agriculture</i>		24	181	205	
<i>Utilities</i>		21	30	51	
<i>Mining</i>		18	8	26	
<i>Other</i>		95	247	342	
Total Impact	6,008	2,120	6,031	14,159	3.3%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	384			384	1.6%
Indirect and Induced Impacts on Other Industries**:		157	360	516	2.1%
<i>Services</i>		42	128	170	
<i>Finance, insurance, real estate, rental and leasing</i>		41	82	123	
<i>Manufacturing</i>		30	36	66	
<i>Wholesale and retail trade</i>		8	51	60	
<i>Utilities</i>		8	13	21	
<i>Information</i>		6	13	19	
<i>Transportation and warehousing</i>		7	8	15	
<i>Construction</i>		7	3	10	
<i>Agriculture</i>		1	8	10	
<i>Mining</i>		2	1	3	
<i>Other</i>		6	16	21	
Total Impact	384	157	360	900	3.6%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	178			178	1.1%
Indirect and Induced Impacts on Other Industries**:		94	220	314	1.9%
<i>Services</i>		34	104	138	
<i>Manufacturing</i>		21	26	46	
<i>Finance, insurance, real estate, rental and leasing</i>		11	24	35	
<i>Wholesale and retail trade</i>		5	30	35	
<i>Transportation and warehousing</i>		5	6	11	
<i>Information</i>		3	6	9	
<i>Construction</i>		6	2	8	
<i>Utilities</i>		2	4	6	
<i>Agriculture</i>		0	3	4	
<i>Mining</i>		1	1	2	
<i>Other</i>		6	15	21	
Total Impact	178	94	220	492	3.0%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Virginia, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	47,908			47,908	1.0%
Indirect and Induced Impacts on Other Industries**:		25,182	70,388	95,571	2.0%
<i>Services</i>		13,353	37,219	50,572	
<i>Wholesale and retail trade</i>		1,158	11,389	12,546	
<i>Finance, insurance, real estate, rental and leasing</i>		2,966	8,133	11,099	
<i>Manufacturing</i>		2,687	3,888	6,575	
<i>Transportation and warehousing</i>		1,346	2,353	3,700	
<i>Information</i>		760	1,915	2,675	
<i>Construction</i>		1,761	653	2,414	
<i>Agriculture</i>		168	1,211	1,379	
<i>Utilities</i>		127	190	317	
<i>Mining</i>		184	86	269	
<i>Other</i>		673	3,352	4,025	
Total Impact	47,908	25,182	70,388	143,479	3.0%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,755			3,755	1.0%
Indirect and Induced Impacts on Other Industries**:		2,570	5,642	8,212	2.1%
<i>Services</i>		1,090	1,960	3,050	
<i>Finance, insurance, real estate, rental and leasing</i>		574	1,524	2,098	
<i>Wholesale and retail trade</i>		108	637	746	
<i>Manufacturing</i>		263	447	710	
<i>Information</i>		165	401	566	
<i>Transportation and warehousing</i>		80	142	222	
<i>Utilities</i>		65	106	171	
<i>Construction</i>		114	39	153	
<i>Mining</i>		41	19	60	
<i>Agriculture</i>		6	39	44	
<i>Other</i>		64	328	392	
Total Impact	3,755	2,570	5,642	11,968	3.1%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,825			1,825	0.7%
Indirect and Induced Impacts on Other Industries**:		1,697	3,400	5,098	2.0%
<i>Services</i>		951	1,663	2,614	
<i>Finance, insurance, real estate, rental and leasing</i>		182	453	635	
<i>Wholesale and retail trade</i>		64	388	452	
<i>Manufacturing</i>		172	243	415	
<i>Information</i>		75	178	252	
<i>Transportation and warehousing</i>		58	104	162	
<i>Construction</i>		92	32	124	
<i>Utilities</i>		19	30	49	
<i>Mining</i>		22	10	32	
<i>Agriculture</i>		2	16	18	
<i>Other</i>		60	284	344	
Total Impact	1,825	1,697	3,400	6,923	2.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Washington, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	25,362			25,362	0.7%
Indirect and Induced Impacts on Other Industries**:		21,724	59,531	81,254	2.1%
<i>Services</i>		9,594	29,338	38,932	
<i>Wholesale and retail trade</i>		1,930	9,754	11,684	
<i>Finance, insurance, real estate, rental and leasing</i>		2,587	7,066	9,652	
<i>Manufacturing</i>		2,568	3,914	6,482	
<i>Transportation and warehousing</i>		1,137	1,824	2,960	
<i>Information</i>		810	1,996	2,806	
<i>Agriculture</i>		226	2,056	2,282	
<i>Construction</i>		1,647	538	2,185	
<i>Mining</i>		113	43	156	
<i>Utilities</i>		60	70	130	
<i>Other</i>		1,053	2,933	3,987	
Total Impact	25,362	21,724	59,531	106,616	2.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,300			3,300	1.1%
Indirect and Induced Impacts on Other Industries**:		2,178	4,854	7,032	2.3%
<i>Services</i>		666	1,471	2,136	
<i>Finance, insurance, real estate, rental and leasing</i>		475	1,247	1,722	
<i>Wholesale and retail trade</i>		203	678	881	
<i>Manufacturing</i>		267	400	667	
<i>Information</i>		192	456	648	
<i>Transportation and warehousing</i>		81	133	215	
<i>Construction</i>		122	38	160	
<i>Agriculture</i>		17	137	154	
<i>Utilities</i>		30	32	62	
<i>Mining</i>		19	7	26	
<i>Other</i>		105	256	361	
Total Impact	3,300	2,178	4,854	10,333	3.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,489			1,489	0.7%
Indirect and Induced Impacts on Other Industries**:		1,379	2,924	4,303	2.2%
<i>Services</i>		556	1,191	1,747	
<i>Wholesale and retail trade</i>		120	402	522	
<i>Finance, insurance, real estate, rental and leasing</i>		146	364	510	
<i>Manufacturing</i>		186	312	497	
<i>Information</i>		100	234	334	
<i>Transportation and warehousing</i>		59	97	157	
<i>Construction</i>		99	30	129	
<i>Agriculture</i>		9	66	75	
<i>Utilities</i>		9	10	18	
<i>Mining</i>		9	4	13	
<i>Other</i>		86	216	301	
Total Impact	1,489	1,379	2,924	5,792	2.9%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in West Virginia, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	26,420			26,420	2.9%
Indirect and Induced Impacts on Other Industries**:		14,085	20,386	34,471	3.8%
<i>Services</i>		5,534	10,651	16,185	
<i>Wholesale and retail trade</i>		1,186	4,086	5,272	
<i>Finance, insurance, real estate, rental and leasing</i>		1,640	1,798	3,437	
<i>Construction</i>		2,411	164	2,575	
<i>Manufacturing</i>		1,288	951	2,239	
<i>Transportation and warehousing</i>		539	547	1,086	
<i>Agriculture</i>		248	630	877	
<i>Mining</i>		515	229	744	
<i>Information</i>		305	344	650	
<i>Utilities</i>		181	137	318	
<i>Other</i>		239	848	1,087	
Total Impact	26,420	14,085	20,386	60,891	6.7%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	3,188			3,188	5.5%
Indirect and Induced Impacts on Other Industries**:		1,067	1,157	2,224	3.9%
<i>Services</i>		260	397	657	
<i>Finance, insurance, real estate, rental and leasing</i>		233	248	481	
<i>Wholesale and retail trade</i>		74	181	256	
<i>Manufacturing</i>		137	99	236	
<i>Construction</i>		127	9	136	
<i>Mining</i>		87	39	126	
<i>Utilities</i>		61	43	104	
<i>Transportation and warehousing</i>		35	35	70	
<i>Information</i>		32	36	68	
<i>Agriculture</i>		5	13	18	
<i>Other</i>		16	57	73	
Total Impact	3,188	1,067	1,157	5,412	9.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,438			1,438	3.9%
Indirect and Induced Impacts on Other Industries**:		613	688	1,302	3.5%
<i>Services</i>		216	324	540	
<i>Wholesale and retail trade</i>		45	112	157	
<i>Manufacturing</i>		81	59	140	
<i>Construction</i>		103	7	110	
<i>Finance, insurance, real estate, rental and leasing</i>		50	56	105	
<i>Mining</i>		48	22	70	
<i>Transportation and warehousing</i>		24	24	48	
<i>Information</i>		14	16	30	
<i>Utilities</i>		17	12	30	
<i>Agriculture</i>		1	4	5	
<i>Other</i>		15	51	66	
Total Impact	1,438	613	688	2,740	7.4%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Wisconsin, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	31,978			31,978	0.9%
Indirect and Induced Impacts on Other Industries**:		19,065	52,778	71,843	2.0%
<i>Services</i>		7,343	25,199	32,542	
<i>Manufacturing</i>		5,925	6,112	12,037	
<i>Wholesale and retail trade</i>		904	8,717	9,621	
<i>Finance, insurance, real estate, rental and leasing</i>		2,021	5,885	7,907	
<i>Transportation and warehousing</i>		1,063	1,954	3,017	
<i>Agriculture</i>		211	1,827	2,038	
<i>Information</i>		456	1,079	1,535	
<i>Construction</i>		620	377	997	
<i>Utilities</i>		107	192	300	
<i>Mining</i>		69	33	102	
<i>Other</i>		345	1,402	1,747	
Total Impact	31,978	19,065	52,778	103,821	2.9%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	1,787			1,787	0.8%
Indirect and Induced Impacts on Other Industries**:		1,625	3,425	5,050	2.2%
<i>Services</i>		442	1,064	1,506	
<i>Manufacturing</i>		577	577	1,154	
<i>Finance, insurance, real estate, rental and leasing</i>		294	818	1,112	
<i>Wholesale and retail trade</i>		80	470	551	
<i>Transportation and warehousing</i>		62	117	180	
<i>Information</i>		52	118	170	
<i>Utilities</i>		33	69	101	
<i>Agriculture</i>		10	76	86	
<i>Construction</i>		42	22	64	
<i>Mining</i>		8	4	13	
<i>Other</i>		26	90	115	
Total Impact	1,787	1,625	3,425	6,837	3.0%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	931			931	0.6%
Indirect and Induced Impacts on Other Industries**:		1,026	2,097	3,122	2.1%
<i>Services</i>		359	870	1,229	
<i>Manufacturing</i>		363	380	743	
<i>Finance, insurance, real estate, rental and leasing</i>		107	275	382	
<i>Wholesale and retail trade</i>		47	277	325	
<i>Transportation and warehousing</i>		46	87	133	
<i>Information</i>		27	61	88	
<i>Construction</i>		34	18	52	
<i>Utilities</i>		9	19	29	
<i>Agriculture</i>		3	22	25	
<i>Mining</i>		5	2	7	
<i>Other</i>		26	84	110	
Total Impact	931	1,026	2,097	4,053	2.7%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

The Economic Impact of the Oil and Natural Gas Industry in Wyoming, 2007

Employment*					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	32,029			32,029	8.5%
Indirect and Induced Impacts on Other Industries**:		16,929	22,105	39,034	10.3%
<i>Services</i>		7,225	11,140	18,365	
<i>Wholesale and retail trade</i>		1,607	5,035	6,642	
<i>Finance, insurance, real estate, rental and leasing</i>		2,533	2,405	4,939	
<i>Construction</i>		2,603	193	2,796	
<i>Transportation and warehousing</i>		820	562	1,382	
<i>Manufacturing</i>		622	347	969	
<i>Information</i>		393	377	770	
<i>Agriculture</i>		291	443	734	
<i>Utilities</i>		237	147	384	
<i>Mining</i>		276	108	384	
<i>Other</i>		322	1,346	1,669	
Total Impact	32,029	16,929	22,105	71,063	18.8%
Value Added (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	5,762			5,762	20.1%
Indirect and Induced Impacts on Other Industries**:		1,349	1,321	2,670	9.3%
<i>Services</i>		362	425	786	
<i>Finance, insurance, real estate, rental and leasing</i>		376	366	742	
<i>Wholesale and retail trade</i>		115	236	351	
<i>Construction</i>		151	11	163	
<i>Utilities</i>		89	51	140	
<i>Transportation and warehousing</i>		67	46	113	
<i>Manufacturing</i>		63	28	91	
<i>Mining</i>		56	22	78	
<i>Information</i>		35	33	68	
<i>Agriculture</i>		9	14	23	
<i>Other</i>		26	89	116	
Total Impact	5,762	1,349	1,321	8,432	29.4%
Labor Income*** (\$ Millions)					
Sector Description	Direct	Indirect	Induced	Total	As a % of State Total
Direct Impact of the Oil and Natural Gas Industry	2,590			2,590	15.5%
Indirect and Induced Impacts on Other Industries**:		734	736	1,470	8.8%
<i>Services</i>		273	325	598	
<i>Wholesale and retail trade</i>		70	146	216	
<i>Finance, insurance, real estate, rental and leasing</i>		90	85	175	
<i>Construction</i>		123	9	132	
<i>Transportation and warehousing</i>		44	30	75	
<i>Manufacturing</i>		37	18	55	
<i>Mining</i>		32	13	45	
<i>Utilities</i>		25	15	40	
<i>Information</i>		15	15	30	
<i>Agriculture</i>		2	3	5	
<i>Other</i>		22	77	99	
Total Impact	2,590	734	736	4,060	24.3%

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).

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

** Indirect and induced impacts on other industries exclude NAICS codes grouped under the oil and natural gas industry.

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

Appendix B: Data Sources and Methodology

This Appendix describes the methodology used to derive the results for the study. It first discusses the data sources PricewaterhouseCoopers utilized to develop estimates of direct economic contributions by the oil and natural gas industry. It then describes the development of the indirect and induced impact estimates.

I. Estimates of Direct Economic Contributions

This study uses the IMPLAN input-output modeling system and its most recent database (for the year 2007 - released in October 2008) as the primary data sources. The IMPLAN modeling system is similar to the Regional Input-Output Modeling System developed by the U.S. Department of Commerce. The U.S. Forest Service, in cooperation with the Federal Emergency Management Agency and the Bureau of Land Management, developed IMPLAN (Impact Analysis for Planning) to help with land resource planning issues. It was later refined by the Minnesota IMPLAN Group. The system has been in use since 1979. Its current users include academia, federal, state, and local governments, and the private sector.

The IMPLAN database represents a consistent set of economic data processed from various published sources (such as the Bureau of Economic Analysis's National Income and Product Accounts (NIPA) and Regional Economic Information System (REIS), the Census Bureau's County Business Patterns (CBP), and the Bureau of Labor Statistics' Covered Employee and Wages Program (CEW) in a variety of formats and under varying disclosure restrictions.

The IMPLAN input-output modeling system was used to construct customized economic impact models for the United States and the 50 states and the District of Columbia for the oil and natural gas industry. The IMPLAN sectors that correspond to PricewaterhouseCoopers' definition of the oil and natural gas industry are shown in Table 1 of the report. The direct employment in the oil and natural gas industry was used in each model to drive the impact analysis.⁷ Direct value added and labor income (including wages and salaries and benefits as well as proprietors' income) corresponding to the national or state-specific direct employment in the oil and natural gas industry were obtained from each model.

In general, most subsectors of the oil and natural gas industry as defined by PricewaterhouseCoopers have a one-to-one correspondence to an IMPLAN sector, thus the 2007 employment for these subsectors were directly obtained from the customized IMPLAN national or state impact models. The exceptions are four NAICS codes: NAICS 2212 ("Natural gas distribution - public"), NAICS 23712 ("Oil and gas pipeline and related structures construction"), NAICS 4247 ("Petroleum and petroleum products wholesalers"), and NAICS 45431 ("Fuel dealers"). Each is included as part of a larger IMPLAN sector.

PricewaterhouseCoopers undertook the following procedure to estimate employment for the four NAICS sectors. First, employment numbers for these sectors were obtained by combining paid employee counts from the U.S. Department of Labor's *Bureau of Labor Statistics* (BLS) with establishment counts from *Nonemployer Statistics* (NES) provided

⁷ Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.

by the Census Bureau.⁸ Each nonemployer establishment was assumed to have one owner who acts as the business's sole employee. In our analysis, data were obtained at both the national level and for each of the 50 states and the District of Columbia.

For the four NAICS sectors, in some states the paid employee or nonemployer establishment counts were suppressed because of the small number of establishments in these sectors. Since counts were available for these sectors at the national-level and for larger sector aggregations at the state-level, a "raking" process was used to estimate the state-level employee count for the sector of interest. The raking process uses information from known sectors to impute information for the sectors with suppressed data. For example, NAICS sector 45431 ("Fuel Dealers") is one of two sub-sectors in NAICS sector 4543 ("Nonstore Retailers"). A matrix was set up with 51 rows representing the 50 states and the District of Columbia and two columns. Thus, each cell in the matrix represents the total employment for a state and sub-sector within sector 4543. When the exact count was not known for a particular cell, the starting values were determined by allocating the difference between the total national employment in the industry and the sum of the known values across the states based on the number of establishments provided in the BLS database. Because not all cell values were known, the column totals did not match the national employment counts from BLS. Similarly, the row totals did not match the known state-level totals for sector 4543. A standard raking algorithm was used to adjust the unknown cell values so that both the column and row totals matched the corresponding BLS sub-sector and state sector totals.⁹

There were two exceptions to the above methodology for filling in missing values at the state level. First, NES does not report data for all detailed industry sectors. In particular, while NES provides data for NAICS 2371 ("Utility System Construction"), it does not provide data for the NAICS 23712 ("Oil and Gas Pipeline and Related Structures Construction"). As a result, PricewaterhouseCoopers used establishment data from the latest CBP database (currently for 2006) to apportion the NAICS 2371 nonemployer establishments to NAICS 23712. For example, according to CBP, there were 304 establishments with paid employees in NAICS 2371 in Alabama, 36 of which were in NAICS 23712. As such, 11.8 percent (36/304) of Alabama's 209 nonemployer establishments in NAICS 2371 were assumed to be in NAICS sector 23712. State level estimates were then scaled to match the estimated national total for NAICS 23712.

The second exception was for public-sector employment in NAICS 2212. For this sector it was not possible to use the standard raking procedure as industry control totals were not readily available. Instead, employees per establishment for the public-sector employment in NAICS 22 ("Utilities") from BLS were used to obtain initial values for states with only establishment missing values. These initial values were then scaled to match the difference between the known national total for the public sector employment in NAICS 2212 and the sum of the employment for the same NAICS code in states with known values.

Estimates of the oil and natural gas industry's new capital investment in 2007 are obtained from the *Annual Capital Expenditure Survey* published by the Census Bureau.

⁸ A nonemployer is a business without paid employees. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income.

⁹ Oh, H.L. and Scheuren, F. (1987). Modified Raking Ratio Estimation. *Survey Methodology*, vol. 13, no. 2, pp. 209-219.

For quantifying the economic impact of the oil and natural gas industry's capital investment, its capital spending is translated into purchases of capital assets by type through the use of the so-called "capital flow matrix" from the U.S. Department of Commerce.

II. Estimates of Indirect and Induced Economic Contributions

Estimates of indirect and induced economic contributions by the oil and natural gas industry were derived based on the IMPLAN models for the country as a whole and for each of the 50 states and the District of Columbia.

The IMPLAN models are 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. Meanwhile, employees and business owners make personal purchases out of the additional income that is generated by this process, sending more new demands rippling through the economy. Multipliers describe these 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 contributions 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 in each model.¹⁰

Because IMPLAN state models capture only the indirect and induced effects within each state, the indirect and induced effects crossing state borders ("cross-state spillover effects") are not captured by the IMPLAN state models. As such, if not adjusted, the state-level indirect and induced impacts calculated by the IMPLAN state models would not add up to the overall impact captured by the national model, which includes the cross-state effects. PricewaterhouseCoopers allocated the cross-state indirect and induced employment, labor income, and value added effects across the 50 states and the District of Columbia in proportion to each state's share of the total national employment, labor income, and value added. The allocation was done at the industry level. The state indirect and induced effects reported throughout this study include such allocation of the cross-state spillover effects.

¹⁰ Because the IMPLAN models are used for total impact analysis (as opposed to marginal impact analysis) in this study, necessary adjustments are made to the initial indirect and induced impact estimates to prevent double-counting. For instance, any indirect or induced effects from the initial estimates for IMPLAN sectors that are fully mapped to the oil and natural gas industry are removed. Similarly, indirect and induced effects for IMPLAN sectors that are partially mapped to the oil and natural gas industry are proportionately adjusted.