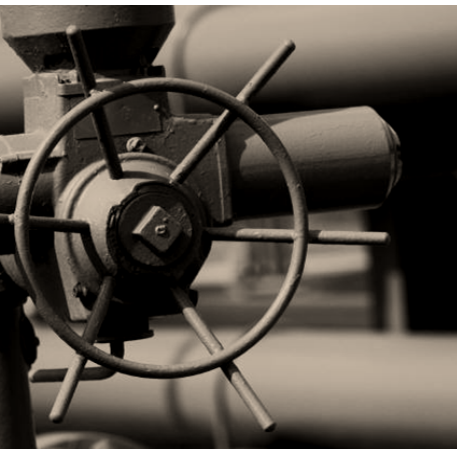


THE OIL AND GAS INDUSTRY IN CALIFORNIA

ITS ECONOMIC CONTRIBUTION AND WORKFORCE IN 2013



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A CALIFORNIA INDUSTRY STUDY

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June 2015



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This research was commissioned by the Western States Petroleum Association.

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Executive Summary

The oil and gas industry makes a significant contribution to the Californian economy. Extraction, production, refining and petroleum products manufacturing result in highly tradable products, producing high revenues, high wage jobs and significant fiscal revenues for all levels of government.

In this update to *Oil and Gas in California: The Industry and Its Economic Contribution in 2012*, the Institute for Applied Economics of the Los Angeles County Economic Development Corporation (LAEDC) conducts an industry contribution analysis of the oil and gas industry in California in 2013 and reviews selected characteristics of its workforce. The findings are as follows.

Total Economic Contribution

The total economic contribution of the oil and gas industry in California in 2013, which includes indirect and induced activity, is presented in Exhibit ES-1:

- ▶ 455,940 direct, indirect and induced jobs
- ▶ \$38 billion in total labor income
- ▶ \$72 billion in value added, accounting for 3.4 percent of state GDP
- ▶ \$204 billion in output, accounting for 5.7 percent of total California output.

Total Fiscal Contribution

The industry brings significant fiscal revenues to local, state and federal governments, as summarized in Exhibit ES-2:

- ▶ \$21.2 billion in state and local tax revenues
- ▶ \$12.8 billion in federal taxes
- ▶ \$18.9 billion in sales and excise taxes
- ▶ \$2.1 billion in corporate income taxes

Exhibit ES-1

Total Economic Contribution of Oil and Gas Industry California 2013

Employment (jobs):	
Direct	184,100
TOTAL	455,940
<i>Percent of California Total Employment</i>	<i>2.1%</i>
Labor income (\$ millions):	
Direct	\$ 23,280
TOTAL	\$ 38,280
<i>Percent of California Total Labor Income</i>	<i>2.9%</i>
Value added (\$ millions):	
Direct	\$ 47,610
TOTAL	\$ 71,890
<i>Percent of California Total GDP</i>	<i>3.4%</i>
Output (\$ millions):	
Direct	\$ 165,500
TOTAL	\$ 203,790
<i>Percent of California Total Output</i>	<i>5.7%</i>

Source: Estimates by LAEDC

Exhibit ES-2

Fiscal Contribution of Oil and Gas Industry California 2013

State and Local Taxes (\$ millions):	
Sales and excise taxes	\$ 14,830
Property taxes	3,630
Personal income taxes	1,170
Corporate income taxes	430
All other taxes	1,180
Total State and Local Taxes	\$ 21,240
Federal Taxes (\$ millions):	
Excise taxes	\$ 4,060
Personal income taxes	3,110
Corporate income taxes	1,700
Other taxes	3,900
Total Federal Taxes	\$ 12,810
TOTAL TAX REVENUES	\$ 34,040

Source: Estimates by LAEDC

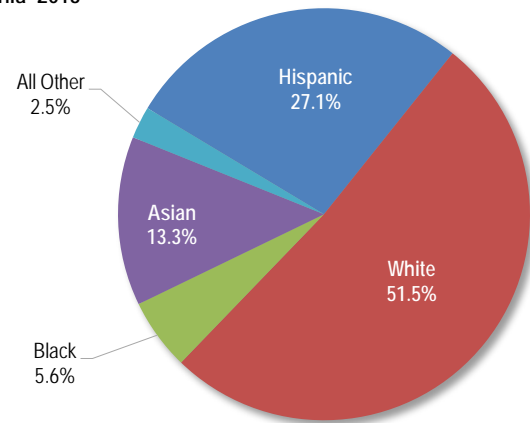
Characteristics of the Workforce

The industry employs individuals with a broad range of characteristics exhibiting some notable trends:

- ▶ The workforce is ethnically and racially diverse, with 51.5 percent white, 27.1 percent of Hispanic origin and 13.3 percent Asian.
- ▶ Men in the workforce outnumber women by more than 2 to 1.
- ▶ More than three-quarters of the industry's workforce is in its prime working age—between 22 years and 54 years of age. Still, workers aged 55 years and older still account for 24.1 percent, a significant share of the industry workforce.
- ▶ A diversity of employment opportunities is available across the educational attainment spectrum:
 - Approximately 30 percent of workers have a bachelor's degree or higher;
 - Almost 30 percent have some college, post-secondary certification or an associate's degree; and
 - One third of all workers have high school credentials or less. ❖

Exhibit ES-3

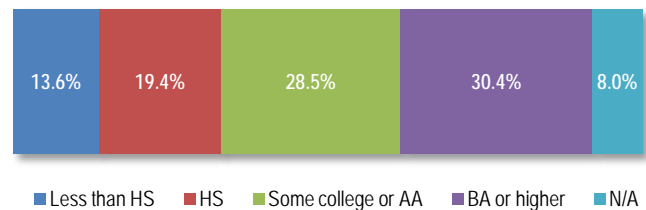
Employment Distribution by Race and Ethnicity
California 2013



Source: QWI; Analysis by LAEDC

Exhibit ES-4

Industry Employment Distribution by Education
California 2013



Source: QWI; Analysis by LAEDC

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1 Introduction

The oil and gas industry makes a significant contribution to the U.S economy. Operating in a global market, demand, supply and prices are influenced by what takes place worldwide, not just nationally. National extraction, production, refining and petroleum products manufacturing result in highly tradable products consumed domestically and exported to satiate global demand. As a result, the oil and gas industry is associated with high revenues and high wage jobs.

Finite natural resources, both fossil fuels are heavily regulated as their extraction, production and refining has consequences for the environment and depletion of these resources could be calamitous for the energy needs of future generations. Taxes are levied on the industry in a variety of ways to mitigate these risks, resulting in public revenues that are larger than observed in other industries.

In this report, the Institute for Applied Economics of the Los Angeles County Economic Development Corporation (LAEDC) provides an update to its *Oil and Gas in California: The Industry and Its Economic Contribution in 2012*, outlining the economic and fiscal contribution of the oil and gas industry in California in 2013 and selected characteristics of its workforce.

The report is presented as follows.

Section 2 provides an economic overview of the oil and gas industry in general and a discussion of the public revenues attributed to the industry and the consumption of its products. The section concludes with an analysis of the industry's total economic and fiscal contribution to the state of California.

In Section 3, several characteristics of the workforce are reviewed.

Section 4 provides details at the sub-regional and Section 5 provides county-level contributions for most counties in California.

Methodology and detailed industry descriptions as referenced in the text can be found in the Appendix. ❖



Oil and Gas Industry Definition

The definition of the oil and gas industry, using the North American Industry Classification System (NAICS) is listed below. These are described in detail in the Appendix. ❖

Exhibit 1-1
Oil and Gas Industry Definition

NAICS	Industry
211	Oil and gas extraction
213111	Drilling oil and gas wells
213112	Support activities for oil and gas operations
2212	Natural gas distribution
23712	Oil and gas pipeline and related structures construction
32411	Petroleum refineries
324191	Petroleum lubricating oil and grease manufacturing
32511	Petrochemical manufacturing
333132	Oil and gas field machinery and equipment manufacturing
4247	Petroleum and petroleum products merchant wholesalers
447	Gasoline stations
45431	Fuel dealers
486	Pipeline transportation

Source: LAEDC

2 The Oil and Gas Industry in California

The oil and gas industry makes a significant contribution to the U.S. economy. Operating in a global market, demand, supply and prices are influenced by what takes place worldwide, not just nationally. Extraction, production, refining and related manufacturing result in highly tradable products consumed domestically and exported to satiate global demand. As a result, the oil and gas industry is associated with high revenues and high wage jobs.

Production Activity

In 2013, the Division of Oil, Gas and Geothermal Resources of the California Department of Conservation (DOGGR) reports that more than 2,720 new wells were drilled, with just fewer than 3,040 wells completed to production. There are approximately 55,630 wells that are currently active. These are distributed across the state, but the majority of them are located in the Central Valley/ Northern California sub-region.

Natural Gas

Natural gas production in the U.S. totaled 24.4 trillion cubic feet in 2013. California produced 252.3 billion cubic feet, accounting for one percent of total U.S. production. Out of the 32 natural gas producing states nationwide, California ranks thirteenth (Exhibit 2-1).

The Central Valley/Northern California sub-region accounted for over two-thirds of total California production, followed by Southern California and the Central Coast, producing 15 percent and 13 percent respectively.

Crude Oil

U.S. oil field production totaled just less than 2.4 billion barrels in 2013. California produced 198.8 million barrels, representing 7.3 percent of total national production, and California still ranks third of the 31 oil producing states nationwide (Exhibit 2-2).

Similar to natural gas production, the Central Valley/ Northern California sub-region accounted for almost two-thirds of total California oil production in 2013. ❖

Exhibit 2-1

Natural Gas Production 2013

(Cubic feet in millions)

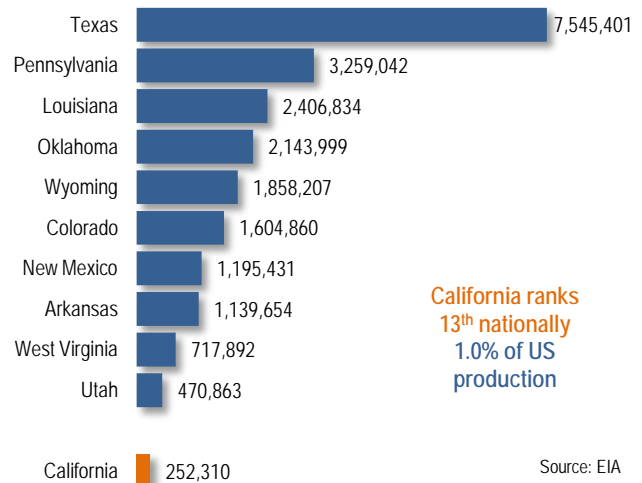


Exhibit 2-2

Crude Oil Production 2013

(Thousands of barrels)

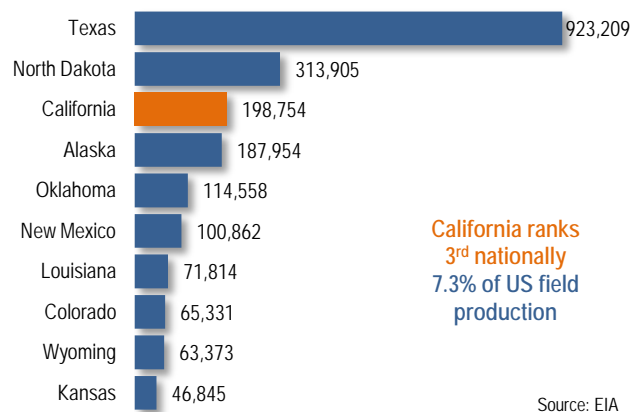
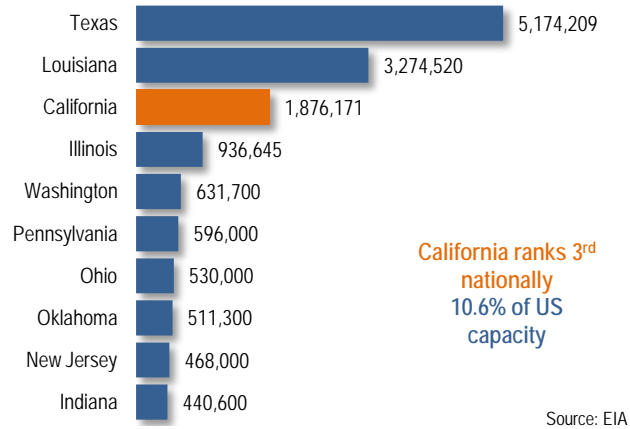


Exhibit 2-3**Crude Oil Distillation Capacity 2013**
Annual Operable Atmospheric (bpcd)

Refining Activity

At the end of December 2013, annual operable atmospheric crude oil distillation capacity in the U.S. was 17.7 million bpcd. California accounted for approximately 11 percent of this capacity with 1.88 million bpcd.

Refineries in California are located largely in Southern California (primarily Los Angeles County) and the San Francisco Bay Area. Refining capacity has been decreasing over the years due to the closure of older and smaller refining operations that found compliance with the state's strict environmental regulations to be cost prohibitive. This is also limiting the permitting of new facilities, and therefore any potential increase in oil refining capacity in the future in California appears highly unlikely. ❖

Direct Economic Activity

Direct activity associated with the oil and gas industry is the direct contribution to the economy of the industry in terms of employment, labor income and value added.

Direct employment in the oil and gas industry includes all workers who are directly employed by industry firms. These are measured on a job-count basis regardless of the number of hours worked and include full-time, part-time, permanent and seasonal employees and the self-employed.

The oil and gas industry in California provided 184,100 jobs in 2013, including independent contractors and payroll employees (Exhibit 2-4). Taken together, the industry accounted for just less than 1 percent of all employment in California.

Labor income is the value of all earnings received by both payroll employees and the self-employed, including benefits such as health insurance and pension plan contributions. Overall labor income to workers in the industry totaled \$23.3 billion in 2013 (Exhibit 2-5), accounting for 1.7 percent of all labor income in California.

The industry pays higher wages than other industries (Exhibit 2-6). With the exception of gasoline stations and fuel dealers, wages in each of the component industries exceed the average annual wage paid in California. ❖

Exhibit 2-4

Oil and Gas Industry Employment California 2013

NAICS	Industry	
211	Oil and gas extraction	31,580
213111	Drilling oil and gas wells	7,480
213112	Support activities for oil and gas ops	10,160
2212	Natural gas distribution	34,950
23712	Oil and gas pipeline construction	11,950
32411	Petroleum refineries	11,840
324191	Petroleum lubricating oil / grease mfg	760
333132	Oil and gas field machinery mfg	2,660
4247	Petroleum prods wholesalers	7,330
447	Gasoline stations	59,670
45431	Fuel dealers	2,855
486	Pipeline transportation	2,840
Oil and Gas Industry Employment		184,100
<i>Percent of California Total Employment</i>		<i>0.9%</i>

Note: Includes non-employers and independent contractors
Source: Estimates by LAEDC

Exhibit 2-5

Oil and Gas Industry Labor Income (\$ millions) California 2013

NAICS	Industry	
211	Oil and gas extraction	\$ 4,900
213111	Drilling oil and gas wells	960
213112	Support activities for oil and gas ops	920
2212	Natural gas distribution	5,630
23712	Oil and gas pipeline construction	870
32411	Petroleum refineries	3,240
324191	Petroleum lubricating oil / grease mfg	70
333132	Oil and gas field machinery mfg	220
4247	Petroleum prods wholesalers	590
447	Gasoline stations	4,060
45431	Fuel dealers	80
486	Pipeline transportation	1,740
Oil and Gas Industry Labor Income		\$ 23,280
<i>Percent of California Total Labor Income</i>		<i>1.7%</i>

Note: Includes non-employers and independent contractors
Source: Estimates by LAEDC

Exhibit 2-6

Oil and Gas Industry Average Annual Wages California 2013

NAICS	Industry	
211	Oil and gas extraction	\$ 234,592
213111	Drilling oil and gas wells	91,417
213112	Support activities for oil and gas ops	80,580
2212	Natural gas distribution	115,024
23712	Oil and gas pipeline construction	66,390
32411	Petroleum refineries	181,330
324191	Petroleum lubricating oil / grease mfg	75,781
333132	Oil and gas field machinery mfg	68,489
4247	Petroleum prods wholesalers	71,932
45431	Fuel dealers	49,998
486	Pipeline transportation	102,348
Oil and Gas Industry		\$ 118,032
<i>All private industries in CA</i>		<i>\$ 56,590</i>

Note: Excludes non-employers and independent contractors
Source: CA EDD; Estimates by LAEDC

Total Economic Contribution

The total economic contribution of the oil and gas industry in California includes indirect and induced activity in addition to the direct activity already identified (Exhibit 2-7).

Exhibit 2-7

**Total Economic Contribution of Oil and Gas Industry
California 2013**

Employment (jobs):	
Direct	184,100
Indirect	98,690
Induced	173,150
TOTAL	455,940
<i>Percent of California Total Employment</i>	<i>2.1%</i>
Labor income (\$ millions):	
Direct	\$ 23,280
Indirect	6,350
Induced	8,660
TOTAL	\$ 38,280
<i>Percent of California Total Labor Income</i>	<i>2.9%</i>
Value added (\$ millions):	
Direct	\$ 47,610
Indirect	9,670
Induced	14,610
TOTAL	\$ 71,890
<i>Percent of California Total GDP</i>	<i>3.4%</i>
Output (\$ millions):	
Direct	\$ 165,500
Indirect	16,820
Induced	24,460
TOTAL	\$ 203,790
<i>Percent of California Total Output</i>	<i>5.7%</i>

Source: Estimates by LAEDC

It is estimated that the activities related to the oil and gas industry in California in 2013 generated value added equaling \$71.9 billion in California, approximately 3.4 percent of the state's GDP of \$2.1 trillion. The industry contributed 455,940 jobs, or 2.1 percent of the state total, with labor income of almost \$40 billion, about 3 percent of all labor income earned in the state.

Clearly, the industry remains a significant contributor to the state's economic activity.

Industry Distribution

The total economic contribution is achieved through activity occurring across a wide range of industry sectors via indirect and induced effects (Exhibit 2-8).

Exhibit 2-8

**Total Economic Contribution of Oil and Gas Industry By Sector
California 2013**

	Jobs	Labor Income (\$ millions)	Value Added (\$ millions)
Ag, forestry, fish & hunting	1,301	\$ 83	\$ 125
Mining	49,350	6,791	10,473
Utilities	35,187	5,668	14,855
Construction	22,680	1,636	1,700
Manufacturing	23,425	4,104	14,322
Wholesale trade	26,041	2,092	4,183
Retail trade	91,339	5,197	6,852
Transportation and warehousing	20,530	2,788	3,051
Information	4,654	673	1,502
Finance and insurance	19,793	1,399	1,662
Real estate and rental	15,541	398	4,376
Professional, scientific technical	19,866	1,519	2,006
Management of companies	5,177	644	755
Administrative and waste services	22,571	856	1,095
Educational services	7,116	308	331
Health and social services	33,196	1,884	1,963
Arts, entertainment and recreation	7,107	232	306
Accommodation and food services	27,696	771	1,055
Other services	19,306	857	955
Government	4,059	380	323
Total 2013	455,940	\$ 38,280	\$ 71,890

Source: Estimates by LAEDC

Of the 455,940 jobs supported, twenty percent were in the retail trade sector (which includes gas stations) and approximately 11 percent in the mining sector (which includes oil and gas extraction). However, virtually all industry sectors receive a positive economic impact from the oil and gas industry, including utilities, health and social services, accommodation and food services, wholesale trade, manufacturing and construction.

A description of the industry sectors is provided in the Appendix. ❖

Total Fiscal Contribution

The oil and gas industry faces high taxes incurred by both firms operating within the industry and by their consumers. Production, refining, distribution, retail and consumption of oil and gas all face taxes levied by local, state and federal governments, including:

- Ad valorem taxes on the market value of proved reserves
- Assessment on oil and gas production
- State and local excise taxes on natural gas and oil sales
- Federal excise taxes on fuel purchases
- State and local sales taxes on fuel purchases
- Federal and state lease payments for the right to explore, drill and extract on federally-owned and state-owned land
- Federal and state royalties on production from federally-owned and state-owned land
- Other taxes and fees, including
 - IFTA taxes on diesel fuel
 - Underground storage tank fees
 - Oil spill prevention and administration fees
 - Oil spill response fees

Given this background, the economic activity associated with the oil and gas industry in California in 2013 is estimated to have generated \$21.2 billion in state and local taxes (Exhibit 2-9). Federal tax revenues in 2013 are estimated to have been \$12.8 billion.

Exhibit 2-9

Fiscal Contribution of Oil and Gas Industry California 2013

State and Local Taxes (\$ millions):	
Sales and excise taxes	\$ 14,830
Property taxes	3,630
Personal income taxes	1,170
Corporate income taxes	430
Social insurance	100
Other taxes	800
Fees, fines and permits	280
Total State and Local Taxes	\$ 21,240
Federal Taxes (\$ millions):	
Excise taxes	\$ 4,060
Personal income taxes	3,110
Corporate income taxes	1,700
Social insurance	3,580
Other taxes	300
Fees, fines and permits	80
Total Federal Taxes	\$ 12,810

Source: Estimates by LAEDC

Of state and local government revenues, almost \$15 billion was earned from sales and excise taxes (including those paid on the consumption of oil and gas products), \$3.6 billion was earned from property taxes paid by households and businesses and \$1.6 billion was earned from personal and corporate income taxes.

Of federal taxes, \$4.1 billion in taxes was earned in excise taxes, \$3.1 billion from personal income taxes, \$1.7 billion in taxes on corporate income and \$3.6 billion in social insurance payments. ❖

3 California's Oil and Gas Industry Workforce

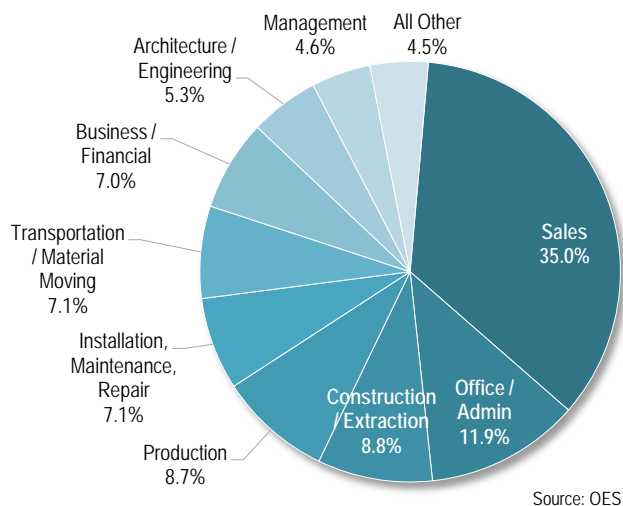
The oil and gas industry employs a large number of people in California, providing myriad employment opportunities for a diverse group of individuals. As job duties vary, so do the required skills and education levels for job entry. Wages vary with occupations in the industry, with many associated with high wages.

Industry Occupations

An occupation is classified according to the set of activities or tasks that an employee is paid to perform. Some occupations are specific to an industry, but others exist in a number of different industries, such as, for example, customer service representatives, salespersons, accounting staff and receptionists.

Occupations are classified by the Standard Occupational Classification (SOC) System. Workers fall into one of 840 detailed occupations, which are combined into 23 major groups. Each occupation requires its own skill set and education levels. The distribution of employment by major occupational group specific to the oil and gas industry in California is displayed in Exhibit 3-1.

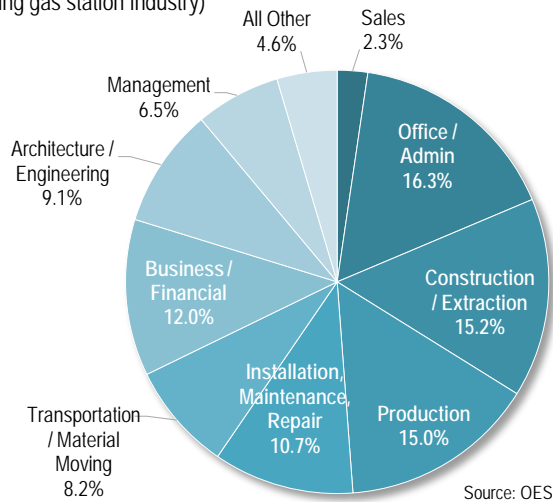
Exhibit 3-1
Occupational Distribution of Oil and Gas Industry



More than a third (35 percent) of workers in the industry are employed in sales occupations, another 24 percent in office and administrative, business and financial and management occupations combined, and almost 32 percent work in blue collar occupations such as construction and extraction, production, installation and maintenance, and transportation and material moving.

It should be noted that this occupational distribution includes individuals employed at gas stations. Gas stations represent the retail side of the oil and gas industry and account for the largest share of industry employment. Activities taking place at retail gas stations are dissimilar to activities taking place in other oil and gas industries, many of which involve production and distribution. Many gas station jobs require lower education and skills levels and are associated with average annual wages significantly lower than found in other oil and gas industries.

Including gas stations in an occupational analysis skews average annual wages of occupations in the oil and gas industry and the occupational composition of the oil and gas industry. This is evident in the next two exhibits as the oil and gas industry outside of gas stations is reviewed. (The gas station industry is shown separately in the following section.) Exhibit 3-2 shows the distribution of employment in the California oil and gas industry by major occupational group excluding the gas station industry.

Exhibit 3-2**Occupational Distribution of Oil and Gas Industry**
(Excluding gas station industry)

Excluding the gas station industry, the largest share of the oil and gas workforce is employed in office and administrative occupations, which includes bookkeepers and accounting clerks, utility meter readers, office clerks, stock clerks and order fillers, dispatchers and customer service representatives. Individuals employed in construction and extraction occupations and production (manufacturing) occupations follow, each with employment shares of 14 percent. Business and financial operations occupations and installation, maintenance and repair occupations round out the top five with 11 percent and ten percent of industry employment respectively.

The wages of occupations in the oil and gas industry vary widely. Exhibit 3-3 shows the average wages in the oil and gas industry in California for the different major occupational groups shown in Exhibit 3-2.

Exhibit 3-3**Average Industry Wages by Major Occupational Group**
California 2013
(Excluding gas station industry)

A wide variety of detailed occupations exist in each major occupational group. The top 20 detailed occupations by employment share in the oil and gas industry in California and their associated wages in 2013 are shown in Exhibit 3-4, followed by the top 20 by average annual wages in Exhibit 3-5.

The top twenty detailed occupations account for almost 40 percent of the industry's workforce. In contrast, the top twenty highest paid occupations account for approximately 8 percent of the workforce. ❖

Exhibit 3-4

**Detailed Industry Occupations by Employment Share (excluding Gas Station Industry)
California 2013**

SOC	Detailed Occupation	Share (%)	Average Annual Wage
51-8093	Petroleum Pump System Operators, Refinery Operators, Gaugers	4.9	\$ 75,511
53-3032	Heavy and Tractor-Trailer Truck Drivers	3.7	45,404
13-1199	Business Operations Specialists, All Other	3.0	93,558
47-5071	Roustabouts, Oil and Gas	3.0	39,103
47-5013	Service Unit Operators, Oil, Gas, and Mining	3.0	53,931
43-9061	Office Clerks, General	2.6	35,812
43-5041	Meter Readers, Utilities	2.1	49,110
17-2171	Petroleum Engineers	2.0	124,388
49-9041	Industrial Machinery Mechanics	2.0	76,085
51-1011	First-Line Supervisors of Production / Operating Workers	1.8	101,763
51-8092	Gas Plant Operators	1.7	75,614
47-1011	First-Line Supervisors of Construction / Extraction Workers	1.6	91,922
11-1021	General and Operations Managers	1.5	147,249
49-9012	Control and Valve Installers / Repairers, Except Mechanical Door	1.3	72,590
43-1011	First-Line Supervisors of Office and Administrative Workers	1.2	86,864
49-1011	First-Line Supervisors of Mechanics, Installers, Repairers	1.2	102,020
51-4121	Welders, Cutters, Solderers, and Brazers	1.1	65,085
17-2071	Electrical Engineers	1.0	n/a
17-2112	Industrial Engineers	1.0	122,458
43-6014	Secretaries / Admins, Except Legal, Medical, and Executive	1.0	42,122
<i>Other Occupations</i>		<i>59.4</i>	
All Occupations in the Oil and Gas Industry		100.0	\$ 81,292

Source: OES

Exhibit 3-5

**Detailed Industry Occupations by Average Annual Wages (Excluding Gas Station Industry)
California 2013**

SOC	Detailed Occupation	Share (%)	Average Annual Wage
11-1011	Chief Executives	0.1	\$ 194,031
11-9041	Architectural and Engineering Managers	0.4	180,500
11-9199	Managers, All Other	0.0	172,740
11-3021	Computer and Information Systems Managers	0.3	160,739
11-3051	Industrial Production Managers	0.4	155,669
11-2022	Sales Managers	0.2	155,488
11-3031	Financial Managers	0.2	154,091
17-2151	Mining / Geological Engineers, Including Mining Safety Engineers	0.1	150,150
11-1021	General and Operations Managers	1.5	147,249
19-2042	Geoscientists, Except Hydrologists and Geographers	0.6	145,124
11-9021	Construction Managers	0.2	136,148
11-3011	Administrative Services Managers	0.1	128,062
17-2171	Petroleum Engineers	2.0	124,388
17-2112	Industrial Engineers	1.0	122,458
17-2051	Civil Engineers	0.2	121,150
17-2041	Chemical Engineers	0.1	120,390
11-2031	Public Relations and Fundraising Managers	0.1	119,720
11-3121	Human Resources Managers	0.1	116,260
17-2199	Engineers, All Other	n/a	107,020
17-2141	Mechanical Engineers	0.1	106,550
<i>Other Occupations</i>		<i>92.4</i>	
All Occupations in the Oil and Gas Industry		100.0	\$ 81,292

Source: OES

Gas Station Industry

Gas stations represent the retail side of the oil and gas industry, with products being sold to the end user.

The distribution of employment by major occupational group specific to gas stations in California is shown in Exhibit 3-6. The majority of individuals in this industry segment (more than 80 percent) work in sales occupations, just over 80 percent. Most of these workers are cashiers. Workers in office and administrative occupations and transportation and material moving occupations rank second and third, each with employment shares of almost six percent. The fourth largest group in terms of employment is food preparation and serving occupations, with just over three percent of workers.

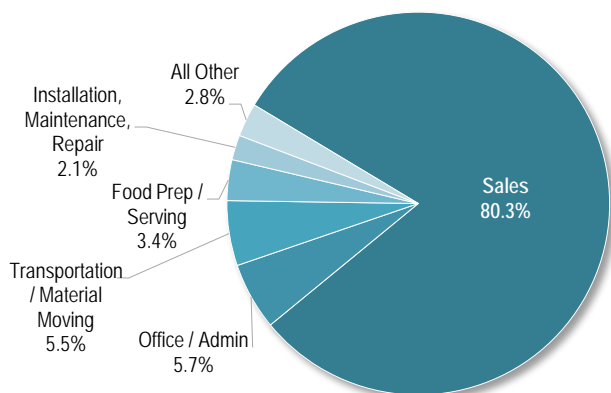
The wages of these occupations also vary substantially. Exhibit 3-7 shows the average wages in the gas station industry in California for the different major occupational groups.

As expected, the highest average annual wages are paid to those in management occupations. Sales occupations, which account for more than 80 percent of gas station industry employment, earn on average \$22,490 per year. Overall, the industry average is \$24,270 annually. ❖



Exhibit 3-6

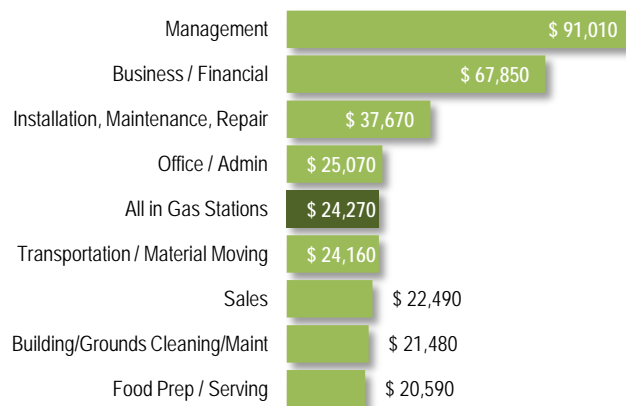
Occupational Distribution of Gas Station Industry



Source: OES

Exhibit 3-7

Average Annual Wages of Gas Station Industry
California 2013



Source: OES

Characteristics of the Industry Workforce

The composition of the workforce in the oil and gas industry varies according to sex, age, race and ethnicity and educational attainment.

Sex of Workforce

Workers in the oil and gas industry are predominantly male. In 2013, males represented 69 percent of the workforce (Exhibit 3-8).

Age of Workforce

The majority of the workforce is in its prime working age—between 22 years and 54 years of age, with almost half being in the 35 to 54 years of age group (Exhibit 3-9). Still, workers aged 55 years and older still account for 24.1 percent, a significant share of the industry workforce.

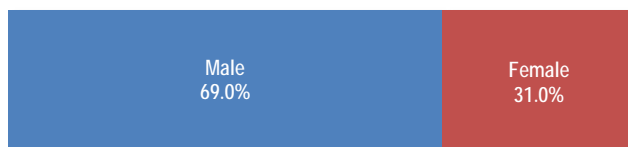
Race and Ethnicity in the Workforce

The workforce in the oil and gas industry is diverse in both race and ethnicity (Exhibit 3-10). Workers reporting their race as white accounted for more than half of the workforce, with those reporting their ethnicity as Hispanic or Latino accounted for 27.1 percent and 13.3 percent were Asian.

Educational Attainment of Workers

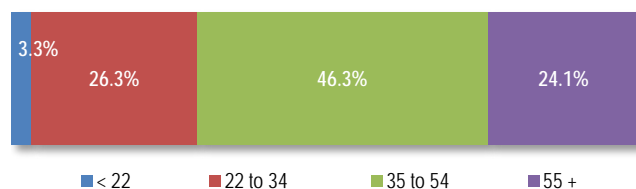
The industry provides a wide range of jobs to individuals with different levels of education (Exhibit 3-11). Approximately 20 percent have a high school diploma, 29 percent of workers have some college education, and 30 percent have earned a bachelor's degree or higher. ❖

Exhibit 3-8
Industry Employment Distribution by Sex
California 2013



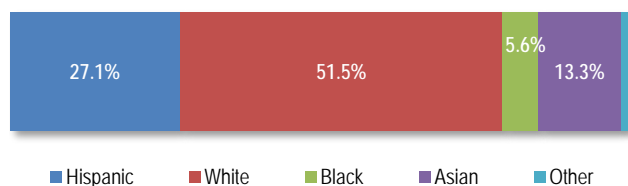
Source: QWI; Analysis by LAEDC

Exhibit 3-9
Industry Employment Distribution by Age Group
California 2013



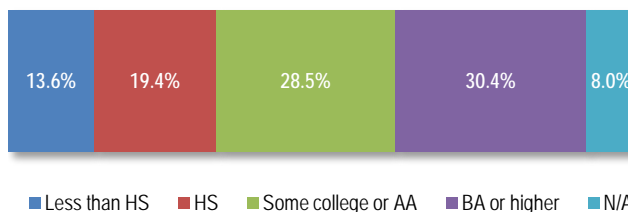
Source: QWI; Analysis by LAEDC

Exhibit 3-10
Industry Employment Distribution by Race /Ethnicity
California 2013



Source: QWI; Analysis by LAEDC

Exhibit 3-11
Industry Employment Distribution by Education
California 2013



Source: QWI; Analysis by LAEDC

4 California's Oil and Gas Industry by Sub-Region

The oil and gas industry is widespread across the state. In this section, the industry is analyzed in four sub-regional geographies depicted in Exhibit 4-1: Southern California, the Central Coast, the San Francisco Bay Area, and Central Valley/Northern California.

These four sub-regions account for 35 counties and more than ninety percent of the direct employment in the industry. The remaining counties are summarized in a Rest of State sub-region.

Production activity occurs across the state, but the majority is located in the Central Valley/Northern California sub-region. According to the Division of Oil, Gas and Geothermal Resources of the California Department of Conservation (DOGGR), as of 2013, just fewer than 55,630 wells are currently active.

Approximately 78 percent of all active wells are in Kern County, which accounts for almost 71 percent of oil production and more than 67 percent of all gas production in the state. Los Angeles County is a distant second, with less than seven percent of active wells, twelve percent of oil production and six percent of gas production.

Employment in oil and gas extraction, well drilling and support activities for oil and gas operations are related to the concentration of well activity and consequently is mostly found in the counties of Kern and Los Angeles.

Downstream activity of the industry is concentrated in the Southern California sub-region, where more than half of the refining capacity is located, and in the San Francisco Bay Area, with almost 40 percent of the state's refining capacity.

Large industry segments related to trade, such as natural gas distribution and gasoline stations, depend on delivery to residents and businesses, thus their employment is distributed proportionally to the resident population. As such, the Southern California sub-region has the largest share of employment in these component industries, and its share has grown since 2012.

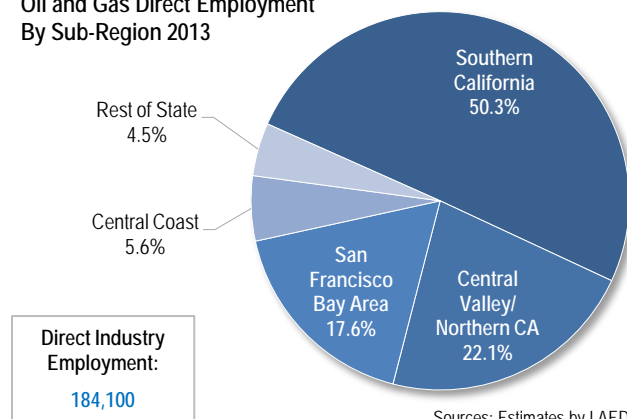
Direct activity and economic and fiscal contributions of each sub-region along with their workforce characteristics are presented in the following pages. ❖

Exhibit 4-1
California Sub-Regions



Source: ESRI

Exhibit 4-2
Oil and Gas Direct Employment
By Sub-Region 2013



Sources: Estimates by LAEDC

Southern California Sub-Region

The Southern California sub-region consists of the six counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and San Diego.

Exhibit 4-3

Southern California Sub-Region



Source: ESRI

Exhibit 4-4

Direct Employment of Oil and Gas Industry Southern California Sub-Region 2013

211	Oil and gas extraction	15,491
213111	Drilling oil and gas wells	2,883
213112	Support activities for oil and gas ops	2,433
2212	Natural gas distribution	22,407
23712	Oil and gas pipeline construction	5,946
32411	Petroleum refineries	4,442
324191	Petroleum lubricating oil / grease mfg	615
32511	Petrochemical manufacturing	9
333132	Oil and gas field machinery mfg	1,980
4247	Petroleum prods wholesalers	3,171
447	Gasoline stations	30,651
45431	Fuel dealers	896
486	Pipeline transportation	1,508

TOTAL DIRECT EMPLOYMENT 92,430
Percent of California Industry Employment 49.9%

Exhibit 4-5

Total Economic and Fiscal Contribution of Oil and Gas Industry Southern California Sub-Region 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	92,430	\$ 11,450	\$ 23,550	\$ 71,040
Indirect	46,370	2,800	4,350	7,590
Induced	86,220	4,120	7,020	11,740
TOTAL CONTRIBUTION	225,030	\$ 18,370	\$ 34,920	\$ 90,370
<i>Percent of Total CA Contribution</i>	<i>49.4%</i>	<i>48.0%</i>	<i>48.6%</i>	<i>44.3%</i>

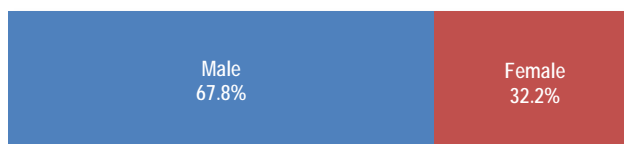
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 7,610.0	\$ 1,985.3	\$ 9,595.3
Property taxes	1,899.1	-	1,990.1
Personal income taxes	564.7	1,494.3	2,059.1
Corporate profits taxes	204.8	811.2	1,016.0
Social insurance taxes	42.6	1,720.8	1,763.5
Other taxes	415.7	166.9	582.6
Fees, fines and permits	135.2	42.4	177.7
TOTAL TAX REVENUES	\$ 10,872.1	\$ 6,221.0	\$ 17,093.2

Workforce Demographics

- ▶ The oil and gas industry workforce in Southern California in 2013 is mostly male (68 percent), with less than a third being female (Exhibit 4-6).
- ▶ Almost half of the workforce is aged 35 to 54 years (Exhibit 4-7). Almost 24 percent is 55 years of age or older. Very few young people (under the age of 22 years) work in the industry in this sub-region.
- ▶ The workforce in the oil and gas industry in this sub-region is diverse in both race and ethnicity (Exhibit 4-8). Workers reporting their race as white accounted for 45 percent of the workforce, with those reporting their ethnicity as Hispanic or Latino accounted for 34.7 percent. More than 12 percent are Asian.
- ▶ In 2013, approximately 36 percent of the industry's workforce in this sub-region had an education level of high school or less, 27.9 percent had some college or an associate's degree and more than 27 percent had earned a bachelor's degree or higher (Exhibit 4-9). Educational attainment is not determined for workers younger than 25 years of age, which accounted for 9.1 percent of industry employment. ❖

Exhibit 4-6

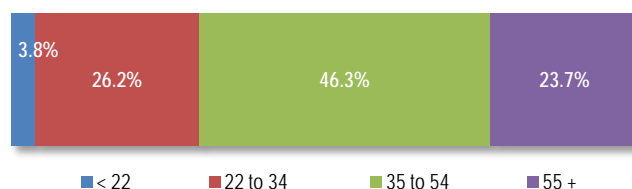
Industry Employment Distribution by Sex
Southern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-7

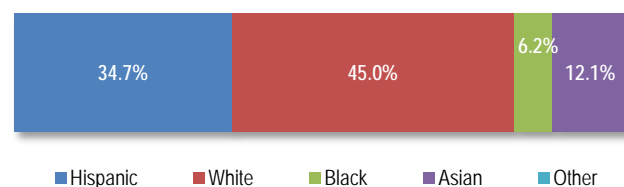
Industry Employment Distribution by Age Group
Southern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-8

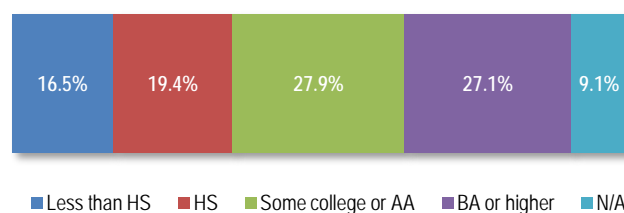
Industry Employment Distribution by Race / Ethnicity
Southern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-9

Industry Employment Distribution by Education
Southern California 2013



Source: QWI; Analysis by LAEDC

Central Coast Sub-Region

The Central Coast sub-region consists of the four counties of Monterey, San Luis Obispo, Santa Barbara and Ventura.

Exhibit 4-10
Central Coast Sub-Region



Source: ESRI

Exhibit 4-11
Direct Employment of Oil and Gas Industry
Central Coast Sub-Region 2013

211	Oil and gas extraction	2,252
213111	Drilling oil and gas wells	825
213112	Support activities for oil and gas ops	936
2212	Natural gas distribution	1,454
23712	Oil and gas pipeline construction	416
32411	Petroleum refineries	170
324191	Petroleum lubricating oil / grease mfg	-
32511	Petrochemical manufacturing	-
333132	Oil and gas field machinery mfg	330
4247	Petroleum prods wholesalers	362
447	Gasoline stations	3,263
45431	Fuel dealers	197
486	Pipeline transportation	40

TOTAL DIRECT EMPLOYMENT 10,250
Percent of California Industry Employment 5.6%

Exhibit 4-12
Total Economic and Fiscal Contribution of Oil and Gas Industry
Central Coast Sub-Region 2013

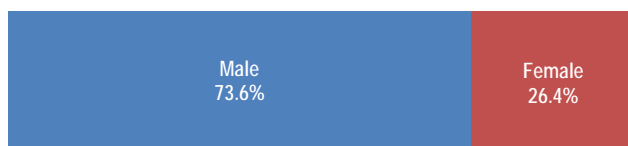
ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	10,250	\$ 1,400	\$ 2,310	\$ 4,720
Indirect	2,670	130	220	380
Induced	7,610	320	570	930
TOTAL CONTRIBUTION	20,520	\$ 1,860	\$ 3,100	\$ 6,030
Percent of Total CA Contribution	4.5%	4.9%	4.3%	3.0%

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 688.0	\$ 184.7	\$ 872.8
Property taxes	166.4	-	166.4
Personal income taxes	59.6	157.7	217.3
Corporate profits taxes	14.2	56.3	70.5
Social insurance taxes	4.5	163.2	167.7
Other taxes	36.8	13.1	49.9
Fees, fines and permits	13.7	3.3	17.0
TOTAL TAX REVENUES	\$ 983.1	\$ 578.4	\$ 1,561.5

Workforce Demographics

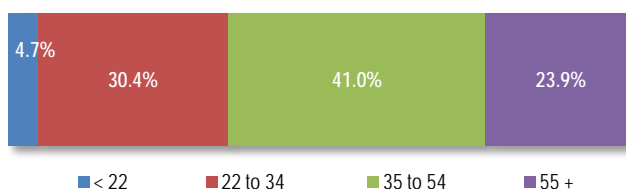
- ▶ Almost 74 percent of the oil and gas industry workforce in the Central Coast sub-region is male, with 26.4 percent being female (Exhibit 4-13).
- ▶ Forty-one percent of the workforce is aged 35 to 54 years (Exhibit 4-14). Very few young people (under the age of 22 years) work in the industry, but almost 24 percent of the workforce is 55 years of age or older.
- ▶ The workforce in the oil and gas industry in this sub-region is diverse in both race and ethnicity (Exhibit 4-15). Workers reporting their race as white accounted for 54.8 percent of the workforce, with those reporting their ethnicity as Hispanic or Latino accounted for 33.6 percent.
- ▶ In 2013, almost 40 percent of the industry's workforce in this sub-region had an education level of high school or less, almost 30 percent had some college or an associate's degree and 20 percent had earned a bachelor's degree or higher (Exhibit 4-16). Educational attainment is not determined for workers younger than 25 years of age, which accounted for 11.3 percent of industry employment. ❖

Exhibit 4-13
Industry Employment Distribution by Sex
Central Coast 2013



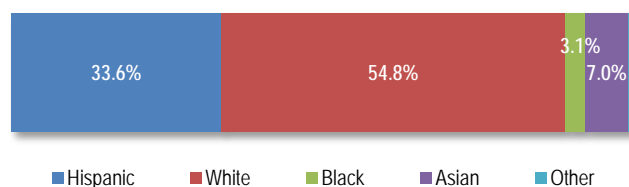
Source: QWI; Analysis by LAEDC

Exhibit 4-14
Industry Employment Distribution by Age Group
Central Coast 2013



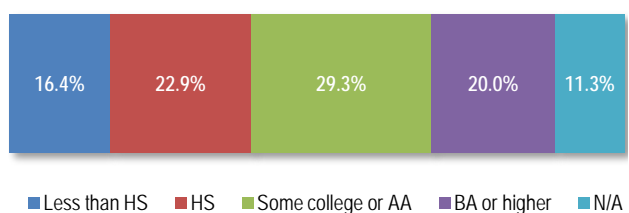
Source: QWI; Analysis by LAEDC

Exhibit 4-15
Industry Employment Distribution by Race / Ethnicity
Central Coast 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-16
Industry Employment Distribution by Education
Central Coast 2013



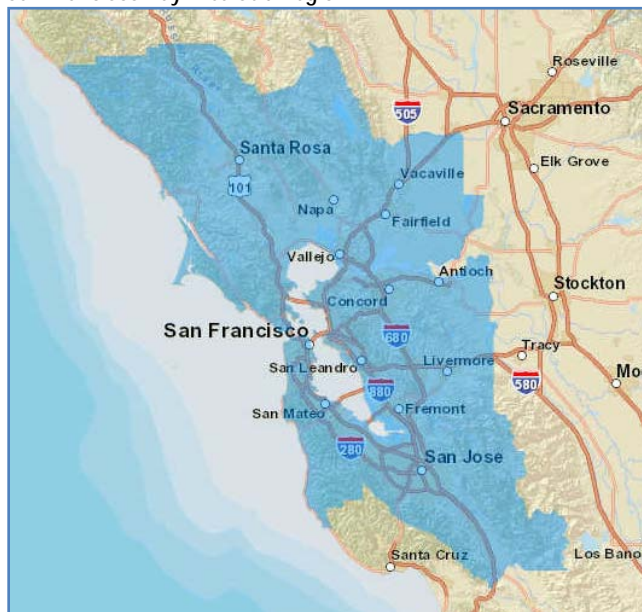
Source: QWI; Analysis by LAEDC

San Francisco Bay Area Sub-Region

The San Francisco Bay Area sub-region consists of the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma.

Exhibit 4-17

San Francisco Bay Area Sub-Region



Source: ESRI

Exhibit 4-18

Direct Employment of Oil and Gas Industry
San Francisco Bay Area Sub-Region 2013

211	Oil and gas extraction	4,001
213111	Drilling oil and gas wells	903
213112	Support activities for oil and gas ops	509
2212	Natural gas distribution	7,557
23712	Oil and gas pipeline construction	938
32411	Petroleum refineries	6,183
324191	Petroleum lubricating oil / grease mfg	138
32511	Petrochemical manufacturing	-
333132	Oil and gas field machinery mfg	33
4247	Petroleum prods wholesalers	1,080
447	Gasoline stations	10,461
45431	Fuel dealers	271
486	Pipeline transportation	296

TOTAL DIRECT EMPLOYMENT 32,370
Percent of California Industry Employment 17.6%

Exhibit 4-19

Total Economic and Fiscal Contribution of Oil and Gas Industry
San Francisco Bay Area Sub-Region 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	32,370	\$ 5,390	\$ 13,100	\$ 68,380
Indirect	24,770	2,000	2,840	4,680
Induced	30,920	1,790	2,910	4,570
TOTAL CONTRIBUTION	88,060	\$ 9,180	\$ 18,850	\$ 77,630
<i>Percent of Total CA Contribution</i>	<i>19.3%</i>	<i>24.0%</i>	<i>26.2%</i>	<i>38.1%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 2,779.8	\$ 655.6	\$ 3,435.4
Property taxes	798.7	-	798.7
Personal income taxes	274.0	730.3	1,004.3
Corporate profits taxes	136.1	539.2	675.3
Social insurance taxes	18.1	857.8	875.8
Other taxes	176.8	53.8	230.6
Fees, fines and permits	63.1	13.7	76.8
TOTAL TAX REVENUES	\$ 4,246.7	\$ 2,850.3	\$ 7,097.0

Workforce Demographics

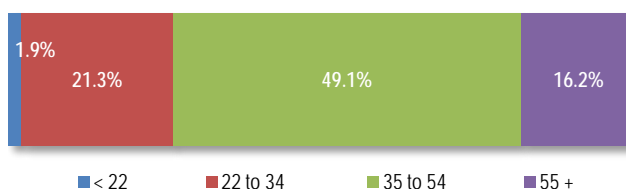
- ▶ The oil and gas industry workforce in the San Francisco Bay Area sub-region in 2013 is mostly male (68 percent), with 32 percent being female (Exhibit 4-20).
- ▶ More than 49.1 percent of the workforce is aged 35 to 54 years (Exhibit 4-21). Very few young people (under 22 years of age) work in the industry.
- ▶ The workforce in the oil and gas industry in this sub-region is diverse in both race and ethnicity (Exhibit 4-22). Workers reporting their race as white accounted for 53.7 percent of the workforce, with those reporting their race or ethnicity as Asian accounted for 20.7 percent and Hispanic or Latino 16.2 percent.
- ▶ In 2013, approximately 25 percent of the industry's workforce in this sub-region had an education level of high school or less, almost 29 percent had some college or an associate's degree and 41.5 percent had earned a bachelor's degree or higher (Exhibit 4-23). Educational attainment is not determined for workers younger than 25 years of age, which accounted for 4.8 percent of industry employment. ❖

Exhibit 4-20
Industry Employment Distribution by Sex
San Francisco Bay Area 2013



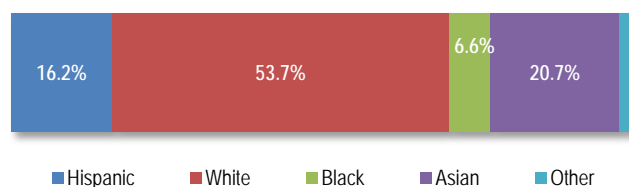
Source: QWI; Analysis by LAEDC

Exhibit 4-21
Industry Employment Distribution by Age Group
San Francisco Bay Area 2013



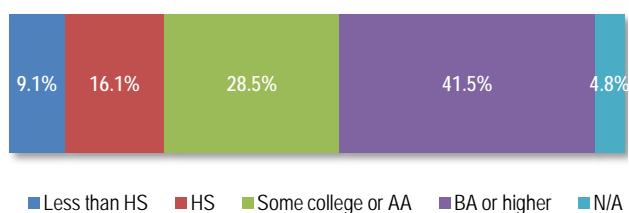
Source: QWI; Analysis by LAEDC

Exhibit 4-22
Industry Employment Distribution by Race / Ethnicity
San Francisco Bay Area 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-23
Industry Employment Distribution by Education
San Francisco Bay Area 2013



Source: QWI; Analysis by LAEDC

Central Valley/Northern California Sub-Region

The Central Valley/Northern California sub-region consists of the sixteen counties of Butte, Colusa, Fresno, Glenn, Kern, Kings, Merced, Sacramento, San Joaquin, Shasta, Stanislaus, Sutter, Tehama, Tulare, Yolo and Yuba.

Exhibit 4-24

Central Valley / Northern California Sub-Region



Source: ESRI

Exhibit 4-25

Direct Employment of Oil and Gas Industry
Central Valley/Northern California Sub-Region 2013

211	Oil and gas extraction	8,339
213111	Drilling oil and gas wells	2,576
213112	Support activities for oil and gas ops	6,202
2212	Natural gas distribution	2,306
23712	Oil and gas pipeline construction	4,615
32411	Petroleum refineries	1,021
324191	Petroleum lubricating oil / grease mfg	8
32511	Petrochemical manufacturing	-
333132	Oil and gas field machinery mfg	319
4247	Petroleum prods wholesalers	2,173
447	Gasoline stations	11,475
45431	Fuel dealers	719
486	Pipeline transportation	944

TOTAL DIRECT EMPLOYMENT	40,700
<i>Percent of California Industry Employment</i>	<i>22.1%</i>

Exhibit 4-26

Total Economic and Fiscal Contribution of Oil and Gas Industry
Central Valley/Northern California Sub-Region 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	40,700	\$ 4,350	\$ 7,340	\$ 19,250
Indirect	12,750	620	1,010	1,810
Induced	24,600	1,010	1,840	3,110
TOTAL CONTRIBUTION	78,040	\$ 5,980	\$ 10,200	\$ 24,160
<i>Percent of Total CA Contribution</i>	<i>17.1%</i>	<i>15.6%</i>	<i>14.2%</i>	<i>11.9%</i>

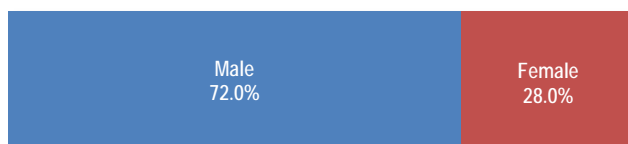
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 2,336.7	\$ 665.0	\$ 3,001.7
Property taxes	534.8	-	534.8
Personal income taxes	175.8	461.7	637.5
Corporate profits taxes	49.6	196.6	246.2
Social insurance taxes	28.2	547.2	575.4
Other taxes	117.5	46.9	164.4
Fees, fines and permits	41.3	11.9	53.2
TOTAL TAX REVENUES	\$ 3,283.9	\$ 1,929.3	\$ 5,213.2

Workforce Demographics

- ▶ The oil and gas industry workforce in the Central Valley/Northern California sub-region in 2013 is predominantly male (72 percent), with 28 percent being female (Exhibit 4-27).
- ▶ Almost 43 percent of the workforce is aged 35 to 54 years (Exhibit 4-28). Approximately 20 percent is 55 years of age or older.
- ▶ The workforce in the oil and gas industry in this sub-region is diverse in both race and ethnicity (Exhibit 4-29). Workers reporting their race as white accounted for 55.2 percent of the workforce, while those reporting their race or ethnicity as Hispanic or Latino accounted for 28.4 percent. Approximately ten percent of the workforce is Asian.
- ▶ In 2013, almost 40 percent of the industry's workforce in this sub-region had an education level of high school or less, almost 29 percent had some college or an associate's degree and 21.0 percent had earned a bachelor's degree or higher (Exhibit 4-30). Educational attainment is not determined for workers younger than 25 years of age, which accounted for 10.7 percent of industry employment. ❖

Exhibit 4-27

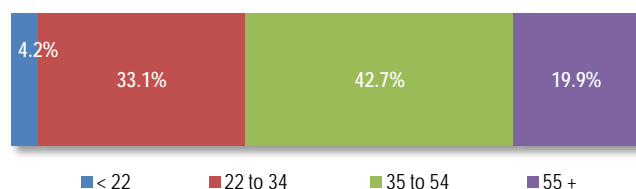
Industry Employment Distribution by Sex
Central Valley/Northern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-28

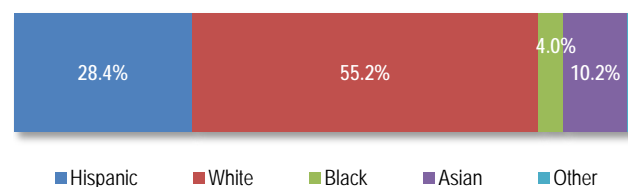
Industry Employment Distribution by Age Group
Central Valley/Northern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-29

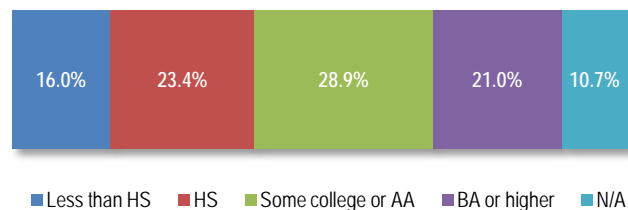
Industry Employment Distribution by Race / Ethnicity
Central Valley/Northern California 2013



Source: QWI; Analysis by LAEDC

Exhibit 4-30

Industry Employment Distribution by Education
Central Valley/Northern California 2013



Source: QWI; Analysis by LAEDC

Rest of State

The Rest of State consists of the remaining twenty-three states that have not been included in the four sub-regions above.

Exhibit 4-31
Rest of State



Source: ESRI

Exhibit 4-32
Direct Employment of Oil and Gas Industry
Rest of State 2013

211	Oil and gas extraction	1,499
213111	Drilling oil and gas wells	297
213112	Support activities for oil and gas ops	78
2212	Natural gas distribution	1,229
23712	Oil and gas pipeline construction	38
32411	Petroleum refineries	22
324191	Petroleum lubricating oil / grease mfg	-
32511	Petrochemical manufacturing	-
333132	Oil and gas field machinery mfg	-
4247	Petroleum prods wholesalers	542
447	Gasoline stations	3,823
45431	Fuel dealers	771
486	Pipeline transportation	52
TOTAL DIRECT EMPLOYMENT		8,350
<i>Percent of California Industry Employment</i>		<i>4.5%</i>

Exhibit 4-33
Total Economic and Fiscal Contribution of Oil and Gas Industry
Rest of State 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	8,350	\$ 590	\$ 1,210	\$ 2,020
Indirect	1,550	60	130	220
Induced	3,020	120	220	370
TOTAL CONTRIBUTION	12,920	\$ 770	\$ 1,560	\$ 2,610
<i>Percent of Total CA Contribution</i>	<i>2.8%</i>	<i>2.0%</i>	<i>2.2%</i>	<i>1.3%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 629.3	\$ 174.3	\$ 803.7
Property taxes	124.3	-	124.3
Personal income taxes	24.5	64.5	88.9
Corporate profits taxes	7.9	31.3	39.2
Social insurance taxes	2.2	67.3	69.5
Other taxes	26.7	9.0	35.7
Fees, fines and permits	6.6	2.3	8.9
TOTAL TAX REVENUES	\$ 821.5	\$ 348.7	\$ 1,170.2

5 California's Oil and Gas Industry by County

California is comprised of 58 individual counties. Oil and gas industry activity varies from county to county. This section identifies the direct activity of the oil and gas industry in each county and then estimates their economic and fiscal contribution.

Exhibit 5-1 identifies the direct industry employment, the total economic contribution and the total fiscal contribution of each county. Counties asterisked (*) are detailed in the following pages, in alphabetical order. ❖

Exhibit 5-1
Oil and Gas Industry Total Economic and Fiscal Contribution by County
California 2013

County	Direct Employment	Total Employment	----- Total Economic Contribution -----		<u>Total Fiscal Contribution</u> (\$ millions)
			Total Labor Income (\$ millions)	Total Value Added (\$ millions)	
Alameda County *	4,733	9,088	730.0	1,496.3	982.4
Alpine County	1	1	0.0	0.0	0.0
Amador County	207	288	14.3	29.7	23.7
Butte County *	684	1,151	70.3	139.9	114.4
Calaveras County	287	442	32.6	68.4	33.7
Colusa County *	252	333	21.9	50.0	28.8
Contra Costa County *	10,318	36,068	4,258.1	9,899.8	2,553.7
Del Norte County	135	175	9.0	14.2	10.5
El Dorado County *	861	1,259	69.9	152.8	117.3
Fresno County *	2,167	3,606	199.9	352.5	411.8
Glenn County *	335	440	26.1	53.0	30.7
Humboldt County *	718	1,191	71.8	143.1	94.6
Imperial County *	729	968	48.9	112.4	89.2
Inyo County	269	309	6.3	24.2	25.8
Kern County *	23,857	44,544	3,821.4	6,366.9	2,167.5
Kings County *	492	629	34.0	70.0	70.6
Lake County	341	476	28.9	57.4	37.0
Lassen County	137	164	5.0	15.2	11.6
Los Angeles County *	49,279	116,925	10,493.5	20,442.1	8,756.9
Madera County *	505	748	53.4	100.9	90.7
Marin County *	1,072	1,788	195.3	345.2	199.2
Mariposa County	81	99	3.1	8.2	9.1
Mendocino County *	630	1,067	74.8	154.1	90.2
Merced County	893	1,258	64.4	105.7	137.0
Modoc County	247	280	5.0	18.0	11.6
Mono County	105	133	5.7	11.7	6.3
Monterey County *	1,233	1,941	146.8	226.6	202.2
Napa County *	464	745	61.9	104.2	83.1
Nevada County	587	803	25.9	96.0	67.7
Orange County *	13,543	28,186	2,431.9	3,803.9	2,189.0
Placer County *	1,187	2,146	164.5	258.3	237.9
Plumas County	248	374	29.6	69.7	29.8
Riverside County *	5,562	10,105	709.1	1,310.4	1,195.0
Sacramento County *	3,704	7,255	655.8	960.2	745.6
San Benito County	157	208	11.3	26.7	25.7
San Bernardino County *	8,886	15,461	1,099.3	2,309.5	1,586.5
San Diego County *	14,660	26,806	2,079.3	4,471.7	2,592.3
San Francisco County *	5,776	9,926	1,418.8	2,750.1	958.0

Exhibit 5-1 (cont'd)

County	Direct Employment	Total Employment	----- Total Economic Contribution -----		<u>Total Fiscal Contribution</u> (\$ millions)
			Total Labor Income (\$ millions)	Total Value Added (\$ millions)	
San Joaquin County *	2,304	3,630	212.4	424.7	716.6
San Luis Obispo County *	1,906	3,704	250.2	518.1	249.0
San Mateo County *	1,990	2,681	184.7	308.8	368.7
Santa Barbara County *	2,756	5,135	506.6	813.3	369.2
Santa Clara County *	3,600	5,048	341.8	560.4	777.9
Santa Cruz County	891	1,360	78.4	167.5	151.0
Shasta County *	989	1,856	132.4	245.0	163.4
Sierra County	10	12	0.2	0.5	0.2
Siskiyou County	356	494	23.7	41.3	43.0
Solano County *	2,842	5,711	476.4	1,179.7	479.6
Sonoma County *	1,576	2,401	121.6	230.8	244.4
Stanislaus County *	1,432	2,233	112.4	232.2	259.2
Sutter County *	300	557	51.3	73.8	55.0
Tehama County *	542	678	25.1	51.1	65.1
Trinity County	84	114	6.6	10.7	4.7
Tulare County *	1,558	2,662	223.8	425.4	268.4
Tuolumne County	310	460	26.4	57.4	34.5
Ventura County *	4,351	8,913	905.3	1,469.7	712.4
Yolo County *	734	1,025	65.3	110.4	120.7
Yuba County *	455	541	18.2	55.4	46.6
TOTAL 2013	184,100	455,940	38,280	71,890	34,040

Source: Estimates by LAEDC

Fiscal contributions may not sum to the aggregate state level fiscal contribution since some tax revenues cannot be estimated at the county level with any accuracy. The estimates provided at the county level are therefore likely to be conservative.

Additionally, county-level economic contributions may not add to sub-regional contributions because estimates are produced at defined geographic levels, which do not account for spill-over impacts between counties. Such spill-over effects are captured in state level impacts and in the sub-regional impacts. ❖

Alameda County

Exhibit 5-2

**Direct Activity of Oil and Gas Industry
Alameda County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	514	\$ 28.7
213111	Drilling oil and gas wells	63	3.5
213112	Support activities for oil and gas operations	33	0.8
2212	Natural gas distribution	1,541	270.9
23712	Oil and gas pipeline construction	34	3.2
32411	Petroleum refineries	150	40.2
324191	Petroleum lubricating oil and grease mfg	67	3.8
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	117	10.2
447	Gasoline stations	2,195	127.6
45431	Fuel dealers	11	0.3
486	Pipeline transportation	9	1.6
TOTAL DIRECT ACTIVITY		4,733	\$ 490.9

Exhibit 5-3

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Alameda County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	4,733	\$ 490.9	\$ 1,111.8	\$ 2,873.8
Indirect	1,534	99.1	150.4	249.1
Induced	2,821	139.9	234.2	375.7
TOTAL CONTRIBUTION	9,088	\$ 730.0	\$ 2,204.0	\$ 3,498.7
<i>Percent of Total CA Contribution</i>	<i>2.4%</i>	<i>2.2%</i>	<i>2.4%</i>	<i>1.8%</i>
<i>Percent of County Total</i>	<i>1.0%</i>	<i>1.1%</i>	<i>1.6%</i>	<i>2.1%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 518.0	\$ 129.0	\$ 647.0
Property taxes	97.3	-	97.3
Personal income taxes	23.5	62.6	86.1
Corporate profits taxes	9.1	36.1	45.2
Social insurance taxes	1.9	68.7	70.6
Other taxes	21.1	7.3	28.4
Fees, fines and permits	5.9	1.9	7.8
TOTAL TAX REVENUES	\$ 676.9	\$ 305.5	\$ 982.4

Source: Estimates by LAEDC

Butte County

Exhibit 5-4

**Direct Activity of Oil and Gas Industry
Butte County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	79	\$ 1.0
213111	Drilling oil and gas wells	10	0.1
213112	Support activities for oil and gas operations	1	0.0
2212	Natural gas distribution	138	17.7
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	42	2.3
447	Gasoline stations	322	28.8
45431	Fuel dealers	73	2.1
486	Pipeline transportation	19	1.4
TOTAL DIRECT ACTIVITY		684	\$ 53.5

Exhibit 5-5

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Butte County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	684	\$ 53.5	\$ 107.3	\$ 159.9
Indirect	150	5.5	11.3	19.1
Induced	317	11.3	21.3	35.4
TOTAL CONTRIBUTION	1,151	\$ 70.3	\$ 139.9	\$ 214.4
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.1%</i>	<i>1.5%</i>	<i>1.8%</i>	<i>1.5%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 63.3	\$ 18.8	\$ 82.1	
Property taxes	10.4	-	10.4	
Personal income taxes	2.0	5.3	7.3	
Corporate profits taxes	0.7	2.9	3.6	
Social insurance taxes	0.2	6.5	6.8	
Other taxes	2.2	1.1	3.4	
Fees, fines and permits	0.5	0.3	0.8	
TOTAL TAX REVENUES	\$ 79.5	\$ 34.9	\$ 114.4	

Source: Estimates by LAEDC

Colusa County

Exhibit 5-6

**Direct Activity of Oil and Gas Industry
Colusa County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	12	\$ 1.0
213111	Drilling oil and gas wells	1	0.1
213112	Support activities for oil and gas operations	11	1.2
2212	Natural gas distribution	60	8.4
23712	Oil and gas pipeline construction	1	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	82	6.5
447	Gasoline stations	80	1.6
45431	Fuel dealers	4	0.1
486	Pipeline transportation	0	0.0
TOTAL DIRECT ACTIVITY		252	\$ 19.1

Exhibit 5-7

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Colusa County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	252	\$ 19.1	\$ 44.2	\$ 65.9
Indirect	40	1.3	2.6	4.6
Induced	41	1.5	3.2	5.2
TOTAL CONTRIBUTION	333	\$ 21.9	\$ 50.0	\$ 75.7
<i>Percent of Total CA Contribution</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.04%</i>
<i>Percent of County Total</i>	<i>2.8%</i>	<i>3.3%</i>	<i>4.6%</i>	<i>3.0%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 13.1	\$ 3.5	\$ 16.6	
Property taxes	4.4	-	4.4	
Personal income taxes	0.7	1.8	2.6	
Corporate profits taxes	0.3	1.2	1.5	
Social insurance taxes	0.1	2.2	2.3	
Other taxes	0.9	0.3	1.3	
Fees, fines and permits	0.2	0.1	0.3	
TOTAL TAX REVENUES	\$ 19.8	\$ 9.1	\$ 28.8	

Source: Estimates by LAEDC

Contra Costa County

Exhibit 5-8**Direct Activity of Oil and Gas Industry
Contra Costa County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	1,275	\$ 559.3
213111	Drilling oil and gas wells	348	91.8
213112	Support activities for oil and gas operations	225	31.6
2212	Natural gas distribution	618	202.5
23712	Oil and gas pipeline construction	314	27.6
32411	Petroleum refineries	5,443	1,708.4
324191	Petroleum lubricating oil and grease mfg	71	6.7
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	17	1.4
4247	Petroleum and petroleum prods wholesalers	324	29.3
447	Gasoline stations	1,428	83.6
45431	Fuel dealers	113	2.2
486	Pipeline transportation	142	15.6
TOTAL DIRECT ACTIVITY		10,318	\$ 2,759.9

Exhibit 5-9**Total Economic and Fiscal Contribution of Oil and Gas Industry
Contra Costa County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	10,318	\$ 2,759.9	\$ 7,578.0	\$ 54,446.4
Indirect	11,293	794.7	1,093.4	1,909.7
Induced	14,457	703.5	1,228.4	1,935.4
TOTAL CONTRIBUTION	36,068	\$ 4,258.1	\$ 9,899.8	\$ 58,291.5
<i>Percent of Total CA Contribution</i>	<i>9.6%</i>	<i>12.9%</i>	<i>15.6%</i>	<i>30.4%</i>
<i>Percent of County Total</i>	<i>7.1%</i>	<i>12.9%</i>	<i>17.7%</i>	<i>43.8%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 611.3	\$ 120.3	\$ 731.6
Property taxes	281.3	-	281.3
Personal income taxes	145.1	386.3	531.4
Corporate profits taxes	88.4	350.1	438.5
Social insurance taxes	10.2	445.0	455.1
Other taxes	64.3	16.3	80.6
Fees, fines and permits	31.0	4.1	35.1
TOTAL TAX REVENUES	\$ 1,231.5	\$ 1,322.2	\$ 2,553.7

Source: Estimates by LAEDC

El Dorado County

Exhibit 5-10

**Direct Activity of Oil and Gas Industry
El Dorado County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	166	\$ 4.2
213111	Drilling oil and gas wells	53	3.1
213112	Support activities for oil and gas operations	3	0.1
2212	Natural gas distribution	129	14.0
23712	Oil and gas pipeline construction	2	0.1
32411	Petroleum refineries	2	0.7
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	15	0.4
447	Gasoline stations	366	31.4
45431	Fuel dealers	125	1.2
486	Pipeline transportation	1	0.1
TOTAL DIRECT ACTIVITY		861	\$ 55.4

Exhibit 5-11

**Total Economic and Fiscal Contribution of Oil and Gas Industry
El Dorado County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	861	\$ 55.4	\$ 123.2	\$ 209.5
Indirect	144	5.5	11.6	20.1
Induced	254	9.0	18.0	30.9
TOTAL CONTRIBUTION	1,259	\$ 69.9	\$ 152.8	\$ 260.4
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.3%</i>	<i>1.8%</i>	<i>2.1%</i>	<i>2.1%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 63.6	\$ 17.2	\$ 80.8	
Property taxes	12.7	-	12.7	
Personal income taxes	2.4	6.2	8.6	
Corporate profits taxes	0.9	3.5	4.4	
Social insurance taxes	0.2	6.2	6.4	
Other taxes	2.7	0.9	3.6	
Fees, fines and permits	0.6	0.2	0.9	
TOTAL TAX REVENUES	\$ 83.0	\$ 34.3	117.3	

Source: Estimates by LAEDC

Fresno County

Exhibit 5-12

**Direct Activity of Oil and Gas Industry
Fresno County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	255	\$ 19.5
213111	Drilling oil and gas wells	31	2.4
213112	Support activities for oil and gas operations	124	9.4
2212	Natural gas distribution	23	2.8
23712	Oil and gas pipeline construction	11	0.7
32411	Petroleum refineries	28	12.7
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	224	14.6
447	Gasoline stations	1,312	72.3
45431	Fuel dealers	111	1.8
486	Pipeline transportation	46	4.2
TOTAL DIRECT ACTIVITY		2,167	\$ 140.5

Exhibit 5-13

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Fresno County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	2,167	\$ 140.5	\$ 245.1	\$ 596.6
Indirect	580	25.6	46.4	78.9
Induced	859	33.9	61.0	102.6
TOTAL CONTRIBUTION	3,606	\$ 199.9	\$ 352.5	\$ 778.1
<i>Percent of Total CA Contribution</i>	<i>1.0%</i>	<i>0.6%</i>	<i>0.6%</i>	<i>0.4%</i>
<i>Percent of County Total</i>	<i>0.8%</i>	<i>0.9%</i>	<i>1.0%</i>	<i>1.2%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 257.3	\$ 75.4	\$ 332.6	
Property taxes	20.8	-	20.8	
Personal income taxes	6.3	16.5	22.8	
Corporate profits taxes	1.7	6.8	8.5	
Social insurance taxes	0.6	17.8	18.4	
Other taxes	4.6	2.1	6.7	
Fees, fines and permits	1.5	0.5	2.0	
TOTAL TAX REVENUES	\$ 292.7	\$ 119.1	\$ 411.8	

Source: Estimates by LAEDC

Glenn County

Exhibit 5-14

**Direct Activity of Oil and Gas Industry
Glenn County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	61	\$ 4.9
213111	Drilling oil and gas wells	7	0.6
213112	Support activities for oil and gas operations	97	1.6
2212	Natural gas distribution	41	6.3
23712	Oil and gas pipeline construction	13	0.5
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	24	1.4
447	Gasoline stations	91	7.7
45431	Fuel dealers	-	-
486	Pipeline transportation	0	0.0
TOTAL DIRECT ACTIVITY		335	\$ 23.0

Exhibit 5-15

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Glenn County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	335	\$ 23.0	\$ 46.4	\$ 72.5
Indirect	37	1.2	2.3	4.2
Induced	67	1.9	4.3	7.2
TOTAL CONTRIBUTION	440	\$ 26.1	\$ 53.0	\$ 84.0
<i>Percent of Total CA Contribution</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.04%</i>
<i>Percent of County Total</i>	<i>3.5%</i>	<i>4.0%</i>	<i>4.8%</i>	<i>4.1%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 14.2	\$ 3.8	\$ 18.0	
Property taxes	4.3	-	4.3	
Personal income taxes	0.8	2.2	3.0	
Corporate profits taxes	0.3	1.1	1.4	
Social insurance taxes	0.1	2.4	2.4	
Other taxes	0.3	0.3	1.2	
Fees, fines and permits	0.1	0.1	0.3	
TOTAL TAX REVENUES	\$ 20.9	\$ 9.8	\$ 30.7	

Source: Estimates by LAEDC

Humboldt County

Exhibit 5-16

**Direct Activity of Oil and Gas Industry
Humboldt County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	96	\$ 0.9
213111	Drilling oil and gas wells	14	0.4
213112	Support activities for oil and gas operations	2	0.0
2212	Natural gas distribution	100	14.6
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	10	1.3
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	35	1.7
447	Gasoline stations	417	35.5
45431	Fuel dealers	36	0.6
486	Pipeline transportation	9	0.7
TOTAL DIRECT ACTIVITY		718	\$ 55.7

Exhibit 5-17

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Humboldt County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	718	\$ 55.7	\$ 110.9	\$ 241.4
Indirect	157	5.6	11.6	20.8
Induced	315	10.5	20.6	34.9
TOTAL CONTRIBUTION	1,191	\$ 71.8	\$ 143.1	\$ 297.2
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>1.7%</i>	<i>2.5%</i>	<i>3.0%</i>	<i>3.5%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 49.3	\$ 14.1	\$ 63.4	
Property taxes	9.9	-	9.9	
Personal income taxes	2.0	5.3	7.4	
Corporate profits taxes	0.7	2.9	3.7	
Social insurance taxes	6.2	6.2	6.5	
Other taxes	2.1	0.9	3.0	
Fees, fines and permits	0.5	0.2	0.8	
TOTAL TAX REVENUES	\$ 64.9	\$ 29.6	\$ 94.6	

Source: Estimates by LAEDC

Imperial County

Exhibit 5-18

**Direct Activity of Oil and Gas Industry
Imperial County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	67	\$ 0.2
213111	Drilling oil and gas wells	8	0.0
213112	Support activities for oil and gas operations	49	3.5
2212	Natural gas distribution	137	13.3
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	58	3.6
447	Gasoline stations	398	19.1
45431	Fuel dealers	-	-
486	Pipeline transportation	10	1.1
TOTAL DIRECT ACTIVITY		729	\$ 40.8

Exhibit 5-19

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Imperial County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	729	\$ 40.8	\$ 95.7	\$ 148.0
Indirect	104	3.9	7.6	13.4
Induced	135	4.1	9.1	15.5
TOTAL CONTRIBUTION	968	\$ 48.9	\$ 112.4	\$ 177.0
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.1%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.3%</i>	<i>1.3%</i>	<i>1.7%</i>	<i>1.5%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 48.8	\$ 13.6	\$ 62.4	
Property taxes	10.0	-	10.0	
Personal income taxes	1.4	3.8	5.2	
Corporate profits taxes	0.7	2.6	3.2	
Social insurance taxes	0.2	4.4	4.4	
Other taxes	2.1	0.9	3.0	
Fees, fines and permits	0.4	0.2	0.7	
TOTAL TAX REVENUES	\$ 63.7	\$ 25.5	\$ 89.2	

Source: Estimates by LAEDC

Kern County

Exhibit 5-20

**Direct Activity of Oil and Gas Industry
Kern County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	6,339	\$ 1,175.7
213111	Drilling oil and gas wells	2,250	290.6
213112	Support activities for oil and gas operations	5,741	554.5
2212	Natural gas distribution	521	103.9
23712	Oil and gas pipeline construction	4,517	328.5
32411	Petroleum refineries	959	209.7
324191	Petroleum lubricating oil and grease mfg	3	0.2
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	319	32.0
4247	Petroleum and petroleum prods wholesalers	378	30.3
447	Gasoline stations	2,414	189.6
45431	Fuel dealers	76	0.8
486	Pipeline transportation	340	38.6
TOTAL DIRECT ACTIVITY		23,857	\$ 2,954.2

Exhibit 5-21

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Kern County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	23,857	\$ 2,954.2	\$ 4,891.6	\$ 15,152.3
Indirect	7,073	359.1	517.7	955.7
Induced	13,615	508.0	957.6	1,580.8
TOTAL CONTRIBUTION	44,544	\$ 3,821.4	\$ 6,366.9	\$ 17,689.1
<i>Percent of Total CA Contribution</i>	<i>11.8%</i>	<i>11.6%</i>	<i>10.0%</i>	<i>9.2%</i>
<i>Percent of County Total</i>	<i>11.0%</i>	<i>17.0%</i>	<i>17.9%</i>	<i>27.0%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 607.6	\$ 164.7	\$ 772.3
Property taxes	285.6	-	285.6
Personal income taxes	117.2	307.7	424.9
Corporate profits taxes	31.6	125.2	156.8
Social insurance taxes	13.9	387.9	401.8
Other taxes	63.6	28.9	92.5
Fees, fines and permits	26.3	7.3	33.7
TOTAL TAX REVENUES	\$ 1,145.7	\$ 1,021.8	\$ 2,167.5

Source: Estimates by LAEDC

Kings County

Exhibit 5-22

**Direct Activity of Oil and Gas Industry
Kings County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	160	\$ 0.0
213111	Drilling oil and gas wells	-	-
213112	Support activities for oil and gas operations	-	-
2212	Natural gas distribution	57	6.1
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	33	2.2
447	Gasoline stations	230	20.5
45431	Fuel dealers	8	0.1
486	Pipeline transportation	2	0.2
TOTAL DIRECT ACTIVITY		492	\$ 29.0

Exhibit 5-23

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Kings County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	492	\$ 29.0	\$ 59.7	\$ 98.9
Indirect	44	1.7	3.5	5.9
Induced	93	3.3	6.8	11.5
TOTAL CONTRIBUTION	629	\$ 34.0	\$ 70.0	\$ 116.3
<i>Percent of Total CA Contribution</i>	<i>0.2%</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.1%</i>	<i>1.0%</i>	<i>1.2%</i>	<i>1.0%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 41.0	\$ 11.5	\$ 52.5	
Property taxes	7.7	-	7.7	
Personal income taxes	1.0	2.7	3.8	
Corporate profits taxes	0.3	1.1	1.4	
Social insurance taxes	0.1	2.6	2.7	
Other taxes	1.6	0.5	2.1	
Fees, fines and permits	0.3	0.1	0.4	
TOTAL TAX REVENUES	\$ 52.1	\$ 18.5	\$ 70.6	

Source: Estimates by LAEDC

Los Angeles County

Exhibit 5-24

**Direct Activity of Oil and Gas Industry
Los Angeles County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	10,910	\$ 1,957.2
213111	Drilling oil and gas wells	2,150	338.5
213112	Support activities for oil and gas operations	1,780	158.7
2212	Natural gas distribution	10,476	1,595.6
23712	Oil and gas pipeline construction	3,172	207.1
32411	Petroleum refineries	4,131	935.6
324191	Petroleum lubricating oil and grease mfg	373	32.5
32511	Petrochemical manufacturing	3	0.2
333132	Oil and gas field machinery and eqmt mfg	852	68.3
4247	Petroleum and petroleum prods wholesalers	1,523	111.0
447	Gasoline stations	12,769	870.0
45431	Fuel dealers	313	6.9
486	Pipeline transportation	826	613.5
TOTAL DIRECT ACTIVITY		49,279	\$ 6,895.3

Exhibit 5-25

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Los Angeles County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	49,279	\$ 6,895.3	\$ 14,630.9	\$ 54,943.5
Indirect	25,560	1,576.4	2,404.8	4,141.0
Induced	42,085	2,021.8	3,406.5	5,505.7
TOTAL CONTRIBUTION	116,925	\$ 10,493.5	\$ 20,442.1	\$ 64,590.2
<i>Percent of Total CA Contribution</i>	<i>31.0%</i>	<i>31.9%</i>	<i>32.1%</i>	<i>33.7%</i>
<i>Percent of County Total</i>	<i>2.0%</i>	<i>3.0%</i>	<i>3.5%</i>	<i>6.5%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 3,615.5	\$ 908.8	\$ 4,524.4
Property taxes	1,032.8	-	1,032.8
Personal income taxes	312.1	826.2	1,138.3
Corporate profits taxes	128.3	508.2	636.5
Social insurance taxes	24.1	982.1	1,006.2
Other taxes	226.2	94.1	320.3
Fees, fines and permits	74.5	23.9	98.4
TOTAL TAX REVENUES	\$ 5,413.5	\$ 3,343.4	\$ 8,756.9

Source: Estimates by LAEDC

Madera County

Exhibit 5-26

**Direct Activity of Oil and Gas Industry
Madera County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	61	\$ 0.5
213111	Drilling oil and gas wells	19	0.8
213112	Support activities for oil and gas operations	1	0.0
2212	Natural gas distribution	77	10.5
23712	Oil and gas pipeline construction	1	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	63	4.0
447	Gasoline stations	236	27.7
45431	Fuel dealers	47	0.6
486	Pipeline transportation	0	0.1
TOTAL DIRECT ACTIVITY		505	\$ 44.2

Exhibit 5-27

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Madera County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	505	\$ 44.2	\$ 82.1	\$ 118.6
Indirect	78	2.8	6.2	10.7
Induced	166	6.3	12.5	21.2
TOTAL CONTRIBUTION	748	\$ 53.4	\$ 100.9	\$ 150.5
<i>Percent of Total CA Contribution</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.2%</i>	<i>1.6%</i>	<i>1.9%</i>	<i>1.6%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 51.7	\$ 16.2	\$ 67.9	
Property taxes	7.3	-	7.3	
Personal income taxes	1.6	4.3	5.9	
Corporate profits taxes	0.5	2.0	2.5	
Social insurance taxes	0.2	4.3	4.4	
Other taxes	1.6	0.5	2.1	
Fees, fines and permits	0.4	0.1	0.6	
TOTAL TAX REVENUES	\$ 63.4	\$ 27.3	\$ 90.7	

Source: Estimates by LAEDC

Marin County

Exhibit 5-28**Direct Activity of Oil and Gas Industry
Marin County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	366	\$ 50.0
213111	Drilling oil and gas wells	45	6.1
213112	Support activities for oil and gas operations	24	1.5
2212	Natural gas distribution	310	35.1
23712	Oil and gas pipeline construction	1	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	1	0.1
447	Gasoline stations	320	64.8
45431	Fuel dealers	3	0.1
486	Pipeline transportation	2	0.2
TOTAL DIRECT ACTIVITY		1,072	\$ 158.0

Exhibit 5-29**Total Economic and Fiscal Contribution of Oil and Gas Industry
Marin County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,072	\$ 158.0	\$ 282.2	\$ 396.3
Indirect	181	10.9	17.5	28.6
Induced	535	26.4	45.6	71.9
TOTAL CONTRIBUTION	1,788	\$ 195.3	\$ 345.2	\$ 496.8
<i>Percent of Total CA Contribution</i>	<i>0.5%</i>	<i>0.6%</i>	<i>0.5%</i>	<i>0.3%</i>
<i>Percent of County Total</i>	<i>0.9%</i>	<i>1.7%</i>	<i>1.9%</i>	<i>1.7%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 99.4	\$ 23.1	\$ 122.5
Property taxes	24.3	-	24.3
Personal income taxes	6.8	18.3	25.2
Corporate profits taxes	1.0	4.0	5.0
Social insurance taxes	0.2	13.6	13.8
Other taxes	5.3	1.2	6.5
Fees, fines and permits	1.6	0.3	1.9
TOTAL TAX REVENUES	\$ 138.7	\$ 60.5	\$ 199.2

Source: Estimates by LAEDC

Mendocino County

Exhibit 5-30

**Direct Activity of Oil and Gas Industry
Mendocino County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	66	\$ 0.8
213111	Drilling oil and gas wells	8	0.1
213112	Support activities for oil and gas operations	1	0.0
2212	Natural gas distribution	168	25.5
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	94	4.4
447	Gasoline stations	250	29.6
45431	Fuel dealers	43	0.6
486	Pipeline transportation	1	0.2
TOTAL DIRECT ACTIVITY		630	\$ 61.3

Exhibit 5-31

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Mendocino County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	630	\$ 61.3	\$ 125.1	\$ 179.8
Indirect	136	4.1	9.4	17.0
Induced	300	9.4	19.6	33.4
TOTAL CONTRIBUTION	1,067	\$ 74.8	\$ 154.1	\$ 230.2
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>2.2%</i>	<i>3.9%</i>	<i>4.6%</i>	<i>3.9%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 42.8	\$ 12.6	\$ 55.4	
Property taxes	11.1	-	11.1	
Personal income taxes	2.2	5.7	7.9	
Corporate profits taxes	0.8	3.0	3.8	
Social insurance taxes	0.3	7.1	7.4	
Other taxes	2.4	1.2	3.6	
Fees, fines and permits	0.6	0.3	0.9	
TOTAL TAX REVENUES	\$ 60.2	\$ 30.0	\$ 90.2	

Source: Estimates by LAEDC

Merced County

Exhibit 5-32

Direct Activity of Oil and Gas Industry Merced County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	101	\$ 0.1
213111	Drilling oil and gas wells	12	0.0
213112	Support activities for oil and gas operations	-	-
2212	Natural gas distribution	16	2.7
23712	Oil and gas pipeline construction	2	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	67	3.7
447	Gasoline stations	652	44.4
45431	Fuel dealers	43	0.5
486	Pipeline transportation	-	-
TOTAL DIRECT ACTIVITY		893	\$ 51.5

Exhibit 5-33

Total Economic and Fiscal Contribution of Oil and Gas Industry Merced County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	893	\$ 51.5	\$ 78.9	\$ 120.2
Indirect	152	5.3	11.6	19.8
Induced	213	7.5	15.2	25.2
TOTAL CONTRIBUTION	1,258	\$ 64.4	\$ 105.7	\$ 165.3
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.3%</i>	<i>1.2%</i>	<i>1.3%</i>	<i>1.0%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 83.4	\$ 28.3	\$ 111.7
Property taxes	7.8	-	7.8
Personal income taxes	2.1	5.4	7.5
Corporate profits taxes	0.4	1.5	1.8
Social insurance taxes	0.2	5.0	5.3
Other taxes	1.7	0.5	2.2
Fees, fines and permits	0.5	0.1	0.7
TOTAL TAX REVENUES	\$ 96.1	\$ 40.9	\$ 137.0

Source: Estimates by LAEDC

Monterey County

Exhibit 5-34

**Direct Activity of Oil and Gas Industry
Monterey County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	190	\$ 18.4
213111	Drilling oil and gas wells	23	2.2
213112	Support activities for oil and gas operations	126	9.7
2212	Natural gas distribution	35	4.7
23712	Oil and gas pipeline construction	2	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	117	13.0
447	Gasoline stations	721	67.6
45431	Fuel dealers	19	0.3
486	Pipeline transportation	0	0.0
TOTAL DIRECT ACTIVITY		1,233	\$ 116.0

Exhibit 5-35

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Monterey County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,233	\$ 116.0	\$ 169.4	\$ 237.3
Indirect	209	9.7	18.8	30.7
Induced	499	21.1	38.4	61.4
TOTAL CONTRIBUTION	1,941	\$ 146.8	\$ 226.6	\$ 329.4
<i>Percent of Total CA Contribution</i>	<i>0.5%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>0.8%</i>	<i>1.1%</i>	<i>1.1%</i>	<i>1.1%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 116.2	\$ 35.1	\$ 151.3	
Property taxes	12.7	-	12.7	
Personal income taxes	4.6	12.0	16.6	
Corporate profits taxes	0.8	3.2	4.0	
Social insurance taxes	0.4	12.0	12.4	
Other taxes	2.8	1.0	3.8	
Fees, fines and permits	1.0	0.3	1.3	
TOTAL TAX REVENUES	\$ 138.6	\$ 63.6	\$ 202.2	

Source: Estimates by LAEDC

Napa County

Exhibit 5-36

**Direct Activity of Oil and Gas Industry
Napa County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	78	\$ 3.9
213111	Drilling oil and gas wells	10	0.5
213112	Support activities for oil and gas operations	1	0.1
2212	Natural gas distribution	77	9.4
23712	Oil and gas pipeline construction	53	3.8
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	12	1.1
447	Gasoline stations	226	31.1
45431	Fuel dealers	6	0.1
486	Pipeline transportation	0	0.1
TOTAL DIRECT ACTIVITY		464	\$ 49.9

Exhibit 5-37

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Napa County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	464	\$ 49.9	\$ 82.7	\$ 119.3
Indirect	81	3.5	6.4	10.3
Induced	200	8.5	15.2	23.8
TOTAL CONTRIBUTION	745	\$ 61.9	\$ 104.2	\$ 153.5
<i>Percent of Total CA Contribution</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>0.7%</i>	<i>1.1%</i>	<i>1.2%</i>	<i>1.0%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 46.7	\$ 13.5	\$ 60.2	
Property taxes	6.4	-	6.4	
Personal income taxes	2.0	5.2	7.2	
Corporate profits taxes	0.4	1.7	2.1	
Social insurance taxes	0.1	4.4	4.5	
Other taxes	1.4	0.6	2.0	
Fees, fines and permits	0.5	0.2	0.6	
TOTAL TAX REVENUES	\$ 57.5	\$ 25.6	\$ 83.1	

Source: Estimates by LAEDC

Orange County

Exhibit 5-38

**Direct Activity of Oil and Gas Industry
Orange County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	2,371	\$ 240.1
213111	Drilling oil and gas wells	392	34.6
213112	Support activities for oil and gas operations	283	24.5
2212	Natural gas distribution	875	176.0
23712	Oil and gas pipeline construction	2,190	187.7
32411	Petroleum refineries	266	99.0
324191	Petroleum lubricating oil and grease mfg	24	2.5
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	1,099	83.3
4247	Petroleum and petroleum prods wholesalers	379	35.0
447	Gasoline stations	4,958	333.6
45431	Fuel dealers	407	10.4
486	Pipeline transportation	298	413.9
TOTAL DIRECT ACTIVITY		13,543	\$ 1,640.7

Exhibit 5-39

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Orange County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	13,543	\$ 1,640.7	\$ 2,523.4	\$ 6,186.6
Indirect	4,867	305.3	464.5	759.1
Induced	9,776	485.9	816.0	1,304.5
TOTAL CONTRIBUTION	28,186	\$ 2,431.9	\$ 3,803.9	\$ 8,250.3
<i>Percent of Total CA Contribution</i>	<i>7.5%</i>	<i>7.4%</i>	<i>6.0%</i>	<i>4.3%</i>
<i>Percent of County Total</i>	<i>1.4%</i>	<i>2.0%</i>	<i>1.9%</i>	<i>2.5%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 1,075.9	\$ 295.8	\$ 1,371.6
Property taxes	170.3	-	170.3
Personal income taxes	78.4	208.3	286.7
Corporate profits taxes	16.3	64.7	81.1
Social insurance taxes	3.3	200.9	204.2
Other taxes	38.5	15.5	54.0
Fees, fines and permits	17.1	3.9	21.0
TOTAL TAX REVENUES	\$ 1,399.8	\$ 789.1	\$ 2,189.0

Source: Estimates by LAEDC

Placer County

Exhibit 5-40
**Direct Activity of Oil and Gas Industry
Placer County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	182	\$ 10.1
213111	Drilling oil and gas wells	22	1.2
213112	Support activities for oil and gas operations	39	2.0
2212	Natural gas distribution	30	4.4
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	10	1.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	114	8.9
447	Gasoline stations	696	85.2
45431	Fuel dealers	59	1.7
486	Pipeline transportation	37	4.7
TOTAL DIRECT ACTIVITY		1,187	\$ 119.7

Exhibit 5-41
**Total Economic and Fiscal Contribution of Oil and Gas Industry
Placer County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,187	\$ 119.7	\$ 178.9	\$ 326.9
Indirect	269	14.1	24.7	40.9
Induced	689	30.7	54.7	89.1
TOTAL CONTRIBUTION	2,146	\$ 164.5	\$ 258.3	\$ 456.9
<i>Percent of Total CA Contribution</i>	<i>0.6%</i>	<i>0.5%</i>	<i>0.4%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>1.1%</i>	<i>1.6%</i>	<i>1.5%</i>	<i>1.6%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 139.7	\$ 40.6	\$ 180.3	
Property taxes	13.9	-	13.9	
Personal income taxes	5.4	14.3	19.7	
Corporate profits taxes	1.0	4.1	5.1	
Social insurance taxes	0.2	13.1	17.4	
Other taxes	3.1	1.0	4.1	
Fees, fines and permits	1.2	0.3	1.5	
TOTAL TAX REVENUES	\$ 164.6	\$ 73.3	\$ 237.9	

Source: Estimates by LAEDC

Riverside County

Exhibit 5-42

**Direct Activity of Oil and Gas Industry
Riverside County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	148	\$ 16.4
213111	Drilling oil and gas wells	54	3.9
213112	Support activities for oil and gas operations	71	3.1
2212	Natural gas distribution	1,359	144.4
23712	Oil and gas pipeline construction	24	1.4
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	182	19.4
32511	Petrochemical manufacturing	3	0.2
333132	Oil and gas field machinery and eqmt mfg	5	0.5
4247	Petroleum and petroleum prods wholesalers	281	16.7
447	Gasoline stations	3,314	187.4
45431	Fuel dealers	95	1.4
486	Pipeline transportation	25	154.2
TOTAL DIRECT ACTIVITY		5,562	\$ 549.2

Exhibit 5-43

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Riverside County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	5,562	\$ 549.2	\$ 998.4	\$ 1,611.7
Indirect	1,395	50.7	99.1	172.7
Induced	3,148	109.1	212.9	359.4
TOTAL CONTRIBUTION	10,105	\$ 709.1	\$ 1,310.4	\$ 2,143.8
<i>Percent of Total CA Contribution</i>	<i>2.7%</i>	<i>2.2%</i>	<i>2.1%</i>	<i>1.1%</i>
<i>Percent of County Total</i>	<i>1.1%</i>	<i>1.8%</i>	<i>1.9%</i>	<i>1.8%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 704.3	\$ 201.4	\$ 905.6	
Property taxes	85.0	-	85.0	
Personal income taxes	21.1	55.5	76.6	
Corporate profits taxes	6.7	26.5	33.2	
Social insurance taxes	2.1	60.1	62.2	
Other taxes	18.4	6.8	25.3	
Fees, fines and permits	5.3	1.7	7.0	
TOTAL TAX REVENUES	\$ 842.8	\$ 352.2	\$ 1,195.0	

Source: Estimates by LAEDC

Sacramento County

Exhibit 5-44

**Direct Activity of Oil and Gas Industry
Sacramento County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	334	\$ 18.3
213111	Drilling oil and gas wells	114	4.4
213112	Support activities for oil and gas operations	25	1.2
2212	Natural gas distribution	213	36.6
23712	Oil and gas pipeline construction	32	2.2
32411	Petroleum refineries	6	2.3
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	364	26.2
447	Gasoline stations	2,098	149.1
45431	Fuel dealers	57	27.4
486	Pipeline transportation	460	221.0
TOTAL DIRECT ACTIVITY		3,704	\$ 488.6

Exhibit 5-45

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Sacramento County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	3,704	\$ 488.6	\$ 672.6	\$ 966.3
Indirect	1,001	52.8	86.1	143.4
Induced	2,550	114.4	201.5	332.0
TOTAL CONTRIBUTION	7,255	\$ 655.8	\$ 960.2	\$ 1,441.7
<i>Percent of Total CA Contribution</i>	<i>1.9%</i>	<i>2.0%</i>	<i>1.5%</i>	<i>0.8%</i>
<i>Percent of County Total</i>	<i>0.9%</i>	<i>1.3%</i>	<i>1.3%</i>	<i>1.3%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 424.5	\$ 117.8	\$ 542.4
Property taxes	49.6	-	49.6
Personal income taxes	19.0	50.0	69.0
Corporate profits taxes	3.1	12.3	15.4
Social insurance taxes	2.9	46.6	49.5
Other taxes	11.0	3.6	14.6
Fees, fines and permits	4.3	0.9	5.2
TOTAL TAX REVENUES	\$ 514.4	\$ 231.2	\$ 745.6

Source: Estimates by LAEDC

San Bernardino County

Exhibit 5-46

**Direct Activity of Oil and Gas Industry
San Bernardino County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	300	\$ 2.8
213111	Drilling oil and gas wells	50	1.3
213112	Support activities for oil and gas operations	59	3.8
2212	Natural gas distribution	3,224	384.7
23712	Oil and gas pipeline construction	531	33.9
32411	Petroleum refineries	33	3.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	6	0.5
4247	Petroleum and petroleum prods wholesalers	310	19.1
447	Gasoline stations	4,023	180.5
45431	Fuel dealers	132	2.5
486	Pipeline transportation	218	220.5
TOTAL DIRECT ACTIVITY		8,886	\$ 853.2

Exhibit 5-47

**Total Economic and Fiscal Contribution of Oil and Gas Industry
San Bernardino County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	8,886	\$ 853.2	\$ 1,856.2	\$ 2,968.2
Indirect	1,954	76.0	137.3	229.4
Induced	4,621	170.1	316.0	519.7
TOTAL CONTRIBUTION	15,461	\$ 1,099.3	\$ 2,309.5	\$ 3,717.4
Percent of Total CA Contribution	4.1%	3.3%	3.6%	1.9%
Percent of County Total	1.7%	2.6%	3.3%	3.0%

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 818.7	\$ 235.4	\$ 1,054.2
Property taxes	167.8	-	167.8
Personal income taxes	34.3	90.1	124.4
Corporate profits taxes	13.5	53.4	66.8
Social insurance taxes	3.5	104.5	107.9
Other taxes	36.1	16.0	52.1
Fees, fines and permits	9.2	4.1	13.2
TOTAL TAX REVENUES	\$ 1,083.1	\$ 503.4	\$ 1,586.5

Source: Estimates by LAEDC

San Diego County

Exhibit 5-48

Direct Activity of Oil and Gas Industry San Diego County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	1,695	\$ 54.4
213111	Drilling oil and gas wells	229	7.1
213112	Support activities for oil and gas operations	190	7.5
2212	Natural gas distribution	6,335	1,055.4
23712	Oil and gas pipeline construction	29	2.1
32411	Petroleum refineries	12	3.5
324191	Petroleum lubricating oil and grease mfg	35	2.9
32511	Petrochemical manufacturing	3	0.3
333132	Oil and gas field machinery and eqmt mfg	18	1.6
4247	Petroleum and petroleum prods wholesalers	620	50.8
447	Gasoline stations	5,189	289.6
45431	Fuel dealers	174	4.2
486	Pipeline transportation	131	13.6
TOTAL DIRECT ACTIVITY		14,660	\$ 1,493.0

Exhibit 5-49

Total Economic and Fiscal Contribution of Oil and Gas Industry San Diego County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	14,660	\$ 1,493.0	\$ 3,477.5	\$ 5,224.6
Indirect	3,777	208.9	337.4	551.8
Induced	8,369	377.4	656.8	1,074.9
TOTAL CONTRIBUTION	26,806	\$ 2,079.3	\$ 4,471.7	\$ 6,851.3
<i>Percent of Total CA Contribution</i>	<i>7.1%</i>	<i>6.3%</i>	<i>7.0%</i>	<i>3.6%</i>
<i>Percent of County Total</i>	<i>1.4%</i>	<i>1.7%</i>	<i>2.3%</i>	<i>2.2%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 1,242.1	\$ 312.3	\$ 1,554.3
Property taxes	344.1	-	344.1
Personal income taxes	61.3	162.2	223.4
Corporate profits taxes	26.5	104.8	131.3
Social insurance taxes	5.3	210.4	215.7
Other taxes	73.7	26.1	99.8
Fees, fines and permits	17.1	6.6	23.7
TOTAL TAX REVENUES	\$ 1,769.9	\$ 822.4	\$ 2,592.3

Source: Estimates by LAEDC

San Francisco County

Exhibit 5-50

Direct Activity of Oil and Gas Industry San Francisco County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	510	\$ 50.0
213111	Drilling oil and gas wells	62	6.1
213112	Support activities for oil and gas operations	48	3.0
2212	Natural gas distribution	4,086	908.6
23712	Oil and gas pipeline construction	11	1.1
32411	Petroleum refineries	45	17.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	53	5.7
447	Gasoline stations	924	92.2
45431	Fuel dealers	-	-
486	Pipeline transportation	36	6.1
TOTAL DIRECT ACTIVITY		5,776	\$ 1,090.4

Exhibit 5-51

Total Economic and Fiscal Contribution of Oil and Gas Industry San Francisco County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	5,776	\$ 1,090.4	\$ 2,265.8	\$ 3,477.1
Indirect	1,407	143.8	194.1	278.6
Induced	2,742	184.5	290.2	428.1
TOTAL CONTRIBUTION	9,926	\$ 1,418.8	\$ 2,750.1	\$ 4,183.7
<i>Percent of Total CA Contribution</i>	<i>2.6%</i>	<i>4.3%</i>	<i>4.3%</i>	<i>2.2%</i>
<i>Percent of County Total</i>	<i>1.2%</i>	<i>1.8%</i>	<i>2.6%</i>	<i>2.7%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 320.9	\$ 58.4	\$ 379.3	
Property taxes	187.0	-	187.0	
Personal income taxes	32.1	85.7	117.7	
Corporate profits taxes	15.1	59.6	74.7	
Social insurance taxes	3.9	130.7	134.6	
Other taxes	40.1	12.5	52.5	
Fees, fines and permits	9.0	3.2	12.2	
TOTAL TAX REVENUES	\$ 608.0	\$ 350.0	\$ 958.0	

Source: Estimates by LAEDC

San Joaquin County

Exhibit 5-52

**Direct Activity of Oil and Gas Industry
San Joaquin County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	166	\$ 6.3
213111	Drilling oil and gas wells	27	0.9
213112	Support activities for oil and gas operations	16	0.4
2212	Natural gas distribution	356	42.5
23712	Oil and gas pipeline construction	17	1.1
32411	Petroleum refineries	9	1.0
324191	Petroleum lubricating oil and grease mfg	2	0.1
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	232	15.3
447	Gasoline stations	1,304	84.9
45431	Fuel dealers	115	1.9
486	Pipeline transportation	60	6.7
TOTAL DIRECT ACTIVITY		2,304	\$ 161.2

Exhibit 5-53

**Total Economic and Fiscal Contribution of Oil and Gas Industry
San Joaquin County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	2,304	\$ 161.2	\$ 325.6	\$ 555.4
Indirect	493	19.3	38.1	62.5
Induced	834	31.8	61.0	98.7
TOTAL CONTRIBUTION	3,630	\$ 212.4	\$ 424.7	\$ 716.6
<i>Percent of Total CA Contribution</i>	<i>1.0%</i>	<i>0.6%</i>	<i>0.7%</i>	<i>0.4%</i>
<i>Percent of County Total</i>	<i>1.3%</i>	<i>1.5%</i>	<i>1.8%</i>	<i>1.7%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 259.7	\$ 80.9	\$ 340.6
Property taxes	30.7	-	30.7
Personal income taxes	6.5	17.1	23.6
Corporate profits taxes	2.3	9.1	11.4
Social insurance taxes	0.7	20.0	20.7
Other taxes	6.6	3.0	9.6
Fees, fines and permits	1.7	0.8	2.5
TOTAL TAX REVENUES	\$ 308.3	\$ 130.9	\$ 439.2

Source: Estimates by LAEDC

San Luis Obispo County

Exhibit 5-54

**Direct Activity of Oil and Gas Industry
San Luis Obispo County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	227	\$ 9.8
213111	Drilling oil and gas wells	53	2.5
213112	Support activities for oil and gas operations	35	2.3
2212	Natural gas distribution	260	30.9
23712	Oil and gas pipeline construction	354	21.8
32411	Petroleum refineries	114	48.3
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	126	11.6
4247	Petroleum and petroleum prods wholesalers	86	4.9
447	Gasoline stations	564	44.0
45431	Fuel dealers	65	1.0
486	Pipeline transportation	23	1.7
TOTAL DIRECT ACTIVITY		1,906	\$ 178.7

Exhibit 5-55

**Total Economic and Fiscal Contribution of Oil and Gas Industry
San Luis Obispo County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,906	\$ 178.7	\$ 390.2	\$ 1,556.0
Indirect	806	35.3	58.0	105.9
Induced	992	36.3	69.9	113.4
TOTAL CONTRIBUTION	3,704	\$ 250.2	\$ 518.1	\$ 1,775.3
Percent of Total CA Contribution	1.0%	0.8%	0.8%	0.9%
Percent of County Total	2.3%	3.3%	3.8%	7.6%

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 112.0	\$ 32.4	\$ 144.4
Property taxes	26.4	-	26.4
Personal income taxes	7.0	18.6	25.6
Corporate profits taxes	3.4	13.7	17.1
Social insurance taxes	1.0	23.3	24.3
Other taxes	5.8	3.0	8.7
Fees, fines and permits	1.7	0.8	2.5
TOTAL TAX REVENUES	\$ 157.4	\$ 91.7	\$ 249.0

Source: Estimates by LAEDC

San Mateo County

Exhibit 5-56

**Direct Activity of Oil and Gas Industry
San Mateo County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	437	\$ 12.8
213111	Drilling oil and gas wells	53	1.6
213112	Support activities for oil and gas operations	7	0.2
2212	Natural gas distribution	126	19.4
23712	Oil and gas pipeline construction	10	1.0
32411	Petroleum refineries	18	4.6
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	28	3.2
447	Gasoline stations	1,288	97.0
45431	Fuel dealers	12	0.5
486	Pipeline transportation	9	1.1
TOTAL DIRECT ACTIVITY		1,990	\$ 141.2

Exhibit 5-57

**Total Economic and Fiscal Contribution of Oil and Gas Industry
San Mateo County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,990	\$ 141.2	\$ 237.5	\$ 513.4
Indirect	266	20.3	32.3	48.8
Induced	425	23.1	39.1	59.8
TOTAL CONTRIBUTION	2,681	\$ 184.7	\$ 308.8	\$ 622.0
<i>Percent of Total CA Contribution</i>	<i>0.7%</i>	<i>0.6%</i>	<i>0.5%</i>	<i>0.3%</i>
<i>Percent of County Total</i>	<i>0.5%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.5%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 235.8	\$ 62.1	\$ 297.8
Property taxes	23.3	-	23.3
Personal income taxes	5.5	14.8	20.3
Corporate profits taxes	1.1	4.5	5.6
Social insurance taxes	0.1	13.2	13.3
Other taxes	5.1	1.6	6.6
Fees, fines and permits	1.4	0.4	1.8
TOTAL TAX REVENUES	\$ 272.3	\$ 96.4	\$ 368.7

Source: Estimates by LAEDC

Santa Barbara County

Exhibit 5-58

**Direct Activity of Oil and Gas Industry
Santa Barbara County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	641	\$ 170.7
213111	Drilling oil and gas wells	355	50.6
213112	Support activities for oil and gas operations	431	42.8
2212	Natural gas distribution	283	31.6
23712	Oil and gas pipeline construction	4	0.3
32411	Petroleum refineries	56	7.6
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	43	2.4
4247	Petroleum and petroleum prods wholesalers	26	2.0
447	Gasoline stations	868	86.5
45431	Fuel dealers	38	0.6
486	Pipeline transportation	12	1.1
TOTAL DIRECT ACTIVITY		2,756	\$ 396.2

Exhibit 5-59

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Santa Barbara County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	2,756	\$ 396.2	\$ 627.5	\$ 1,333.9
Indirect	582	31.2	49.3	85.4
Induced	1,797	79.2	136.5	220.2
TOTAL CONTRIBUTION	5,135	\$ 506.6	\$ 813.3	\$ 1,639.4
<i>Percent of Total CA Contribution</i>	<i>1.4%</i>	<i>1.5%</i>	<i>1.3%</i>	<i>0.9%</i>
<i>Percent of County Total</i>	<i>1.9%</i>	<i>3.4%</i>	<i>3.5%</i>	<i>4.2%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 158.3	\$ 39.7	\$ 198.0	
Property taxes	41.2	-	41.2	
Personal income taxes	14.7	38.9	53.6	
Corporate profits taxes	3.1	12.3	15.4	
Social insurance taxes	1.1	43.9	45.0	
Other taxes	9.1	2.8	11.9	
Fees, fines and permits	3.4	0.7	4.1	
TOTAL TAX REVENUES	\$ 230.9	\$ 138.3	\$ 369.2	

Source: Estimates by LAEDC

Santa Clara County

Exhibit 5-60

Direct Activity of Oil and Gas Industry Santa Clara County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	355	\$ 19.7
213111	Drilling oil and gas wells	69	5.0
213112	Support activities for oil and gas operations	145	8.2
2212	Natural gas distribution	166	26.5
23712	Oil and gas pipeline construction	68	6.2
32411	Petroleum refineries	16	2.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	15	1.4
4247	Petroleum and petroleum prods wholesalers	338	46.4
447	Gasoline stations	2,338	122.4
45431	Fuel dealers	32	4.1
486	Pipeline transportation	57	7.3
TOTAL DIRECT ACTIVITY		3,600	\$ 349.6

Exhibit 5-61

Total Economic and Fiscal Contribution of Oil and Gas Industry Santa Clara County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	3,600	\$ 249.6	\$ 408.6	\$ 744.9
Indirect	573	43.0	71.6	108.8
Induced	875	49.1	80.2	122.4
TOTAL CONTRIBUTION	5,048	\$ 341.8	\$ 560.4	\$ 976.1
<i>Percent of Total CA Contribution</i>	<i>1.3%</i>	<i>1.0%</i>	<i>0.9%</i>	<i>0.5%</i>
<i>Percent of County Total</i>	<i>0.4%</i>	<i>0.3%</i>	<i>0.3%</i>	<i>0.3%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 513.5	\$ 140.1	\$ 653.6	
Property taxes	35.6	-	35.6	
Personal income taxes	9.7	26.0	35.8	
Corporate profits taxes	2.2	8.9	11.1	
Social insurance taxes	0.3	28.4	28.7	
Other taxes	7.8	2.3	10.1	
Fees, fines and permits	2.4	0.6	3.0	
TOTAL TAX REVENUES	\$ 571.5	\$ 206.4	\$ 777.9	

Source: Estimates by LAEDC

Shasta County

Exhibit 5-62

**Direct Activity of Oil and Gas Industry
Shasta County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	114	\$ 4.7
213111	Drilling oil and gas wells	14	0.6
213112	Support activities for oil and gas operations	2	0.1
2212	Natural gas distribution	239	49.8
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	77	4.0
447	Gasoline stations	512	41.4
45431	Fuel dealers	29	0.6
486	Pipeline transportation	1	0.3
TOTAL DIRECT ACTIVITY		989	\$ 101.5

Exhibit 5-63

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Shasta County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	989	\$ 101.5	\$ 186.0	\$ 265.0
Indirect	235	7.8	16.1	28.4
Induced	632	23.0	42.9	71.9
TOTAL CONTRIBUTION	1,856	\$ 132.4	\$ 245.0	\$ 365.3
<i>Percent of Total CA Contribution</i>	<i>0.5%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>2.1%</i>	<i>3.5%</i>	<i>4.0%</i>	<i>3.5%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 82.4	\$ 23.9	\$ 106.3	
Property taxes	17.0	-	17.0	
Personal income taxes	4.0	10.4	14.4	
Corporate profits taxes	1.1	4.5	5.7	
Social insurance taxes	0.5	13.1	13.5	
Other taxes	3.7	1.5	5.1	
Fees, fines and permits	1.0	0.4	1.4	
TOTAL TAX REVENUES	\$ 109.6	\$ 53.7	\$ 163.4	

Source: Estimates by LAEDC

Solano County

Exhibit 5-64

Direct Activity of Oil and Gas Industry Solano County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	113	\$ 9.3
213111	Drilling oil and gas wells	209	14.1
213112	Support activities for oil and gas operations	18	1.1
2212	Natural gas distribution	567	101.0
23712	Oil and gas pipeline construction	393	35.0
32411	Petroleum refineries	512	132.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	94	6.9
447	Gasoline stations	884	43.4
45431	Fuel dealers	12	0.2
486	Pipeline transportation	40	3.6
TOTAL DIRECT ACTIVITY		2,842	\$ 347.2

Exhibit 5-65

Total Economic and Fiscal Contribution of Oil and Gas Industry Solano County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	2,842	\$ 347.2	\$ 958.8	\$ 5,525.2
Indirect	1,255	66.9	98.7	180.6
Induced	1,615	62.3	122.2	192.9
TOTAL CONTRIBUTION	5,711	\$ 476.4	\$ 1,179.7	\$ 5,898.7
<i>Percent of Total CA Contribution</i>	<i>1.5%</i>	<i>1.4%</i>	<i>1.9%</i>	<i>3.1%</i>
<i>Percent of County Total</i>	<i>3.3%</i>	<i>4.6%</i>	<i>6.2%</i>	<i>16.6%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 199.3	\$ 51.9	\$ 251.2
Property taxes	52.2	-	52.2
Personal income taxes	14.8	39.0	53.8
Corporate profits taxes	10.1	40.2	50.3
Social insurance taxes	1.7	50.4	52.0
Other taxes	11.4	4.0	15.4
Fees, fines and permits	3.6	1.0	4.6
TOTAL TAX REVENUES	\$ 293.1	\$ 186.5	\$ 479.6

Source: Estimates by LAEDC

Sonoma County

Exhibit 5-66

**Direct Activity of Oil and Gas Industry
Sonoma County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	353	\$ 11.8
213111	Drilling oil and gas wells	43	1.4
213112	Support activities for oil and gas operations	6	0.2
2212	Natural gas distribution	64	8.3
23712	Oil and gas pipeline construction	54	3.6
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	113	8.2
447	Gasoline stations	859	50.9
45431	Fuel dealers	83	2.1
486	Pipeline transportation	0	0.0
TOTAL DIRECT ACTIVITY		1,576	\$ 86.6

Exhibit 5-67

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Sonoma County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,576	\$ 86.6	\$ 166.2	\$ 266.4
Indirect	310	14.2	26.6	43.7
Induced	515	20.8	38.0	62.4
TOTAL CONTRIBUTION	2,401	\$ 121.6	\$ 230.8	\$ 372.6
<i>Percent of Total CA Contribution</i>	<i>0.6%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>0.9%</i>	<i>0.9%</i>	<i>1.0%</i>	<i>0.9%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 148.5	\$ 41.4	\$ 189.8
Property taxes	18.1	-	18.1
Personal income taxes	3.8	9.9	13.7
Corporate profits taxes	1.0	3.9	4.9
Social insurance taxes	0.3	10.9	11.2
Other taxes	3.9	1.5	5.4
Fees, fines and permits	1.0	0.4	1.4
TOTAL TAX REVENUES	\$ 176.5	\$ 68.0	\$ 244.4

Source: Estimates by LAEDC

Stanislaus County

Exhibit 5-68

Direct Activity of Oil and Gas Industry Stanislaus County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	104	\$ 0.8
213111	Drilling oil and gas wells	16	0.1
213112	Support activities for oil and gas operations	2	0.0
2212	Natural gas distribution	125	12.9
23712	Oil and gas pipeline construction	4	0.2
32411	Petroleum refineries	13	3.5
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	288	18.3
447	Gasoline stations	823	43.9
45431	Fuel dealers	57	0.7
486	Pipeline transportation	1	0.1
TOTAL DIRECT ACTIVITY		1,432	\$ 80.8

Exhibit 5-69

Total Economic and Fiscal Contribution of Oil and Gas Industry Stanislaus County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,432	\$ 80.8	\$ 172.9	\$ 367.5
Indirect	345	13.6	26.1	42.8
Induced	455	18.1	33.2	53.1
TOTAL CONTRIBUTION	2,233	\$ 112.4	\$ 232.2	\$ 463.4
<i>Percent of Total CA Contribution</i>	<i>0.6%</i>	<i>0.3%</i>	<i>0.4%</i>	<i>0.2%</i>
<i>Percent of County Total</i>	<i>1.0%</i>	<i>1.0%</i>	<i>1.3%</i>	<i>1.3%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 157.7	\$ 46.9	\$ 204.7	
Property taxes	17.3	-	17.3	
Personal income taxes	3.6	9.5	13.2	
Corporate profits taxes	1.3	5.2	6.5	
Social insurance taxes	0.3	10.7	11.0	
Other taxes	3.7	1.5	5.2	
Fees, fines and permits	1.0	0.4	1.3	
TOTAL TAX REVENUES	\$ 185.1	\$ 74.2	\$ 259.2	

Source: Estimates by LAEDC

Sutter County

Exhibit 5-70

Direct Activity of Oil and Gas Industry Sutter County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	73	\$ 8.8
213111	Drilling oil and gas wells	20	2.1
213112	Support activities for oil and gas operations	47	3.7
2212	Natural gas distribution	-	-
23712	Oil and gas pipeline construction	1	0.0
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	4	0.1
447	Gasoline stations	125	28.0
45431	Fuel dealers	30	0.2
486	Pipeline transportation	-	-
TOTAL DIRECT ACTIVITY		300	\$ 43.0

Exhibit 5-71

Total Economic and Fiscal Contribution of Oil and Gas Industry Sutter County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	300	\$ 43.0	\$ 56.2	\$ 74.7
Indirect	47	1.5	3.4	6.0
Induced	210	6.8	14.2	23.8
TOTAL CONTRIBUTION	557	\$ 51.3	\$ 73.8	\$ 104.6
<i>Percent of Total CA Contribution</i>	<i>0.1%</i>	<i>0.2%</i>	<i>0.1%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.2%</i>	<i>2.7%</i>	<i>2.2%</i>	<i>1.7%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 29.8	\$ 9.0	\$ 38.8	
Property taxes	3.2	-	3.2	
Personal income taxes	1.7	4.5	6.2	
Corporate profits taxes	0.2	1.0	1.2	
Social insurance taxes	0.1	3.9	4.0	
Other taxes	0.7	0.4	1.1	
Fees, fines and permits	0.4	0.1	0.5	
TOTAL TAX REVENUES	\$ 36.2	\$ 18.8	\$ 55.0	

Source: Estimates by LAEDC

Tehama County

Exhibit 5-72

Direct Activity of Oil and Gas Industry Tehama County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	160	\$ 0.0
213111	Drilling oil and gas wells	-	-
213112	Support activities for oil and gas operations	-	-
2212	Natural gas distribution	14	1.8
23712	Oil and gas pipeline construction	1	0.1
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	7	0.3
447	Gasoline stations	318	17.7
45431	Fuel dealers	41	0.5
486	Pipeline transportation	-	-
TOTAL DIRECT ACTIVITY		542	\$ 20.4

Exhibit 5-73

Total Economic and Fiscal Contribution of Oil and Gas Industry Tehama County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	542	\$ 20.4	\$ 40.8	\$ 74.0
Indirect	56	2.1	4.7	8.0
Induced	80	2.6	5.6	9.2
TOTAL CONTRIBUTION	678	\$ 25.1	\$ 51.1	\$ 91.0
<i>Percent of Total CA Contribution</i>	<i>0.2%</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.05%</i>
<i>Percent of County Total</i>	<i>2.8%</i>	<i>2.5%</i>	<i>3.0%</i>	<i>2.9%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 37.2	\$ 14.0	\$ 51.2	
Property taxes	5.9	-	5.9	
Personal income taxes	0.7	1.9	2.6	
Corporate profits taxes	0.2	0.7	0.7	
Social insurance taxes	0.1	2.4	2.4	
Other taxes	1.2	0.5	1.8	
Fees, fines and permits	0.2	0.1	0.4	
TOTAL TAX REVENUES	\$ 45.5	\$ 19.6	\$ 65.1	

Source: Estimates by LAEDC

Tulare County

Exhibit 5-74

**Direct Activity of Oil and Gas Industry
Tulare County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	73	\$ 3.4
213111	Drilling oil and gas wells	22	0.7
213112	Support activities for oil and gas operations	1	0.1
2212	Natural gas distribution	456	61.8
23712	Oil and gas pipeline construction	17	0.9
32411	Petroleum refineries	5	1.1
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	228	15.5
447	Gasoline stations	722	101.1
45431	Fuel dealers	30	0.3
486	Pipeline transportation	3	0.4
TOTAL DIRECT ACTIVITY		1,558	\$ 185.2

Exhibit 5-75

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Tulare County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	1,558	\$ 185.2	\$ 347.2	\$ 524.8
Indirect	347	13.1	25.1	41.9
Induced	757	25.5	53.1	88.0
TOTAL CONTRIBUTION	2,662	\$ 223.8	\$ 425.4	\$ 654.7
<i>Percent of Total CA Contribution</i>	<i>0.7%</i>	<i>0.7%</i>	<i>0.7%</i>	<i>0.3%</i>
<i>Percent of County Total</i>	<i>1.4%</i>	<i>2.4%</i>	<i>2.9%</i>	<i>2.4%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 134.8	\$ 37.7	\$ 172.5	
Property taxes	28.7	-	28.7	
Personal income taxes	7.2	18.8	25.9	
Corporate profits taxes	2.2	8.9	11.1	
Social insurance taxes	0.8	18.5	19.3	
Other taxes	6.2	2.3	8.5	
Fees, fines and permits	1.8	0.6	2.4	
TOTAL TAX REVENUES	\$ 181.8	\$ 86.6	\$ 268.4	

Source: Estimates by LAEDC

Ventura County

Exhibit 5-76

Direct Activity of Oil and Gas Industry Ventura County 2013

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	1,194	\$ 399.8
213111	Drilling oil and gas wells	394	73.4
213112	Support activities for oil and gas operations	344	35.8
2212	Natural gas distribution	877	113.7
23712	Oil and gas pipeline construction	56	3.4
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	162	12.7
4247	Petroleum and petroleum prods wholesalers	133	11.5
447	Gasoline stations	1,110	57.6
45431	Fuel dealers	76	1.4
486	Pipeline transportation	5	0.7
TOTAL DIRECT ACTIVITY		4,351	\$ 710.0

Exhibit 5-77

Total Economic and Fiscal Contribution of Oil and Gas Industry Ventura County 2013

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	4,351	\$ 710.0	\$ 1,121.3	\$ 1,593.8
Indirect	969	48.0	78.2	133.9
Induced	3,594	147.3	270.2	440.5
TOTAL CONTRIBUTION	8,913	\$ 905.3	\$ 1,469.7	\$ 2,168.2
<i>Percent of Total CA Contribution</i>	<i>2.4%</i>	<i>2.7%</i>	<i>2.3%</i>	<i>1.1%</i>
<i>Percent of County Total</i>	<i>2.0%</i>	<i>3.8%</i>	<i>3.7%</i>	<i>3.2%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 298.4	\$ 77.2	\$ 375.6
Property taxes	83.3	-	83.3
Personal income taxes	29.9	79.4	109.3
Corporate profits taxes	6.2	24.4	30.5
Social insurance taxes	1.7	78.9	80.6
Other taxes	18.5	6.2	24.7
Fees, fines and permits	6.8	1.6	8.4
TOTAL TAX REVENUES	\$ 444.8	\$ 267.6	\$ 712.4

Source: Estimates by LAEDC

Yolo County

Exhibit 5-78

**Direct Activity of Oil and Gas Industry
Yolo County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	115	\$ 8.0
213111	Drilling oil and gas wells	28	2.0
213112	Support activities for oil and gas operations	118	7.7
2212	Natural gas distribution	17	2.3
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	3	0.5
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	87	4.2
447	Gasoline stations	348	27.1
45431	Fuel dealers	8	0.1
486	Pipeline transportation	10	1.2
TOTAL DIRECT ACTIVITY		734	\$ 53.1

Exhibit 5-79

**Total Economic and Fiscal Contribution of Oil and Gas Industry
Yolo County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	734	\$ 53.1	\$ 86.9	\$ 133.7
Indirect	116	5.4	10.2	17.2
Induced	175	6.8	13.3	21.5
TOTAL CONTRIBUTION	1,025	\$ 65.3	\$ 110.4	\$ 172.3
<i>Percent of Total CA Contribution</i>	<i>0.3%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>0.8%</i>	<i>0.9%</i>	<i>1.0%</i>	<i>0.9%</i>
FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)	
Sales and excise taxes	\$ 73.0	\$ 23.9	\$ 96.9	
Property taxes	7.3	-	7.3	
Personal income taxes	1.7	4.6	6.4	
Corporate profits taxes	0.4	1.8	2.2	
Social insurance taxes	0.4	4.7	5.0	
Other taxes	1.6	0.7	2.3	
Fees, fines and permits	0.4	0.2	0.6	
TOTAL TAX REVENUES	\$ 84.8	\$ 35.9	\$ 120.7	

Source: Estimates by LAEDC

Yuba County

Exhibit 5-80**Direct Activity of Oil and Gas Industry
Yuba County 2013**

		Employment	Labor Income (\$ millions)
211	Oil and gas extraction	193	\$ 0.3
213111	Drilling oil and gas wells	24	0.0
213112	Support activities for oil and gas operations	15	0.4
2212	Natural gas distribution	29	2.9
23712	Oil and gas pipeline construction	-	-
32411	Petroleum refineries	-	-
324191	Petroleum lubricating oil and grease mfg	-	-
32511	Petrochemical manufacturing	-	-
333132	Oil and gas field machinery and eqmt mfg	-	-
4247	Petroleum and petroleum prods wholesalers	36	1.1
447	Gasoline stations	122	9.4
45431	Fuel dealers	36	0.6
486	Pipeline transportation	0	0.0
TOTAL DIRECT ACTIVITY		455	\$ 14.7

Exhibit 5-81**Total Economic and Fiscal Contribution of Oil and Gas Industry
Yuba County 2013**

ECONOMIC CONTRIBUTION	Employment	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct	455	\$ 14.7	\$ 48.7	\$ 88.3
Indirect	44	1.9	3.5	6.2
Induced	42	1.5	3.2	5.5
TOTAL CONTRIBUTION	541	\$ 18.2	\$ 55.4	\$ 99.9
<i>Percent of Total CA Contribution</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.1%</i>	<i>0.1%</i>
<i>Percent of County Total</i>	<i>1.8%</i>	<i>1.0%</i>	<i>1.8%</i>	<i>2.2%</i>

FISCAL CONTRIBUTION	State and Local (\$ millions)	Federal (\$ millions)	Total Taxes (\$ millions)
Sales and excise taxes	\$ 25.8	\$ 6.7	\$ 32.4
Property taxes	7.1	-	7.1
Personal income taxes	0.5	1.3	1.8
Corporate profits taxes	0.3	1.3	1.6
Social insurance taxes	0.1	1.2	1.3
Other taxes	1.5	0.5	2.0
Fees, fines and permits	0.2	0.1	0.3
TOTAL TAX REVENUES	\$ 35.5	\$ 11.1	\$ 46.6

Source: Estimates by LAEDC

Appendix

Oil and Gas Industries

NAICS 211111: Crude petroleum and natural gas extraction

Establishments in this U.S. industry are primarily engaged in (1) the exploration, development and/or production of petroleum or natural gas from wells in which the hydrocarbons will initially flow or can be produced using normal pumping techniques or (2) the production of crude petroleum from surface shales or tar sands or from reservoirs in which the hydrocarbons are semisolids. Establishments in this industry operate oil and gas wells on their own account or for others on a contract or fee basis.

NAICS 211112: Natural gas liquid extraction

Establishments in this U.S. industry are primarily engaged in the recovery of liquid hydrocarbons from oil and gas field gases. Establishments primarily engaged in sulfur recovery from natural gas are also included.

NAICS 213111: Drilling oil and gas wells

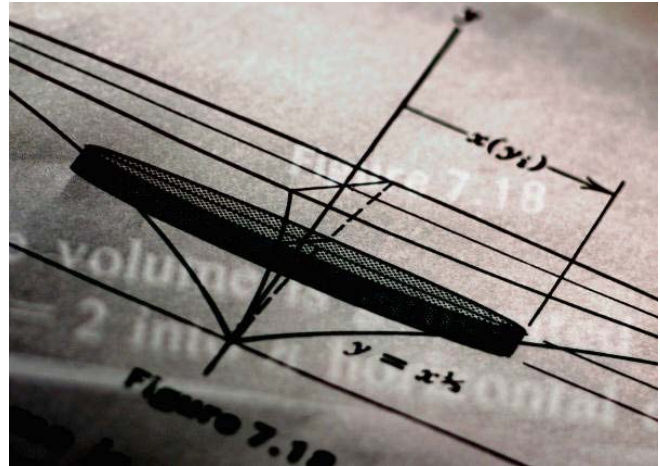
Establishments in this U.S. industry are primarily engaged in drilling oil and gas wells for others on a contract or fee basis. This industry includes contractors that specialize in spudding in, drilling in, redrilling, and directional drilling.

NAICS 213112: Support activities for oil and gas operations

Establishments in this U.S. industry are 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

Establishments in this industry are: primarily engaged in: operating gas distribution systems (e.g., mains, meters); known as gas marketers that buy gas from the well and sell it to a distribution system; known as gas brokers or agents that arrange the sale of gas over gas



distribution systems operated by others; and those primarily engaged in transmitting and distributing gas to final consumers. Only privately owned establishments are included in this report.

NAICS 23712: Oil and gas pipeline and related structures construction

Establishments in this industry include those 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 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 industry.

NAICS 32411: Petroleum refineries

Establishments in this industry are 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

Establishments in this U.S. industry are primarily engaged in blending or compounding refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

NAICS 32511: Petrochemical manufacturing

Establishments in this industry are primarily engaged in manufacturing acyclic (i.e., aliphatic) hydrocarbons such

as ethylene, propylene, and butylenes made from refined petroleum or liquid hydrocarbons and/or manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

NAICS 333132: Oil and gas field machinery and equipment manufacturing

This U.S. industry is comprised of establishments primarily engaged in (1) manufacturing oil and gas field machinery and equipment, such as oil and gas field drilling machinery and equipment; oil and gas field production machinery and equipment; and oil and gas field derricks and (2) manufacturing water well drilling machinery.

NAICS 4247: Petroleum and petroleum products merchant wholesalers

Establishments in this industry group are primarily engaged in the Petroleum Bulk Stations and Terminals industry, with bulk liquid storage facilities primarily engaged in the merchant wholesale distribution of crude, petroleum and petroleum products, including liquefied petroleum gas, or the Petroleum and Petroleum Products Merchant Wholesalers industry, the merchant wholesale distribution of petroleum and petroleum products (except from bulk liquid storage facilities).

NAICS 447: Gasoline stations

Establishments in this subsector retail automotive fuels (e.g., gasoline, diesel fuel, gasohol, alternative fuels) and automotive oils or retail these products in combination with convenience store items. These establishments have specialized equipment for the storage and dispensing of automotive fuels.

NAICS 45431: Fuel dealers

Establishments in this industry are primarily engaged in retailing heating oil, liquefied petroleum (LP) gas, and other fuels via direct selling.

NAICS 486: Pipeline transportation

Industries in this subsector use transmission pipelines to transport products, such as crude oil, natural gas, refined petroleum products, and slurry. Industries are identified based on the products transported (i.e., pipeline transportation of crude oil, natural gas, refined petroleum products, and other products). The Pipeline Transportation of Natural Gas industry 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. ❖

Contribution Analysis Methodology

Economic contribution analysis is used to describe that portion of a region's economy that can be attributed to an existing industry. The primary economic contribution to California's economy of the oil and gas industry is the expenditure of hundreds of millions of dollars towards goods and services from regional vendors. This injection of funds circulates from the initial recipients to the owners and employees of establishments that help supply the goods and services that the industry purchases.

The industry also spends billions of dollars every year for the wages and benefits of its employees and contract workers. These workers, as well as the employees of all the industry's suppliers, spend a portion of their incomes on groceries, rent, vehicle expenses, healthcare, entertainment, and so on. The recirculation of the original expenditures multiplies the initial spending through these indirect and induced effects.

The extent to which the initial expenditures multiply is estimated using economic models that depict the relationships between industries (such as oil production and its suppliers) and among different economic agents (such as industries and their employees).

These models are built upon actual data of expenditure patterns that are reported to the U.S. Bureau of Labor Statistics, the U.S. Census Bureau and the Bureau of Economic Analysis of the U.S. Department of Commerce. Data is regionalized so that it reflects and incorporates local conditions such as prevailing wages rates, expenditure patterns, and resource availability and costs.

The magnitude of the multiplying effect differs from one region to another depending on the extent to which the local region can fill the demand for all rounds of supplying needs. For example, the automobile manufacturing industry has high multipliers in Detroit and Indiana since these regions have deep and wide supplier networks, while the same industry multiplier in Phoenix is quite small. In another example, the jobs multiplier for the construction industry is higher in, say, Arkansas, than in California because the same amount of spending will purchase fewer workers in Los Angeles than in Little Rock.

Multipliers can also differ from year to year as relative material and labor costs change and as the production "recipe" of industries change. For example, the IT

revolution significantly reduced the job multiplier of many industries (such as manufacturing, accounting, architecture and publishing) as computers replaced administrative and production workers.

The metrics used to determine the value of the economic contribution are employment, labor income, value-added and the value of output. *Employment* includes full-time, part-time, permanent and seasonal employees and the self-employed, and is measured on a job-count basis regardless of the number of hours worked. *Labor income* includes all income received by both payroll employees and the self-employed, including wages and benefits such as health insurance and pension plan contributions. *Value-added* is the measure of the contribution to GDP made by the industry, and consists of compensation of employees, taxes on production and gross operating surplus. *Output* is the value of production. For most industries, this is simply the revenues generated through sales; for others, in particular retail industries, output is the value of the services supplied.

Estimates are developed using software and data from IMPLAN Group, LLC which traces inter-industry transactions resulting from an increase in demand in a given region. The economic region of interest is the state of California, and the activity is reported for 2013, the most recent year for which a complete set of data is available. Estimates for labor income and output are expressed in 2013 dollars to maintain consistency with the reported industry activity.

The total estimated economic contribution includes *direct*, *indirect* and *induced* effects. *Direct activity* includes the materials purchased and the employees hired by the industry itself. *Indirect effects* are those which stem from the employment and business revenues motivated by the purchases made by the industry and any of its suppliers. *Induced effects* are those generated by the spending of employees whose wages are sustained by both direct and indirect spending.

Contribution analysis differs from economic impact analysis in that linkages between the component industries are removed so that indirect activity is not double-counted as also part of direct activity.

The correspondence between the identified NAICS and sectors used in IMPLAN are straightforward, with a few exceptions. Several IMPLAN sectors (50, 58, 395, and 407) include activities of NAICS unrelated to the oil and gas industry. Direct activity related to the oil and gas industry for these sectors was based on specific isolated employment estimates. ❖

Workforce Characteristics Methodology

Data for worker characteristics according to industry is not available at the same detailed level as it is for employment. As such, some modifications were made to the industry definition in reporting workers characteristics. Specifically, the following industries from Exhibit 1-1 were excluded from the workforce analysis: 23712, 32511, 333132 and 45431.

The Center for Economic Studies at the U.S. Census Bureau provides several public-use data products derived from existing census, survey, and administrative data. One of these products is the Quarterly Workforce Indicators (QWI), which provides workforce statistics by demography, geography and industry at the sector, subsector and 4-digit industry level.

The QWI is unique in that it reports data at the job-level, obtained from linked employer-employee microdata in the Longitudinal Employer-Household Dynamics (LEHD), a database covering more than 95 percent of U.S. private sector jobs. Additional sources include administrative records on employment by states, Social Security data, Federal tax records and other census and survey data.

Data available through the QWI allows for the analysis of the demographics of a particular labor market or specific industry, as is done in this report for the oil and gas industry. Estimates used to determine employment distributions of worker characteristics are stable full-quarter employment counts, the number of jobs held on both the first and last day of the quarter with the same employer. Quarterly data has been annualized. County level data was aggregated for each sub-region. ❖

Description of NAICS Industry Sectors

The industry sectors used in this report are established by the North American Industry Classification System (NAICS). NAICS divides the economy into twenty sectors, and groups industries within these sectors according to production criteria. Listed below is a short description of each sector as taken from the sourcebook, *North American Industry Classification System*, published by the U.S. Office of Management and Budget (2013).

Agriculture, Forestry, Fishing and Hunting: Activities of this sector are growing crops, raising animals, harvesting timber, and harvesting fish and other animals from farms, ranches, or the animals' natural habitats.

Mining: Activities of this sector are extracting naturally-occurring mineral solids, such as coal and ore; liquid minerals, such as crude petroleum; and gases, such as natural gas; and beneficiating (e.g., crushing, screening, washing and flotation) and other preparation at the mine site, or as part of mining activity.

Utilities: Activities of this sector are generating, transmitting, and/or distributing electricity, gas, steam, and water and removing sewage through a permanent infrastructure of lines, mains, and pipes.

Construction: Activities of this sector are erecting buildings and other structures (including additions); heavy construction other than buildings; and alterations, reconstruction, installation, and maintenance and repairs.

Manufacturing: Activities of this sector are the mechanical, physical, or chemical transformation of material, substances, or components into new products.

Wholesale Trade: Activities of this sector are selling or arranging for the purchase or sale of goods for resale; capital or durable non-consumer goods; and raw and intermediate materials and supplies used in production, and providing services incidental to the sale of the merchandise.

Retail Trade: Activities of this sector are retailing merchandise generally in small quantities to the general public and providing services incidental to the sale of the merchandise.

Transportation and Warehousing: Activities of this sector are providing transportation of passengers and cargo,

warehousing and storing goods, scenic and sightseeing transportation, and supporting these activities.

Information: Activities of this sector are distributing information and cultural products, providing the means to transmit or distribute these products as data or communications, and processing data.

Finance and Insurance: Activities of this sector involve the creation, liquidation, or change of ownership of financial assets (financial transactions) and/or facilitating financial transactions.

Real Estate and Rental and Leasing: Activities of this sector are renting, leasing, or otherwise allowing the use of tangible or intangible assets (except copyrighted works), and providing related services.

Professional, Scientific, and Technical Services: Activities of this sector are performing professional, scientific, and technical services for the operations of other organizations.

Management of Companies and Enterprises: Activities of this sector are the holding of securities of companies and enterprises, for the purpose of owning controlling interest or influencing their management decision, or administering, overseeing, and managing other establishments of the same company or enterprise and normally undertaking the strategic or organizational planning and decision-making of the company or enterprise.

Administrative and Support and Waste Management and Remediation Services: Activities of this sector are performing routine support activities for the day-to-day operations of other organizations, such as: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

Educational Services: Activities of this sector are providing instruction and training in a wide variety of subjects. Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home through correspondence, television, or other means.

Health Care and Social Assistance: Activities of this sector are operating or providing health care and social assistance for individuals.

Arts, Entertainment and Recreation: Activities of this sector are operating facilities or providing services to meet varied cultural, entertainment, and recreational interests of their patrons, such as: (1) producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) preserving and exhibiting objects and sites of historical, cultural, or educational interest; and (3) operating facilities or providing services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests.

Accommodation and Food Services: Activities of this sector are providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption.

Other Services (except Public Administration): Activities of this sector are providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment and machinery repairing, promoting or administering religious activities, grant-making, advocacy, and providing dry-cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services. ❖

Study Authors

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Dr. Cooper leads the Institute for Applied Economics whose work involves research in regional issues such as economic impact studies, regional industry analysis and forecasts, workforce development analysis, and issue studies related to the *L.A. County Strategic Plan for Economic Development*. Her fields of expertise include development economics, environmental economics, regional analysis and urban sustainability.

Prior to joining the LAEDC, Dr. Cooper was a co-founder of a start-up company in Hong Kong concentrating on equity transactions software and computer accessories manufacturing, which expanded production into the special economic zone of Shenzhen, China and distributed products throughout the United States and Asia. With her business partner, she also established the first authorized Apple Computer retailer in China. She has been a lecturer at California State University, Long

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Dr. Cooper is a citizen of the United States and Canada. She earned a Bachelor of Arts in Economics from Carleton University in Ottawa, Canada, and a Ph.D. in Economics from the University of Southern California. With funding from the National Science Foundation, she earned a Graduate Certificate in Environmental Sciences, Policy and Engineering. Her current research includes industry cluster determination and performance in the regional economy, commuting and job allocation patterns, and workforce development issues.

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Ms. Sedgwick joined the LAEDC team in June of 2008 as an Economic Research Assistant for the Kyser Center for Economic Research. In that role she assisted both Economic Research and the Consulting Practice of the LAEDC with data collection and research, managing multiple data sets covering the State of California, Southern California, its counties and their sub-regions. In addition to writing sections of LAEDC's Economic Forecasts, she was responsible for the *Business Scan* containing a collection of Los Angeles County economic indicators; the annual *L.A. Stats*, containing the most frequently requested statistics for Los Angeles and its surrounding counties; and was a regular contributor to the weekly economic newsletter, *e-Edge*.

Before joining the LAEDC, Ms. Sedgwick managed an industrial and steel supply company located in the Inland Empire. There she identified and targeted a diverse customer base, and analyzed product and customer patterns in the local industrial market to successfully increase revenues.

A Southern California native, Ms. Sedgwick received her Bachelor of Arts in Economics from the University of Southern California (USC) with a minor in Architecture. She has been a member of the national and the Los Angeles Chapter of the National Association for Business Economics (NABE) since 2008. ❖



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