

May 2014

# The Role of the Oil and Gas Industry in Alaska's Economy





# ***The Role of the Oil and Gas Industry In Alaska's Economy***

FINAL REPORT

*Prepared for:*  
**Alaska Oil and Gas Association**

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*Juneau • Anchorage*

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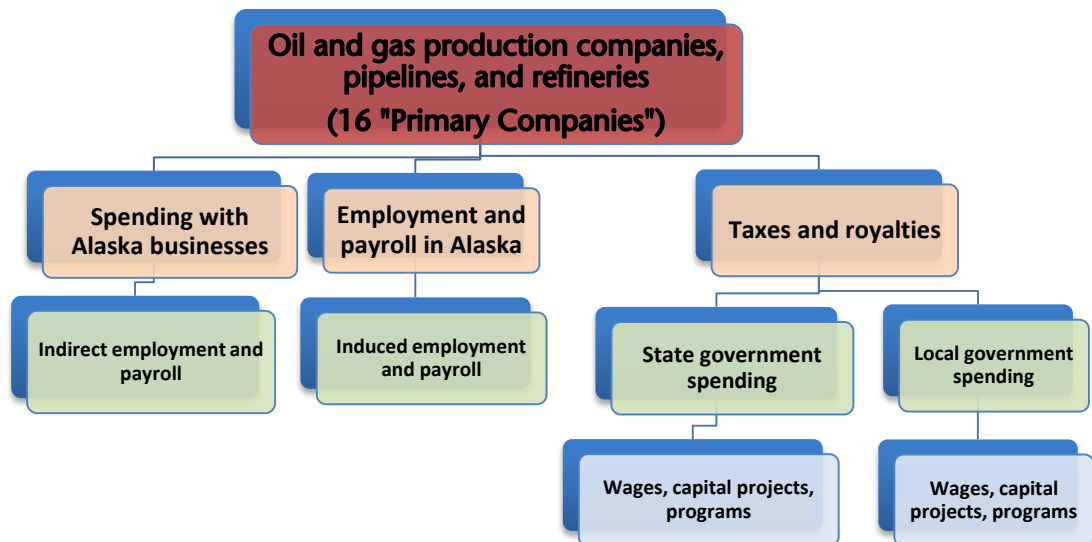
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# Executive Summary

The Alaska Oil and Gas Association (AOGA) contracted with McDowell Group to assess the role of the oil and gas industry in Alaska's private and public sector economy, and in six geographic locations, including Municipality of Anchorage, Fairbanks North Star Borough, Kenai Peninsula Borough, Matanuska-Susitna Borough, North Slope Borough, and City of Valdez. The economic impact analysis conducted for this study was based on detailed expenditure and payroll data provided by 16 "Primary Companies" in Alaska's oil and gas industry (including production and exploration companies, refineries, and pipeline companies).<sup>1</sup> ADOLWD and data sources were also used to analyze the economic impact.

Direct spending by the "Primary Companies" on goods, services and wages for employees in Alaska creates substantial indirect and induced employment and wages for Alaska residents. This effect is often termed the "multiplier effect." The figure below displays how the money flows throughout the Alaska economy.

## Economic impact of Oil and Gas Industry Spending in Alaska's Economy



## Key Statewide Findings

### Oil and Gas Industry-Related Employment and Payroll

- In 2013, the "Primary Companies" employed 5,335 workers, including 4,700 Alaska residents earning \$780 million in wages. Alaska residents represent 88 percent of "Primary Company" hire.
- Including all direct, indirect, and induced employment and wages, oil and gas industry's spending in Alaska accounted for 51,000 jobs and \$3.45 billion in total wages in Alaska's private sector. These estimates do not include nonresident oil and gas industry workers or their wages.

<sup>1</sup> "Primary Companies" include Alyeska Pipeline Service Company, Apache Corporation, BP Exploration (Alaska) Inc., Chevron, ConocoPhillips Alaska, Inc., eni petroleum, ExxonMobil Production Company, Flint Hills Resources, Alaska, Hilcorp, Petro Star Inc., Pioneer Natural Resources Alaska, Inc., Repsol E&P USA Inc., Shell Exploration & Production Company, Statoil, Tesoro Alaska Company, and XTO Energy, Inc.

- State and local spending of taxes and royalties paid by the oil and gas industry directly creates jobs in the public sector and indirectly creates jobs throughout the private sector. Government spending of oil revenue accounted for 60,000 jobs and \$3 billion in wages (direct, indirect and induced) in Alaska's economy in 2013.
- Combining the impacts of "Primary Company" spending in the private sector and payments to the public sector:
  - For each "Primary Company" job, 20 additional jobs are generated in the Alaska economy.
  - For each dollar earned by employees of the "Primary Companies", a total of \$8 in additional wages are generated in Alaska.
  - The industry accounted for 33 percent of all wage and salary employment in Alaska (111,000 jobs out of total of 335,000 jobs) and 38 percent of all wages (\$6.45 billion in wages out of a total of \$17.1 billion).

## Key Local Area Findings

The table below summarizes the effects of Alaska's oil and gas industry private sector spending on six geographic areas, including Municipality of Anchorage, Fairbanks North Star Borough, Kenai Peninsula Borough, Mat-Su Borough, North Slope Borough and the City of Valdez.

**Alaska Resident Employment and Wages in the Oil and Gas Industry, by Local Area, 2013**

	Alaska	Anchorage	Fairbanks North Star Borough	Kenai Peninsula Borough	Mat-Su Borough	North Slope Borough	Valdez	Unattri- buted
<b>Employment</b>								
"Primary Companies"	4,700	2,300	475	930	535	5	300	155
Oil & Gas Support Services	8,400	2,800	750	2,250	2,200	70	155	175
All Other Indirect and Induced	37,900	25,900	2,275	2,820	1,265	1,925	245	3,470
<b>Grand Total</b>	<b>51,000</b>	<b>31,000</b>	<b>3,500</b>	<b>6,000</b>	<b>4,000</b>	<b>2,000</b>	<b>700</b>	<b>3,800</b>
<b>Wages (millions)</b>								
"Primary Companies"	\$780	\$443	\$60	\$135	\$80	\$0.2	\$37	\$25
Oil & Gas Support Services	700	260	60	180	170	3.1	12	15
All Other Indirect and Induced	1,974	1,367	115	115	60	112	16	190
<b>Grand Total (\$millions)</b>	<b>\$3,454</b>	<b>\$2,070</b>	<b>\$235</b>	<b>\$430</b>	<b>\$310</b>	<b>\$115</b>	<b>\$65</b>	<b>\$230</b>

Source: McDowell Group estimates, ADOLWD, and "Primary Companies" data.

# Economic Benefits Related to Oil and Gas Industry Payments of Taxes and Royalties

## State Taxes and Royalties

- The amount of state revenue from Alaska's oil and gas industry is the reason Alaska is the only state in the U.S. that does not have either a state sales tax or personal income tax.
- Since 1959, 88 percent of all state revenue from natural resource development (including seafood, mining, and timber taxes and royalties, and the applicable portion of state corporate income tax) came from oil and gas development.
- In FY2013, the oil and gas industry paid:
  - \$7.4 billion in taxes and royalties to state government, 47 percent of all state revenue (including all taxes, royalties, fees, licenses, permits, fines, forfeitures, federal revenue, and investment revenue).
  - \$6.4 billion in *Unrestricted* General Fund (UGF) revenue, 92 percent of the State's total UGF (unrestricted revenues are available for appropriation by the state legislature, subject to a Governor's veto).
  - \$1 billion in *restricted* revenue, including:
    - \$856 million deposited into the Alaska Permanent Fund and Public School Trust Fund.
    - \$177 million in the Constitutional Budget Reserve Fund.
- In FY2013, the State's operating budget was \$8.5 billion; 56 percent of which was funded by oil and gas industry payments. While all state agencies are supported by oil revenue, oil-revenue-related UGF represented the majority of total operating budgets for:
  - Departments of Corrections (81 percent), Public Safety (80 percent), Education and Early Development (77 percent), Law (62 percent), and Natural Resources (50 percent)
    - 44 percent of all state government agency positions can be attributed to oil-revenue-related UGF.
- In FY2013 the State's capital budget was \$3.1 billion, including \$1.9 billion (60 percent) from oil and gas industry taxes and royalties.
- Several statewide government programs also benefitted from oil-related revenue, including:
  - Alaska Permanent Fund Dividends paid to 631,470 Alaskans totaled \$536 million in 2013. Virtually all of the Fund's principal comes from Alaska's oil and gas production royalties.
  - Approximately \$8 of every \$9 UGF spending on support of K-12 public education comes from oil and gas industry payments to the state. That is, on average, each public school student received approximately \$9,100 in state aid; \$8,170 was oil-revenue-funded.

- Alaska's Medicaid program requires a state match to leverage federal Medicaid dollars. Approximately \$9 of every \$10 of Alaska's state match is related to oil revenue (\$557 million out of \$612 million in total state match) or approximately \$4 of every \$10 spent on Medicaid in Alaska (\$557 million out of \$1.4 billion).
- Approximately \$9 of every \$10 distributed from the Community Revenue Sharing Fund is oil-revenue-related (\$55 million out of \$60 million). This spending affected about 229 municipalities, boroughs, and unincorporated communities throughout Alaska.
- Oil and gas property taxes totaled \$405 million in FY2013, representing 25 percent of all local tax revenue collected in Alaska, and 33 percent of all property tax receipts.

## In Summary

### Economic Impact of the Oil and Gas Industry in Alaska, 2013

	Impacts
"Primary Company" employment in Alaska	5,335
"Primary Company" employment of Alaska residents	4,700
"Primary Company" wages paid to Alaska residents	\$780 million
"Primary Company" spending with Alaska vendors	\$5 billion
Total jobs related to "Primary Company" spending*	51,000
<b><i>Percent of total Alaska private sector wage and salary jobs**</i></b>	<b>20%</b>
Total wages related to "Primary Company" spending	\$3.45 billion
<b><i>Percent of total Alaska private sector wages</i></b>	<b>27%</b>
Jobs related to oil & gas industry taxes and royalties	60,500
Wages related to oil & gas industry taxes and royalties	\$2.98 billion
Total jobs related to Alaska's oil & gas industry	111,500
<b><i>Percent of total Alaska wage and salary jobs</i></b>	<b>33%</b>
Total wages related to Alaska's oil & gas industry	\$6.43 billion
<b><i>Percent of total Alaska wages</i></b>	<b>38%</b>
Total taxes & royalties paid by the oil & gas industry (FY2013)	\$7.4 billion
Oil & gas industry taxes & royalties as % of total Unrestricted General Funds (FY2013)	92%
Oil & gas industry taxes & royalties as % of total state revenues (FY2013)	47%

Source: "Primary Companies" data, McDowell Group estimates, Alaska Department of Revenue, Alaska Department of Labor and Workforce Development.

\*Includes direct, indirect and induced employment.

\*\*Percent of wage and salary jobs as reported by Alaska Department of Labor and Workforce Development.

## Study Scope

The Alaska Oil and Gas Association (AOGA) contracted with McDowell Group to assess the role of the oil and gas industry in Alaska's economy and in the economies of the Municipality of Anchorage, the Kenai Peninsula Borough, the Matanuska-Susitna Borough, the Fairbanks North Star Borough, the City of Valdez, and the North Slope Borough. To accomplish this task, the McDowell Group study team collected data from a variety of sources, including spending and payroll data from the following 16 "Primary Companies":

- Alyeska Pipeline Service Company
- Apache Corporation
- BP Exploration (Alaska) Inc.
- Chevron
- ConocoPhillips Alaska, Inc.
- eni petroleum
- ExxonMobil Production Company
- Flint Hills Resources, Alaska
- Hilcorp
- Petro Star Inc.
- Pioneer Natural Resources Alaska, Inc.
- Repsol E&P USA
- Shell Exploration & Production Company
- Statoil
- Tesoro Alaska Company
- XTO Energy, Inc.

Many of the companies were able to provide detailed financial information, including the amount of money they spend with specific Alaska companies, job counts and payroll information by both place of work and place of residence, and the amount they pay in state and local taxes.

The study team also gathered select information from additional companies that were significant beneficiaries of "Primary Company" spending in 2013. Many of these companies are categorized in government statistics as oil and gas support companies, but some are not generally considered part of the oil and gas industry, for example, construction companies, transportation companies, and companies that provide geological, engineering, and related services.

In addition to the data collected directly from the "Primary Companies" and others that are the major direct recipients of their spending, the study team collected data and information from a variety of published and unpublished sources. These include the Alaska Department of Labor and Workforce Development (ADOLWD), the Alaska Department of Revenue, the Alaska Department of Commerce, Community and Economic



Development, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis (BEA), and the U.S. Department of Energy's Energy Information Administration, among others.

To measure multiplier effects (secondary economic impacts) produced by the "Primary Companies" spending with Alaska businesses and from the wages they paid to Alaska residents, the study team used the IMPLAN<sup>TM2</sup> (IMpact Analysis for PLANning) input-output modeling system to build custom models for Alaska and each of the regions studied. The task of the models was to quantify the jobs and payroll added to the Alaska economy statewide and regionally, as spending by the "Primary Companies" was subsequently re-spent within the state.

## Report Organization

This report is organized as follows:

- Chapter 1: Background information on the oil and gas industry in Alaska, with brief discussions of prices, production, and markets.
- Chapter 2: Overview of the oil and gas industry in Alaska, including brief profiles of the "Primary Companies" and examples of companies that also play key roles in the industry, but are not captured in published oil and gas industry employment data. This chapter also summarizes spending by "Primary Companies" in support of their Alaska operations.
- Chapter 3: Statewide employment and wage impacts of the industry.
- Chapter 4: Local (or regional) area employment and wage impacts for Municipality of Anchorage, Fairbanks North Star Borough, Kenai Peninsula Borough, Mat-Su Borough, North Slope Borough and the City of Valdez.
- Chapter 5: Analysis of oil industry payments to state and local governments, and the economic impacts of those payments on state government employment and wages.
- Appendix A: Oil and Gas employment trends as published by ADOLWD.
- Appendix B: Alaska Workforce Residency as published by ADOLWD.

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<sup>2</sup> IMPLAN<sup>TM</sup> was first developed in the 1970s as part of the U.S. Forest Service's efforts to model different land management planning options. It is one of the most widely-used input-output models designed to quantify and detail the total impact of different events or industries on a regional, state, or national economy.

# Chapter 1. Alaska's Production in the U.S. and World Market

To set the stage for in-depth analysis of the oil and gas industry's role in the Alaska economy today, this chapter offers a broad overview of petroleum consumption, oil production and price trends, and Alaska's role in U.S. and world markets.

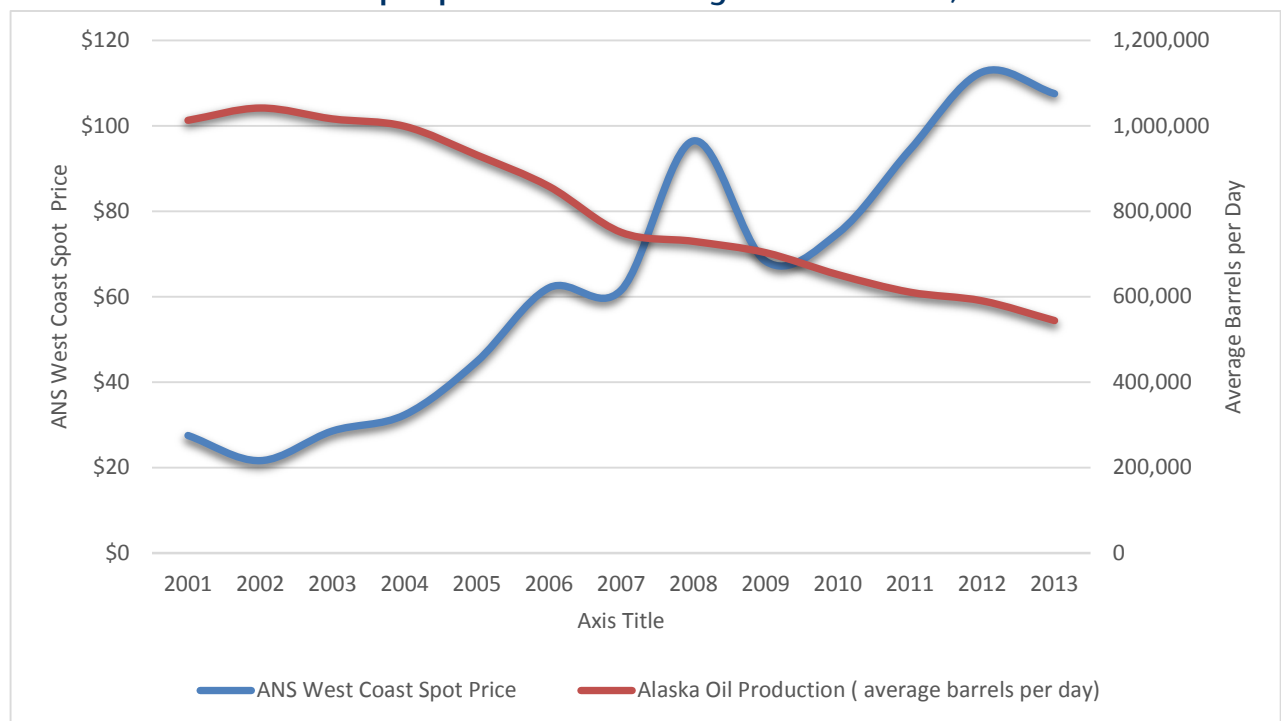
## Alaska North Slope Oil Prices and Alaska Oil Production

Since 2001, Alaska North Slope (ANS) prices per barrel have fluctuated from an annual average of \$22 in 2002 to a high of \$113 in 2012. In 2013, the price held steady, then dropped slightly to \$108 per barrel. The Alaska Department of Revenue estimates that FY2014 and FY2015 jobs will hover around \$105 to \$106 per barrel.<sup>3</sup> Forecast oil prices remain about \$105 per barrel throughout the department's forecast period to 2022.

Since 1988, Alaska oil production (ANS and Cook Inlet production) has trended downward (from 2.05 million barrels per day).

- By 2013, total production had declined to 543,800 barrels per day, about 27 percent of 1988 levels.

**Alaska North Slope Spot Price and Average Oil Production, 2001-2013**



Source: Alaska Department of Revenue.

<sup>3</sup> Alaska Department of Revenue, Spring 2014 *Revenue Sources Book*.

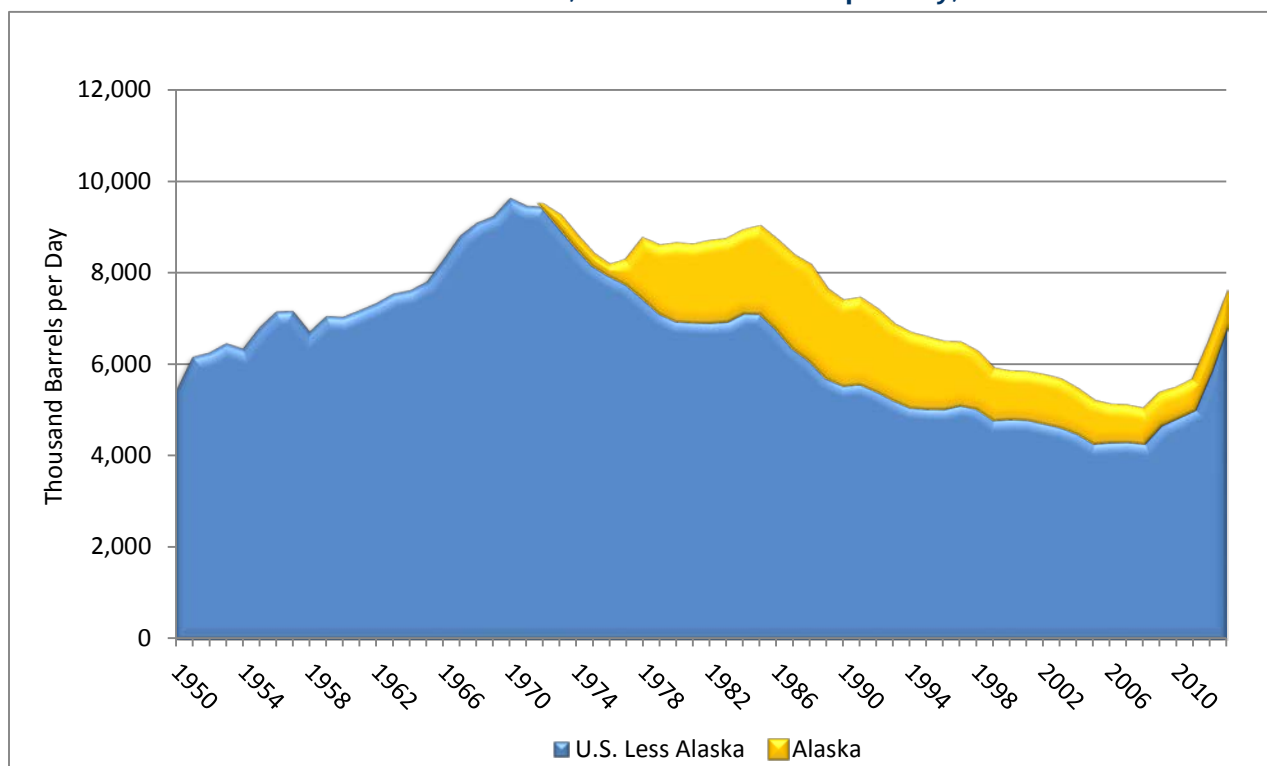
## Alaska's Role in the Domestic Oil Industry

U.S. crude oil production peaked at 9.6 million barrels a day in 1970. From there it declined steadily to a cyclical low point of 8.1 million barrels a day in 1976. Alaska oil – Prudhoe Bay production in particular – helped reverse the decline. Alaska production of 1.2 million barrels a day in 1978 marked the beginning of an expansion of U.S. oil production that lasted until 1985 when production peaked at 9.0 million barrels a day.

After 1985 U.S. oil production fell consistently, dropping to 5.0 million barrels a day by 2008. At that time, higher oil prices and new drilling technologies stimulated industry activity in North Dakota, Texas, and the Gulf of Mexico. By 2013, U.S. oil production's surged to 7.4 million barrels a day.

The figure below shows how Alaska's role in U.S. production has diminished from its peak in 1988 when it accounted for 25 percent of all U.S. production. By 2013, Alaska's share of the U.S. total production was 7 percent. Between 2012 and 2013, U.S. crude oil production grew 15 percent. Lower-48 production grew 18 percent, while Alaska production fell 8 percent.<sup>4</sup>

**U.S. and Alaska Oil Production, Thousands Barrels per Day, 1950-2013**

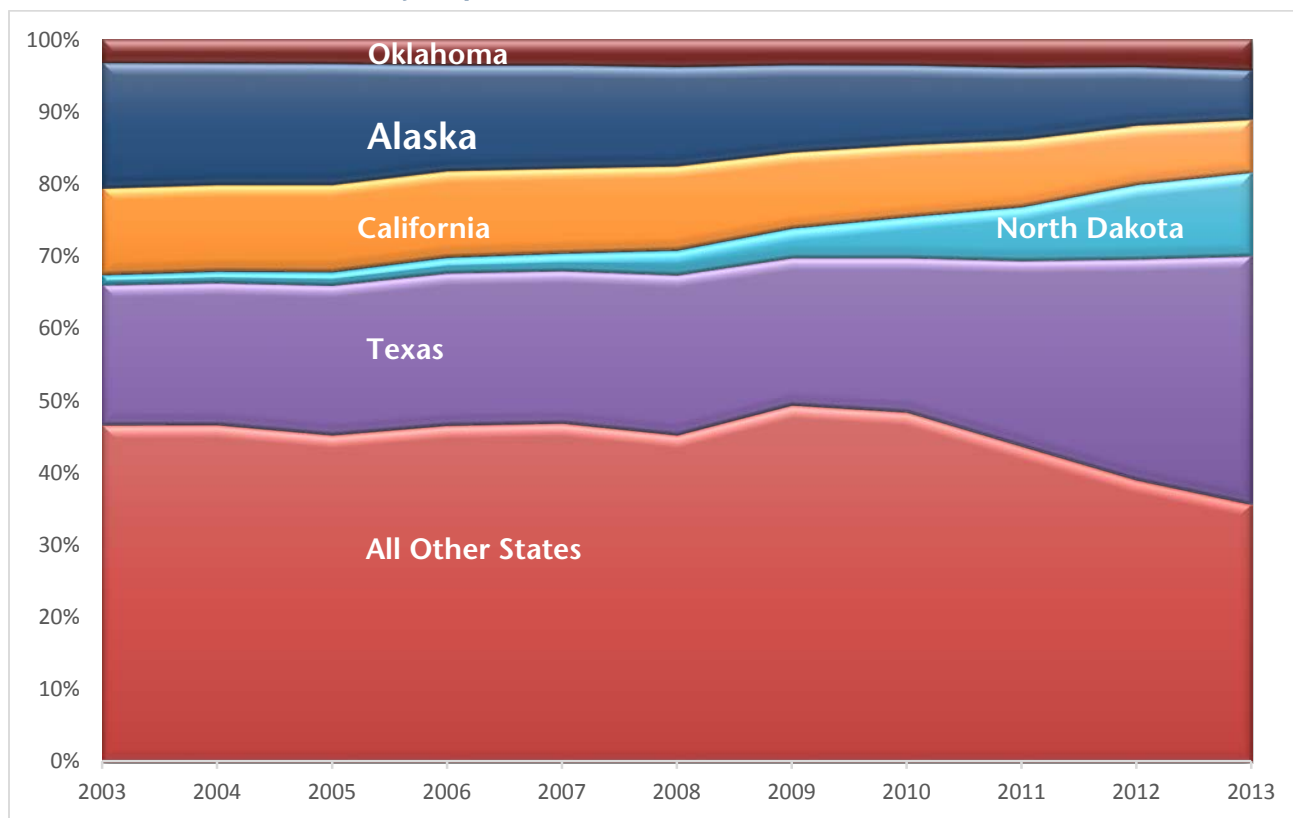


Source: Energy Information Administration.

The figure below shows Alaska's share of total U.S. oil production from 2003 to 2013 relative to other top producing U.S. states. Over this period, Alaska's production proportionally declined, while other states, most noticeably Texas and North Dakota, increased. The subsequent figure presents total production by the top five states, including Alaska in fourth place, after Texas, North Dakota, and California.

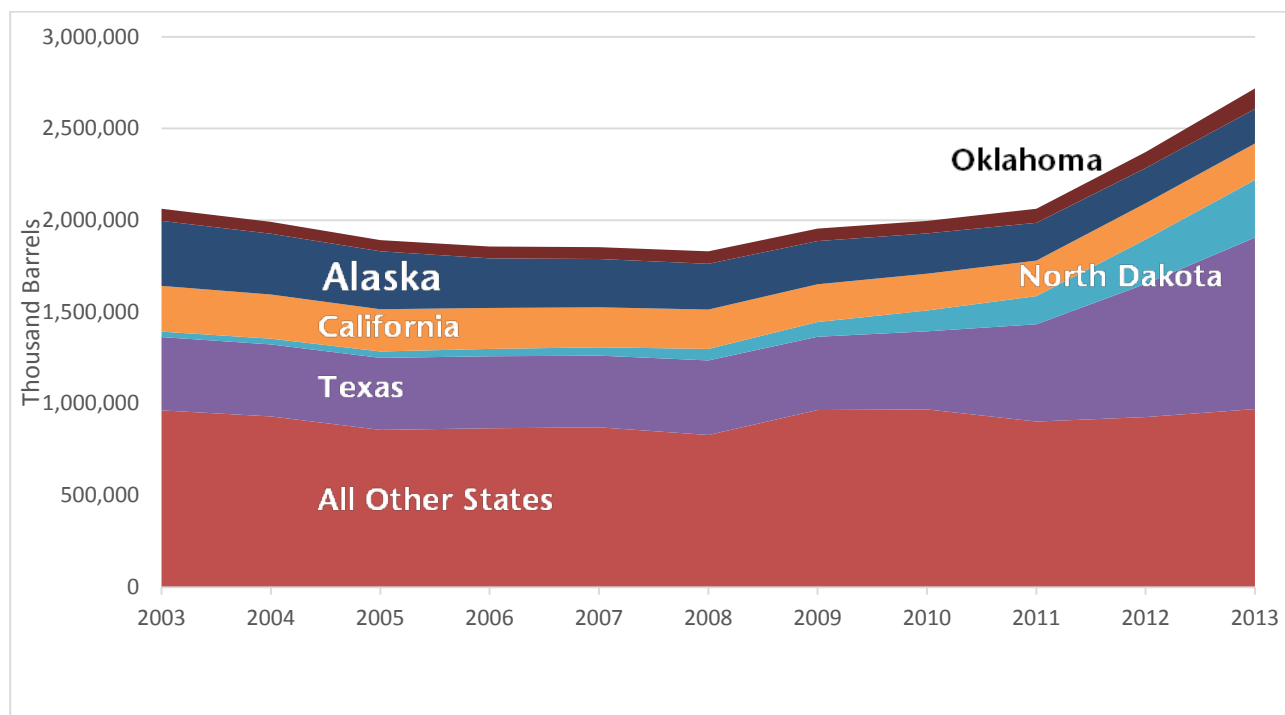
<sup>4</sup> U.S. Energy Information Administration and Alaska Department of Revenue, Spring 2014 *Revenue Sources Book*.

## U.S. Crude Oil Production, by Top Five States, Percent of Total Annual Production, 2003-2013



Source: Energy Information Administration

## U.S. Crude Oil Annual Production, by Top Five Producing States, Thousands of Barrels, 2003-2013



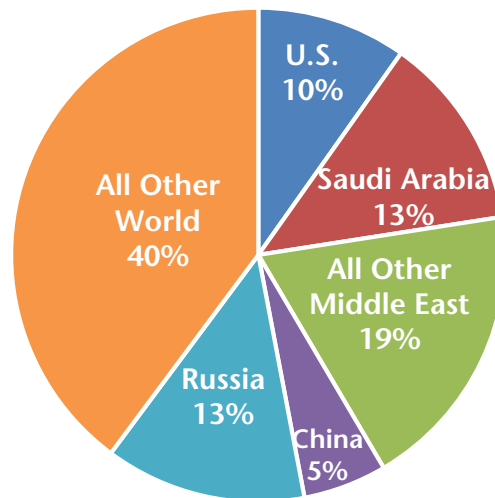
Source: Energy Information Administration



## World Oil Market

The U.S. was the third-largest single-country producer of crude oil in 2013 behind Russia and Saudi Arabia. Other Middle East countries are also major producers and China has steadily increased its oil production over the last several decades.

**World Crude Oil Production, 2013**

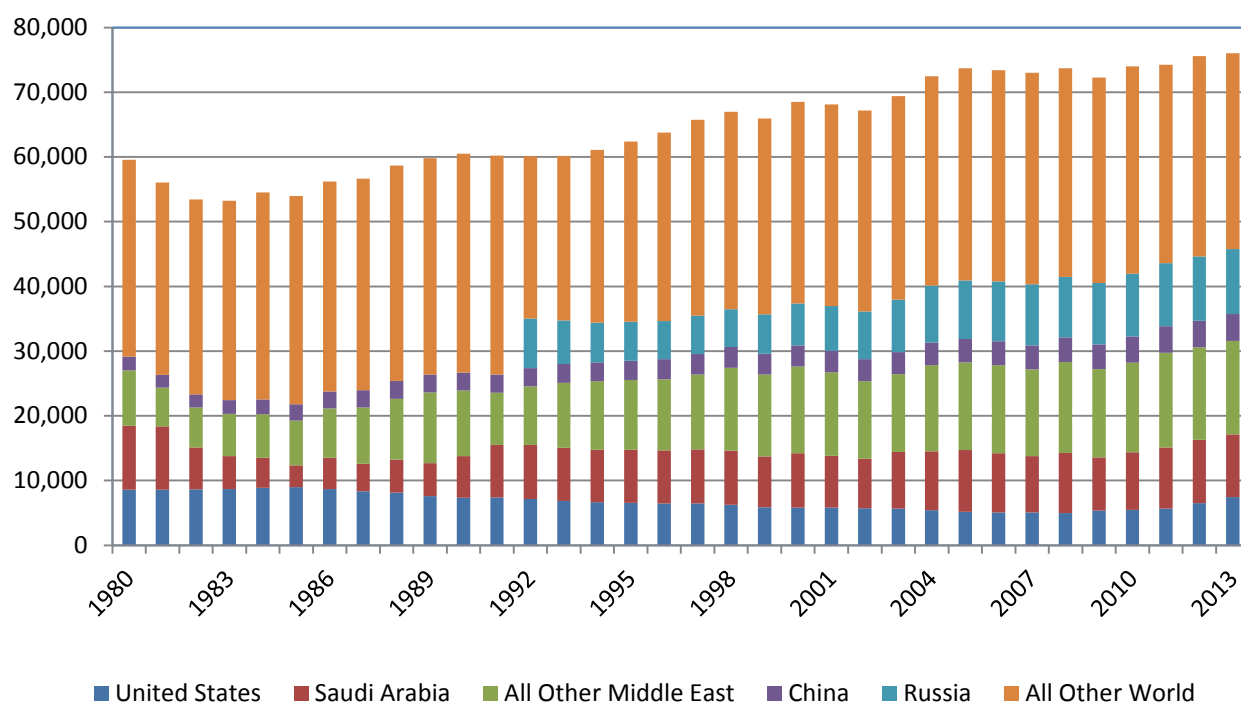


Source: Energy Information Administration.

The next figure shows how, over the course of the last three decades – essentially the period during which Alaska has been a major part of world oil production – the share of world production that has come from the U.S. has fallen from a high of 20 percent in 1985 to a low of 7 percent in 2008. Increased U.S. production since 2009 boosted the U.S. share of world production to about 10 percent in 2013.

*(See figure on next page.)*

### World Crude Oil Production, 1980-2013 (thousands of barrels per day)



Source: Energy Information Administration.

Note: No data was available for Russia separate from the former Soviet Union prior to 1992.

## Oil Consumption

In 2013, the U.S. consumed 6.9 billion barrels of petroleum products, an average of 18.9 million barrels per day.<sup>5</sup> This was about 21 percent of world petroleum consumption.<sup>6</sup> With concerns about the political stability of several major oil producing regions around the world, there is continued interest in stimulating U.S. oil production and reducing the national's dependence on oil imports.

In summary, Alaska plays a declining, but still important role in U.S. oil production. However, Alaska's share of world oil production is very small (about 0.7 percent in 2013), which means that changes in Alaska oil production do not have any significant effect on oil prices. Additionally, the large international oil and gas companies that produce most of the world's oil have a significant variety of geographic options available to them when they make investment decisions.

<sup>5</sup> <http://www.eia.gov/tools/faqs/faq.cfm?id=33&t=6>

<sup>6</sup> <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=5&aid=2>

## Chapter 2. Defining Alaska's Oil and Gas Industry and its Economic Impact

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Government-published employment statistics for the oil and gas industry in Alaska provide only a partial measure of the industry's size and impact. Government oil and gas employment statistics include jobs in companies classified under North American Industrial Classification System (NAICS) sector 211, "oil & gas extraction," and Sectors 213111 "drilling oil and gas wells" and 213112 "support activities for oil and gas operations."<sup>7</sup> (A brief discussion of published oil and gas industry data as defined above is included in Appendix A.)

A broader definition of oil and gas industry is warranted to understand the true impact of this industry activity on Alaska's economy. The published statistics do not include approximately 900 Trans-Alaska Pipeline System (TAPS)-related jobs, which are classified under transportation (NAICS sector 486), nor do they include refinery employment of about 700 workers (NAICS sector 324). They also exclude several thousand jobs directly connected to North Slope and Cook Inlet oil and gas production activity, but reported in other sectors, including jobs in construction, transportation, camp-support services, engineering services, etc.

This chapter includes a discussion of the primary contributors (labeled as "Primary Companies") that are significant investors in Alaska's oil and gas industry infrastructure, including production, transportation and refining of oil and gas. The companies play a pivotal role in development of Alaska's oil and gas resources. The spending by these "Primary Companies" is termed a "direct impact" on Alaska's economy. However, "Primary Company" spending filters through the state's economy in what is often labeled the "multiplier effect" or "indirect and induced impact." Oil dollars move through the economy as spending on goods and services, payroll to Alaskan employees, taxes paid to local governments, and taxes and royalties paid to state government.

The chapter also provides a brief description of the types of private sector firms affected by oil and gas spending, including oilfield support and other types of businesses actively engaged in Alaska's oil and gas industry.

### "Primary Companies" in Alaska's Oil and Gas Industry

For the purposes of this study, the following companies (in alphabetical order) are defined as "Primary Companies" in Alaska's oil and gas industry. They include oil and gas production companies, pipeline operators, and refineries.<sup>8</sup>

- **Alyeska Pipeline Service Company** operates and maintains the 800-mile TAPS, including the pump stations and the Valdez Marine Terminal. Alyeska is the largest employer and taxpayer in the community of Valdez.
- **Apache Corporation** is an oil and gas exploration and production company with significant lease holdings (approximately 850,000 acres on shore, in tidal areas, and offshore) in the Cook Inlet Basin.

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<sup>7</sup> Alaska Department of Labor and Workforce Development estimated 14,100 jobs Alaska's oil and gas sector in 2013, including employment in NAICS Sectors 211 (oil and gas extraction), 213111 (drilling oil and gas wells), and 213112 (support activities for oil and gas operations).

<sup>8</sup> These companies, plus ConocoPhillips Alaska Inc., are all members of the Alaska Oil and Gas Association (AOGA).

- **BP Exploration (Alaska) Inc.** operates 13 fields on the North Slope, including Greater Prudhoe Bay, which together, accounting for about two-thirds of Alaska's oil production. It also own a share of four North Slope pipelines (Kuparuk Transportation Co., Endicott Pipeline Co., Milne Point Pipeline LLC, and Northstar Pipeline) and significant interest in six other producing fields. BP is the largest partner in TAPS with a 48 percent stake. BP's net production rate in Alaska in 2012 was 142,000 barrels of oil equivalent per day.
- **Chevron** has ownership interest in Endicott (11 percent), Greater Kuparuk Area (5 percent), Greater Prudhoe Bay (1 percent), and Greater Point McIntyre (1 percent) fields, as well as 1 percent ownership in TAPS.
- **ConocoPhillips Alaska, Inc.**, a 29 percent owner of TAPS, is 36 percent owner of Prudhoe Bay and Point McIntyre, and the operator at Kuparuk (55 percent). It also has operating interest in the Alpine field on the Western North Slope (78 percent). ConocoPhillips has oil and gas production interests in Cook Inlet, owning all of the Kenai Liquified Natural Gas Plant and operating the Tyonek Platform in North Cook Inlet Field and the Beluga River natural gas field in the Cook Inlet Area. ConocoPhillips's net production rate in Alaska is 213,000 barrels of oil equivalent per day (2012).
- **eni petroleum** owns interests in 172 leases in Alaska, including 89 located in the federal Outer Continental Shelf and 83 state leases. eni is 100 percent owner and operator of the Nikaitchuq Field at Oliktok Point and owns 30 percent of the Oooguruk Field.
- **ExxonMobil Production Company** is 36 percent owner of Prudhoe Bay and 21 percent owner of TAPS. ExxonMobil operates Point Thomson and has working interests in the Greater Point McIntyre Area, Greater Kuparuk Area, Endicott and Granite Point fields.
- **Flint Hills Resources, Alaska** owns and operates the North Pole Refinery a facility with processing capacity of about 85,000 barrels of North Slope crude oil per day. The refinery processes North Slope crude oil and supplies gasoline, jet fuel, high sulfur diesel, turbine fuels and asphalt to Alaska markets. The company also owns and operates refined petroleum products terminals in Fairbanks and Anchorage. The refinery is scheduled to cease gasoline production in May 2014, with closure of the crude processing unit shortly thereafter. The terminals in Fairbanks and Anchorage will continue to operate with supplies coming from other sources.
- **Hilcorp** purchased Chevron's assets in Cook Inlet, including interests in Granite Point, Middle Ground Shoals, Trading Bay and MacArthur River fields, as well as interests in 10 offshore platforms, onshore gas fields, two gas storage facilities and two pipeline companies.
- **Petro Star Inc.** is an Alaskan-owned refining and fuel marketing company that operates refineries in North Pole and Valdez. Petro Star's refineries draw crude supply from TAPS to produce off-road and marine diesel, commercial and military jet fuel, and home heating oil.
- **Pioneer Natural Resources Alaska, Inc.** is an exploration and production company that operates the Oooguruk field west of Prudhoe Bay. Pioneer was the first independent company to operate a producing field on the North Slope. Pioneer has recently sold its Alaska subsidiary to Caelus Energy Alaska.

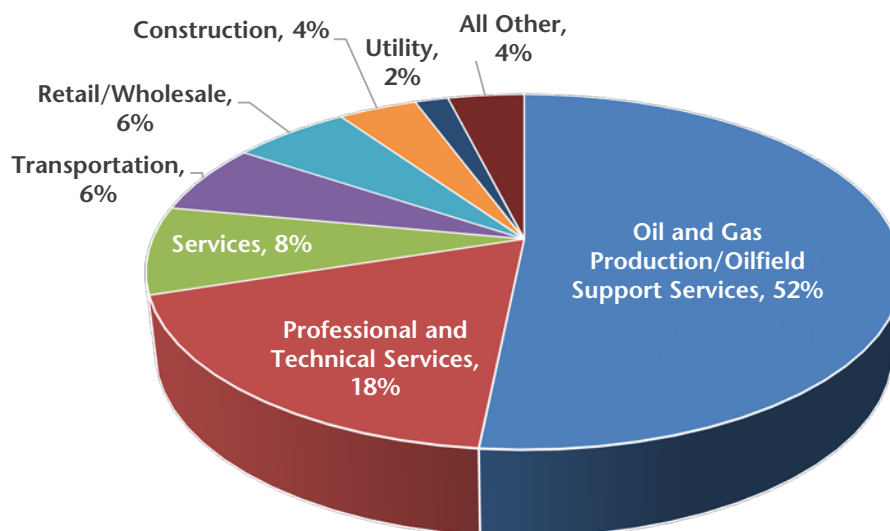


- **Repsol E&P USA** is actively exploring on the North Slope. The company holds 156 onshore blocks to the west of the Kuparuk River and Prudhoe Bay fields. Repsol also holds 93 offshore leases (100 percent working interest) in the Chukchi Sea.
- **Shell Exploration & Production Company** has a long history in Alaska's oil and gas industry, including oil production in Cook Inlet dating back to the 1960s. Shell's current interests include 275 leases in the Chukchi Sea. Plans to drill exploratory wells in the Chukchi Sea are pending.
- **Statoil** is an international energy company that recently expanded into Alaska by acquiring 16 leases in the Chukchi Sea (including 14 joint bids with eni petroleum). Statoil is also a 25 percent owner in the Devils Paw Chukchi Sea prospect (with majority owner ConocoPhillips).
- **Tesoro Alaska Company** operates a refinery in Kenai (the company also owns and operates 31 retail outlets in Alaska). The refinery manufactures jet fuel, diesel, gasoline, propane, asphalt and heavy oils.
- **XTO Energy, Inc. (a subsidiary of ExxonMobil)** operates two platforms in Cook Inlet and an onshore production facility located in Nikiski. XTP produces about 2,700 barrels of oil per day in Alaska.

"Primary Companies" reported approximately \$7 billion in Alaska vendor and inter-company spending in 2013. For purposes of calculating economic impact, inter-company spending was subtracted, leaving approximately \$5 billion in operating and capital expenditures with Alaska vendors who provide goods and services in support of their Alaska operations. Each of these "Primary Company" provided confidential data on spending in support of their Alaska operations, including payroll, purchases of goods and services from oilfield support and other types of firms, payments to local and state governments, and other information pertinent to spending in Alaska. This data revealed hundreds of additional businesses providing goods and services to Alaska's oil and gas sector; some based in Alaska with resident and nonresident employees and some based outside Alaska but with satellite offices in Alaska and also with resident and nonresident employees. In addition, these firms (both Alaska- and Lower-48 based) spend non-payroll money in Alaska, as well as outside of Alaska, in support of their operations. The following figure presents "Primary Company" Alaska vendor spending by sector.

*(See figure on next page.)*

## **“Primary Company” Alaska Vendor Spending, by Industry Sector, by Percent, 2013**



Source: “Primary Companies” and McDowell Group estimates.

### **Oilfield Support Companies**

Most spending (52 percent) by oil producers in support of Alaska operations in 2013 was with firms that are classified as “oil and gas extraction,” “oil and gas wells,” and “support activities for oil and gas operations.” These firms are often referred to as “oilfield support companies” and include firms such as Schlumberger Technology Corporation, Kakivik Asset Management, Halliburton Energy Services, Inc., ASRC Energy Services, Flowline Alaska, M-I LLC, Little Red Services, and Peak Oilfield Services Company.

Oilfield support companies offer a wider array of oil and gas goods and services, including (but not limited to) regulatory, permitting and technical support, engineering, construction, construction management and project management, module fabrication and installation, infrastructure, facility, and pipeline maintenance, drilling engineering and exploration operations support, fleet services, operations support, oil spill response management and equipment, procurement management, wireline, coil tubing, drilling fluids, rig moving, rig operation, and decommissioning services.

### **Other Suppliers of Goods and Services to the Oil and Gas Industry**

Vendor data collected from the “Primary Companies” indicates about 48 percent of their spending is with firms not included in published oil and gas industry support services employment figures. Yet, these firms provide essential goods and services, including professional and technical services (18 percent), services (8 percent), transportation (air, ground, and marine) (6 percent), retail/wholesale (6 percent), construction (those companies not captured already within the oilfield support companies categories) (4 percent), utilities (2 percent), and all others (including communications, insurance, fuel, computer and IT support, manufacturing, administration support, education services, etc.) (4 percent).

Examples of larger firms (more than 70 employees) directly engaged in oil and gas activity in Alaska, but not reported as part of the oilfield support sector include:

- CONAM Construction Company, based in Anchorage, is a general construction contractor specializing in oil and gas facilities (Sector 237 “heavy construction”).
- Alaska West Express, Inc., based in Anchorage with a Fairbanks terminal, transports general commodities, bulk chemicals, tankers, heavy haul products, oil field materials, heavy machinery, and other products (Sector 484 “truck transportation”).
- Beacon Occupational Health & Safety Services, based in Anchorage, provides medical, safety and training services to include occupational health (pre-hire/annual surveillance), drug and alcohol testing services, safety consulting, remote medical staffing, safety staffing and training (Sector 541 “all other professional, scientific, and technical services”).
- Advanced Supply Chain International, based in Anchorage, provides materials management services, purchasing administration, warehouse operations, supply chain management/supplier management and e-commerce web tools. All of the firm’s business is with the oil and gas sector (Sector 493 “warehousing and storage”).

Other businesses with substantial interest in Alaska’s oil and gas industry include NANA Management Services and Doyon Universal Services (Sector 561), AHTNA Construction (Sector 237), Alaska Interstate Construction (Sector 237), and various transportation firms, such as ERA Helicopters (Sector 481), Crowley Marine Services (Sector 483), and Lynden Transport (Sector 484). These firms are active in other sectors of the Alaska economy, but the revenue generated in the oil and gas industry is important, if not essential, to business sustainability.

## **Other Indirect and Induced Economic Linkages to the Oil and Gas Industry**

The wide range of businesses (described above) that provide goods and services to the “Primary Companies”, are collectively described as being part of the “indirect” impact of “Primary Company” activity in Alaska. In fact, detailed vendor data provided to the study team indicates that more than 1,500 businesses in Alaska directly serve the “Primary Companies”. These businesses in turn purchase goods and services in support of their operations in Alaska, creating additional jobs and wages.

The impact of the “Primary Companies” also includes the economic activity associated with their employees spending their wages in the Alaska economy. Jobs and wages that are the result of wages being spent are termed “induced” economic impacts.

Together, indirect and induced impacts are described as “multiplier effects.” In Chapters 3 and 4 of this report the direct and multiplier effects of “Primary Company” spending are described from a statewide perspective as well as for several local areas.

## **Economic Effects of Taxes and Royalties Paid by the Oil and Gas Industry**

The jobs and wages associated with vendor and employee spending are largely in the private sector. Taxes and royalties (totaling over \$7 billion in 2013) paid to state government fund a wide variety of government agency services, programs, and capital projects. Similarly, property taxes paid by the oil and gas industry to local governments supports local services, programs, and projects. Alaska's dependence on oil and gas industry revenues, and the employment and wages associated with expenditure of those revenues is quantified and described in Chapter 5.



# Chapter 3. Statewide Impacts of the Oil and Gas Industry

## “Primary Company” Employment and Wages

The 16 firms that comprise the group of “Primary Companies” directly employed 5,335 workers in Alaska in 2013, including 4,700 Alaska residents. Alaska residents represented approximately 88 percent of “Primary Company” employees. These Alaska resident workers earned \$780 million in total annual wages. Spending by “Primary Companies” and their employees then generate significant additional employment and payroll, as described below.

### “Primary Company” Employment and Wages in Alaska’s Oil and Gas Industry, 2013 Total and Alaska Resident Employment

	Average Annual Employment	Total Wages (\$ millions)
Total Alaska Employment and Wages*	5,335	\$885
Alaska Residents	4,700	\$780

Source: ADOLWD, “Primary Companies” data, and McDowell Group estimates.

Note: \*Annual average based on monthly data from October 2012-September 2013.

## Indirect and Induced Employment and Payroll

In Chapter 2, it was noted that in-state spending by oil and gas industry firms and their employees creates jobs throughout the Alaska economy. However, only a portion of jobs are actually classified in government employment statistics as being related to the oil and gas industry.

For example, ADOLWD statistics indicate that an average of approximately 10,000 workers were employed in Alaska’s oil and gas support services sector in 2013.<sup>9</sup> These workers earned a total of \$1.04 billion in annual wages. However, this accounts for less than a third of all employment connected with the oil and gas industry in Alaska (and less still when including jobs created by oil and gas industry taxes and royalties). Not included in the published data are a variety of support services companies providing goods and services to the “Primary Companies” but classified in government statistics in a number of other sectors, including transportation, construction, and professional and business services.

Finally, as support services companies purchase goods and services in support of their business operations, and as Alaska resident employees of “Primary Companies” and support services companies spend their payroll dollars in-state, additional jobs and income are created. Economic impact modelling conducted for purposes of this study indicates these subsequent cycles of spending created just under 38,000 indirect and induced jobs in Alaska. Combining direct, indirect, and induced impacts, the oil and gas industry in Alaska generated 51,000 jobs and \$3.45 billion in annual payroll. This estimate does not include jobs and income in Alaska stemming from the expenditure of state and local government oil-related taxes and royalties paid by the oil industry.

<sup>9</sup> NAICS codes 213111 (drilling oil and gas wells) and 213112 (support activities for oil and gas operations).

**Alaska Oil and Gas Industry Employment and Wages, 2013**  
**(excluding non-resident oil production and oil field services workers)**

	Employment	Wages
"Primary Companies" (Alaska residents only)	4,700	\$780 million
Oil & Gas Support Services (Alaska residents only)*	8,400	\$700 million
All Other Indirect and Induced	37,900	\$1.97 billion
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>51,000</b>	<b>\$3.45 billion</b>

\*Includes ADOLWD Oil and Gas Support Services Sector 213111 and 213112.

Source: McDowell Group estimates, ADOLWD, and "Primary Companies" data.

According to BEA employment data, which includes people who are self-employed and active-duty military personnel, the Alaska economy included 458,400 jobs in 2012. Based on that figure, the oil industry accounts for slightly more than 1 in 10 jobs in Alaska, not including Alaskan jobs associated with taxes and royalties paid by the oil industry to state and local governments. All told, the oil and gas industry accounted for 1 in 7 private sector jobs.

In 2013 Alaska's economy included an annual average 335,000 wage and salary jobs, with total annual wages of \$17.1 billion, according to ADOLWD data. Based on ADOLWD wage and salary employment data (excluding the self-employed and active duty military personnel), the oil and gas industry accounts for 15 percent of all employment and 20 percent of all wages (again not including jobs associated with taxes and royalties paid by the oil industry to state and local governments).

The oil and gas industry's 51,000 jobs and \$3.5 billion in annual wages accounts for a large share of private sector employment in Alaska. In 2013 there was an average of 245,000 private sector wage and salary jobs in Alaska, accounting for \$12.8 billion in total wages. Based on estimates made in this study, the oil and gas industry accounted for about 20 percent of those wage and salary jobs and more than a quarter (27 percent) of private sector wages.

## Chapter 4. Local/Regional Impact Profiles

This chapter provides an overview of oil and gas industry employment and wage impacts in six geographic areas: the Municipality of Anchorage, Fairbanks North Star Borough, Kenai Peninsula Borough, Matanuska-Susitna Borough, North Slope Borough and City of Valdez.

### Municipality of Anchorage

More than half the jobs created in Alaska as a direct or indirect result of oil industry activity are in the Anchorage economy. Anchorage is Alaska's service and supply center and Alaska headquarters for oil producers, oil industry support services and supply businesses, and many other businesses connected in some way to the oil industry. As a result, much of the oil and industry money spent in Alaska passes through the Anchorage economy.

#### Key Findings

- A total of 2,300 employees of the 16 "Primary Companies" reside in Anchorage, accounting for \$443 million in annual wages. A slightly larger number (2,800) of oil and gas support services employees reside in Anchorage, with annual wages of \$260 million.
- An additional 25,900 jobs in Anchorage are also connected to the oil and gas industry in Alaska. This includes indirect jobs, such as those with professional services firms, transportation providers, and a variety of other companies that provide services to oil and gas firms. It also includes induced effects, i.e., jobs and wages related to oil and gas workers spending their wages in Anchorage. In total, these indirect and induced jobs accounted for approximately \$1.4 billion in annual wages in Anchorage in 2013.
- Including all direct, indirect, and induced effects, in 2013 the oil and gas industry accounted for an annual average of 31,000 jobs and total annual wages of just under \$2.1 billion in Anchorage.
- The oil and gas industry accounts for about 15 percent of total employment and 18 percent of wages in Anchorage, including all direct, indirect and induced effects. The industry accounts for approximately 18 percent of private sector employment and 22 percent of private sector wages. In 2012, the total Anchorage economy included 200,000 jobs and \$11.5 billion in wages, according to BEA data.

#### Oil and Gas Industry Employment and Wages in Anchorage, 2013

	Employment	Wages
"Primary Companies" (Alaska residents only)*	2,300	\$443 million
Oil & Gas Support Services (Alaska residents only)*	2,800	\$260 million
All Other Indirect and Induced	25,900	\$1.37 billion
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>31,000</b>	<b>\$2.07 billion</b>

\*Includes workers who are employed on the North Slope but reside in Anchorage, as well as workers who live and work in Anchorage. Source: ADOLWD, "Primary Companies" data, and McDowell Group estimates.

## Fairbanks North Star Borough

The oil and gas industry in the Fairbanks North Star Borough (FNSB) includes refinery operations, TAPS operations, and oil industry support services-related activity. The borough is also home to a number of North Slope workers.

### Key Findings

- A total of 475 “Primary Company” employees reside in the FNSB, accounting for \$60 million in annual wages.
- An estimated total of 750 oil and gas support services employees reside in the FNSB, with annual wages of \$60 million.
- An additional 2,275 jobs in the FNSB are also connected to “Primary Company” spending in Alaska, including jobs with professional services firms, transportation providers, and a variety of other companies, generating approximately \$115 million in annual wages.
- Including all direct, indirect, and induced effects, the oil and gas industry accounted for an annual average 3,500 jobs and total annual wages of \$235 million in the FNSB in 2013.
- Wages related to the oil and gas industry (including all multiplier effects) equal approximately 8 percent of total FNSB resident employment and wages. Approximately 15 percent of private sector resident employment and wages are attributable to the oil and gas industry. In 2012, the FNSB economy included 42,100 employed residents and \$2.9 billion in resident wages, according to BEA and ADOLWD data.
- The oil and gas industry paid \$9.1 million in property taxes to the FNSB in 2013, 8.4 percent of total Borough property tax revenue. The industry also paid \$100,000 in property taxes to the City of Fairbanks (representing 0.7 percent of total property tax revenue).
- Oil and gas industry firms are among the largest property-tax payers in the FNSB. Alyeska Pipeline Service Company has been the single largest contributor of property-tax revenues. The Flint Hills refinery was the fourth largest.<sup>10</sup>

### Oil and Gas Industry Employment and Wages in Fairbanks, 2013

	Employment	Wages
“Primary Companies” (Alaska residents only)*	475	\$60 million
Oil & Gas Support Services (Alaska residents only)*	750	\$60 million
All Other Indirect and Induced	2,275	\$115 million
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>3,500</b>	<b>\$235 million</b>

\*Includes workers who are employed on the North Slope but reside in the FNSB, as well as workers who live and work in the FNSB. Source: ADOLWD, “Primary Companies” data, and McDowell Group estimates.

<sup>10</sup> Fairbanks North Star Borough, Comprehensive Annual Financial Report, FY13, p. 266



## Kenai Peninsula Borough

The oil and gas industry has a substantial presence in the Kenai Peninsula Borough (KPB). Oil and gas production in Cook Inlet creates jobs and income for borough residents, as does operation of Tesoro's refinery. The KPB also enjoys economic benefit from the wages spent in the local economy by North Slope workers who reside in the borough.

### Key Findings

- A total of approximately 930 "Primary Company" employees reside in the KPB, accounting for \$135 million in total annual wages.
- A larger number (2,250) of oil and gas support services employees reside in the KPB, with total annual wages of \$175.0 million.
- An additional 2,820 jobs in the KPB are also connected to "Primary Company" spending in Alaska, including jobs with professional services firms, transportation providers, and a variety of other companies, generating approximately \$120 million in annual wages.
- Including all direct, indirect, and induced effects, the oil and gas industry accounted for an annual average 6,000 jobs and total annual payroll of \$430 million in the KPB in 2013.
- Wages related to the oil and gas industry equal approximately 26 percent of total KPB resident wages. In terms of jobs, oil and gas industry employment is equivalent to 23 percent of total employed labor force in the KPB. In 2012, the KPB economy included 26,000 employed residents and \$1.6 billion in resident wages, according to BEA data.
- The oil and gas industry accounts for the equivalent of one quarter of all resident private sector jobs in the KPB and about 30 percent of private sector wages earned by residents.
- The oil and gas industry paid \$7.8 million in property taxes to the KPB in 2013, 14 percent of total property tax revenues for the Borough. The industry also paid \$10,000 in property taxes to the City of Kenai (0.3 percent of the City total).
- Eight of the top 10 property tax payers in the KPB are oil and gas companies. In order of taxable assessed value, Phillips Petroleum Co. is 1; followed by Hilcorp Alaska, LLC (#2), Tesoro Alaska (#3), Marathon Oil Co. (#4), XTO Energy Inc. (#7), Alaska Pipeline (#8), Cook Inlet Energy, LLC (#9), and Kenai Kachamak Pipeline (#10).<sup>11</sup>

### Oil and Gas Industry Employment and Wages in KPB, 2013

	Employment	Wages
"Primary Companies" (Alaska residents only)*	930	\$135 million
Oil & Gas Support Services (Alaska residents only)*	2,250	\$180 million
All Other Indirect and Induced	2,820	\$115 million
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>6,000</b>	<b>\$430 million</b>

\*Includes workers who are employed on the North Slope but reside in the KPB, as well as workers who live and work in the KPB. Source: ADOLWD, "Primary Companies" data, and McDowell Group estimates.

<sup>11</sup> Kenai Peninsula Borough, Comprehensive Annual Financial Report, FY13, p. 124

## Matanuska-Susitna Borough

The oil and gas industry's economic impact on the Matanuska-Susitna (Mat-Su) Borough is largely the result of oil and gas industry workers who choose to reside in the area. Mat-Su's proximity to Anchorage and its relatively less expensive housing have made it one of the fastest growing parts of the state over the last several decades. Although Mat-Su's growing network of businesses receives some benefit from oil industry purchases of goods and services, the most significant impact the industry has on the area is in the incomes earned in the industry by Borough residents.

### Key Findings

- A total of approximately 535 "Primary Company" employees reside in the Mat-Su Borough, accounting for \$80 million in annual wages.
- A larger number (2,200) of oil and gas support services employees reside in the Mat-Su Borough, with annual wages of \$170 million.
- An additional 1,265 jobs in the Mat-Su Borough are also directly connected to "Primary Company" spending in Alaska, including jobs with professional services firms, transportation providers, and a variety of other companies, generating approximately \$60 million in total annual wages.
- Including all direct, indirect, and induced effects, the oil and gas industry accounted for an annual average 4,000 jobs in the Mat-Su Borough and total annual payroll of \$310 million in 2013.
- While not many oil and gas industry-related jobs are located in the Mat-Su Borough (and many workers commute to Anchorage), oil and gas industry-related wages equal approximately 10 percent of total Mat-Su resident employment and wages. In 2012, the Mat-Su economy included 40,000 resident workers and \$3.2 billion in resident wages, according to BEA data.

### Oil and Gas Industry Employment and Wages in Mat-Su, 2013

	Employment	Wages
"Primary Companies" (Alaska residents only)*	535	\$80 million
Oil & Gas Support Services (Alaska residents only)*	2,200	\$170 million
All Other Indirect and Induced	1,265	\$60 million
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>4,000</b>	<b>\$310 million</b>

\*Includes workers who are employed on the North Slope or in Anchorage but reside in Mat-Su.

Source: McDowell Group estimates, ADOLWD, and "Primary Companies" data.

## North Slope Borough

There were approximately 14,400 jobs reported in the North Slope Borough in 2013. Almost 80 percent of those jobs (11,000) were in the Prudhoe Bay area. While a very large number of oil and gas industry jobs are based in the North Slope Borough (NSB), very few of the workers who hold those jobs reside in the borough. The North Slope oil industry infrastructure and work sites are self-contained and hundreds of miles away from most of the borough's resident population. In fact the oil industry's greatest economic impact on the residents of the borough has been through oil-related property-tax revenues.

About 15 percent of the jobs in Prudhoe Bay are provided by oil producers and about 55 percent are provided by oil support-services companies. The remaining 30 percent are categorized in other industries, but directly tied to Prudhoe Bay or other area oil operations (construction, transportation, or professional services, for example).

### Key Findings

- By place of work, "Primary Companies" in the NSB provided approximately 2,000 jobs and accounted for \$310 million in annual wages; Alaska residents held 1,310 of these jobs (68 percent of total jobs) and earned \$215 million (69 percent).
- By place of work, oil and gas support services companies with operations in the NSB provided 8,410 jobs and accounted for \$650 million in annual wages; Alaska residents held 5,190 of these jobs (62 percent of total jobs) and earned \$400 million (61 percent).
- By place of residence, "Primary Company" or oil and gas support service companies provided jobs for 85 NSB residents, accounting for \$3.2 million in annual wages.
- An additional 1,900 jobs in the NSB are also connected to oil and gas industry activity in Alaska, generating approximately \$97 million in annual wages. These jobs and wages are linked with property taxes paid by the industry that support local government operations. It also includes high-level estimates of the economic impact of Arctic Slope Regional Corporation (ASRC), which has important interests in the oil and gas industry.
- Including all direct, indirect, and induced effects, the oil and gas industry accounted for an annual average 2,000 jobs in the NSB and total annual wages of \$100 million in 2013.
- The oil and gas industry paid \$347.5 million in property taxes to the NSB in 2013, 99.2 percent of total Borough tax revenues.

### Oil and Gas Industry Employment and Wages in the North Slope Borough, 2013

	Employment	Wages
"Primary Companies" (Alaska residents only)	6	\$0.2 million
Oil & Gas Support Services (Alaska residents only)	79	\$3.1 million
All Other Indirect and Induced	1,915	\$112 million
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>2,000</b>	<b>\$115 million</b>

Source: McDowell Group estimates, ADOLWD, and "Primary Companies" data.

## Valdez

Valdez is the terminus of the 800-mile Trans-Alaska pipeline and the site of the marine terminal where oil is loaded onto oil tankers and transported to refineries, mainly on the U.S. West Coast. The marine terminal, Petro Star's Valdez refinery, and other pipeline facilities within the city account for the vast majority of all local property-tax revenues.

An additional source of revenue dates back to the 1970s when the owners of the pipeline system paid the city \$13.5 million in exchange for letting them use the city's bonding authority to issue tax-exempt bonds. That windfall was used to create the Valdez Permanent Fund, the principal of which is protected by law. Since 1987, the Valdez City Council has had made a policy of not appropriating fund earnings to annual operating and capital budgets. That policy and additional financing fees have enabled the fund to grow considerably over the years.<sup>12</sup>

### Key Findings

- A total of 300 "Primary Company" employees reside in Valdez, accounting for \$37 million in annual wages.
- An estimated total of 155 Oil and Gas Support Services company employees reside in Valdez, with annual wages of \$11 million.
- An additional 245 jobs in Valdez are also connected to "Primary Company" spending and employee spending in Valdez, accounting for approximately \$17 million in annual wages.
- Including all direct, indirect, and induced effects, the oil and gas industry accounted for an annual average 700 jobs and total annual wages of \$65 million in Valdez in 2013.
- The oil and gas industry paid \$34.5 million in property taxes to the City of Valdez in 2013, 90 percent of total City tax revenues.

### Oil and Gas Industry Employment and Wages in Valdez, 2013

	Employment	Wages
"Primary Companies" (Alaska residents only)	300	\$37 million
Oil & Gas Support Services (Alaska residents only)	155	\$12 million
All Other Indirect and Induced	245	\$16 million
<b>Grand Total (Direct, Indirect, and Induced)</b>	<b>700</b>	<b>\$65 million</b>

Source: McDowell Group estimates, ADOLWD, and "Primary Companies" data.

<sup>12</sup> <http://www.ci.valdez.ak.us/index.aspx?NID=324>

## Summary of Localized Impacts

The impacts for the six geographic areas described above capture most of the employment and payroll impacts generated by the oil and gas industry in Alaska. However, other regions of Alaska – Southeast, Southwest, rural Interior, etc. – are home for a number of North Slope workers. Oil industry workers reside in communities all across Alaska and spend wages in their local economies.

Some economic activity related to oil and gas industry spending in Alaska is difficult to attribute to any particular community. For example, spending by oil-industry companies and their workers in Fairbanks is likely to funnel eventually through service and supply businesses in Anchorage. The same is true for spending in Mat-Su and the Kenai Peninsula. Local-level modeling conducted for this study does not capture this inter-regional effect and therefore understates local employment and payroll (especially in Anchorage).

The following table summarizes local-level employment and payroll impacts of the oil and gas industry. The “Unattributed” category is an accounting of jobs created in areas other than the six locations considered in this study and captures all the jobs created by inter-regional flow of oil and gas industry-related dollars.

**Alaska Resident Employment and Wages in the Oil and Gas Industry, by Local Area, 2013**

	Alaska	Anchorage	Fairbanks North Star Borough	Kenai Peninsula Borough	Mat-Su Borough	North Slope Borough	Valdez	Unattributed
<b>Employment</b>								
“Primary Companies”	4,700	2,300	475	930	535	5	300	155
Oil & Gas Support Services	8,400	2,800	750	2,250	2,200	70	155	175
All Other Indirect and Induced	37,900	25,900	2,275	2,820	1,265	1,925	245	3,470
<b>Grand Total</b>	<b>51,000</b>	<b>31,000</b>	<b>3,500</b>	<b>6,000</b>	<b>4,000</b>	<b>2,000</b>	<b>700</b>	<b>3,800</b>
<b>Wages (millions)</b>								
“Primary Companies”	\$780	\$443	\$60	\$135	\$80	\$0.2	\$37	\$25
Oil & Gas Support Services	700	260	60	180	170	3.1	12	15
All Other Indirect and Induced	1,974	1,367	115	115	60	112	16	185
<b>Grand Total (\$millions)</b>	<b>\$3,454</b>	<b>\$2,070</b>	<b>\$235</b>	<b>\$430</b>	<b>\$310</b>	<b>\$115</b>	<b>\$65</b>	<b>\$225</b>

Source: McDowell Group estimates, ADOLWD, and “Primary Companies” data.

# Chapter 5. Oil Revenue Impacts on State and Local Governments

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Alaska is the only state that has neither a state sales tax nor a personal income tax. Instead, revenue from oil and gas development supports 92 percent of state government's unrestricted or discretionary spending. No other state is so dependent on a single industry for funding of government programs.

This chapter provides an analysis of the impacts of Alaska's oil and gas industry payments to state government and a brief overview of oil and gas property taxes paid to various local governments in Alaska. A focus of the analysis is the impact of State unrestricted revenues (*see definition below*), which accrue to the State mainly from oil and gas production.

## Oil Revenue Impacts on State Government

- From 1959 to fiscal year (FY) 2013, Alaska state oil revenues totaled \$197 billion (in 2013 dollars). This represents 88 percent of all state revenue from natural resources, including seafood, mining, and timber taxes and royalties and the applicable portion of state corporate income tax.<sup>13</sup>
- In FY2013, Alaska received \$7.4 billion in oil and gas revenue, representing 47 percent of all state revenue (\$15.8 billion).

State revenue is categorized into two important distinct pools of funding – unrestricted and restricted funds. Below is a brief description of the sources of oil and gas revenue payments to the State of Alaska that fall into each category.<sup>14</sup>

### Unrestricted Revenues

Unrestricted revenues are paid into the General Fund and may be appropriated for any purpose, which means it is available to be appropriated by the Alaska State Legislature (subject to the Governor's veto). These funds are completely flexible for use in any operating or capital budget allocations.

- In FY2013, \$6.4 billion, or 86 percent of Alaska's total oil revenue, was unrestricted.
- As a percent of all unrestricted revenue (from all sources), Alaska's oil and gas industry payments represented 92 percent of the State's total unrestricted revenue.<sup>15</sup>

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<sup>13</sup> Data compiled and inflation-adjusted (2013\$). Alaska Department of Revenue. Scott Goldsmith, UA Research Summary No. 17, February 2011; Institute of Social and Economic Research, University of Alaska Anchorage, and McDowell Group estimates.

<sup>14</sup> More detailed descriptions can be found in the Alaska Department of Revenue, *2013 Annual Report*.  
<http://www.tax.alaska.gov/programs/documentviewer/viewer.aspx?1038r>

<sup>15</sup> The remaining sources of unrestricted revenue include: excise taxes (alcohol, tobacco, motor fuel, etc.) (\$169 million), non-petroleum corporate income tax (\$113 million), fisheries tax (\$24.7 million), and other tax revenue from charitable gaming, estate, large vessel gambling, and mining taxes (\$55 million), plus fees and investment revenue.



## **OIL AND GAS PRODUCTION TAX**

- The largest source of tax revenue to the state comes from the Oil and Production Tax. In FY 2013, production tax (\$4.0 billion) represented:
  - 64 percent of unrestricted oil and gas revenue,
  - 55 percent of all oil revenue, and
  - 26 percent of all state revenue.

The state levies an annual tax on the value of oil and gas production in Alaska (*AS 43.55*). The More Alaska Production Act (MAPA) took effect on January 1, 2014. Prior to that, during FY2013, Alaska's Clear and Equitable Share (ACES) Act was in effect. Under ACES, the base tax rate was 25 percent of the production tax value per BTU-equivalent barrel of taxable oil and gas. When the average monthly production tax value was more than \$30 per barrel, but not more than \$92.50, there was an additional 0.4 percent progressive tax for each additional dollar of production tax value per barrel. Production under state and federal royalty agreements are not taxed. The tax on oil and gas is not levied on. Also not taxed is oil and gas used on a lease or property for drilling, production, or re-pressuring.

## **ROYALTIES – OIL AND GAS BONUSES, RENTS, AND INTEREST**

Royalties are the second largest source of state revenues from oil and gas production.

- In FY 2013, royalties of \$1.8 billion – including oil and gas bonuses, rents, and interest – represented:
  - 28 percent of unrestricted oil and gas revenue.
  - 24 percent of all oil revenue.
  - 11 percent of all state revenue.

Royalty agreements allow a company to share the risk of oil and gas development with the State (*11 ACC 04.010-199, 11 AAC 83.201-295*) in return for a portion of the profits. When a company purchases a lease from the state they pay various "fees" and promise the state a portion of revenue (usually 12.5 or 16.67 percent) if and when the oil and gas are marketed. Royalty payments are based on the value of the oil and gas removed from the state lease, the volume removed, and the lease's royalty rate. Large lease-owners have agreements with the state about what expenses can be deducted from the sales value to calculate royalty due.<sup>16</sup>

## **PETROLEUM CORPORATE INCOME TAX**

Alaska levies a corporate income tax on Alaska businesses (*AS 43.20*).

- In FY 2013, corporate income tax revenue (\$434.6 million) represented:
  - 7 percent of unrestricted oil and gas revenue.

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<sup>16</sup> More detailed description can be found on the Alaska Department of Natural Resources' website: <http://dog.dnr.alaska.gov/Royalty/Accounting.htm>

- 6 percent of all oil revenue.
- 3 percent of all state revenue.

Corporate income tax on oil companies is based on a “modified” apportionment formula of property, sales, and extraction. The extraction factor is the production of oil and gas in Alaska divided by their worldwide production. Alaska taxes corporate income at graduated rates ranging from 0 percent to 9.4 percent divided over 10 tax brackets. Credits, such as the Gas Exploration and Development Credit, Gas Storage Facility Tax Credit, LNG Storage Facility Tax Credit, apply.

## **PROPERTY TAX**

Alaska levies an oil and gas property tax on the value of taxable exploration, production, and pipeline transportation property in Alaska (*AS 43.56*). The state tax rate is 20 mills, or 2 percent of the assessed value.

- In FY 2013, property tax revenue (\$99.3 million) represented 1.6 percent of unrestricted oil and gas revenue.

## **OIL CONSERVATION SURCHARGE**

A \$0.05 tax is levied upon each barrel of taxable oil through an Oil Conservation Surcharge (\$0.01) and Additional Conservation Surcharge (\$0.04) and deposited into the Oil and Hazardous Substance Release Prevention and Response Fund (*AS 43.55.201/300*) as a source of funding to prevent and respond to a hazardous substance spill. The fund is also commonly referred to as the “470 Fund.”

- In FY 2013, the Alaska oil and gas industry paid \$7.8 million into the 470 Fund.

## **Restricted Revenues**

While the majority of oil revenue is unrestricted, a portion of revenue is restricted and allocated for specific uses.

- In FY2013, \$1.0 billion, or 14 percent of Alaska’s total oil revenue, was restricted.
- As a percent of all restricted revenue (from all sources), Alaska’s oil and gas industry payments represented 12 percent of the State’s total restricted revenue.

## **ROYALTY PAYMENTS TO SPECIFIED FUNDS**

### ***Alaska Permanent Fund and Public School Trust***

The Alaska Permanent Fund receives between 25 to 50 percent of oil and gas royalties, depending on the royalty agreement for the specific property. The remainder of restricted royalty revenue (0.5 percent proportion) is deposited into the Public School Trust Fund.

- In FY2013, \$855.9 million was deposited into the Alaska Permanent Fund and Public School Trust Fund.

*(A more detailed discussion of the impact of the oil and gas payments to the Alaska Permanent Fund is found later in this chapter.)*

## Constitutional Budget Reserve Fund

The Constitutional Budget Reserve Fund (CBRF) was established in 1990 to provide cash to fund government during periods of temporarily low oil prices when revenues fall short of expenditures. The principal of the CBRF represents proceeds from settlements of tax and royalty disputes with Alaska's oil and gas companies.

- In FY 2013, \$176.7 million was placed in the CBRF.
- In FY 2013, the CBRF (including the Main Fund and the Subaccount Fund) had a market value of \$11.6 billion.<sup>17</sup>

## NPR-A Royalties, Rents, and Bonuses

Similar to restricted royalties revenue that occur on State land, any royalties, rents or bonuses collected by the Federal government from development in the National Petroleum Reserve – Alaska (NPR-A) is shared with the State.

- In FY2013, \$3.6 million was collected for activity on NPR-A lands.

## Oil Revenue Trends

The table below shows unrestricted and restricted revenue paid by Alaska's oil and gas industry to the State of Alaska between FY2007 and FY2013.

**State of Alaska Oil Revenue, by Type, FY2007-FY2013 (\$Millions)**

	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
<b>Unrestricted Revenue</b>							
Production Tax	\$2,198.3	\$6,810.9	\$3,100.9	\$2,860.7	\$4,543.2	\$6,136.7	\$4,042.5
Royalties – Oil & Gas Bonuses, Rents, Interest	1,613.0	2,446.1	1,465.6	1,477.0	1,843.3	2,031.7	1,767.8
Petroleum Corporate Income Tax	594.4	605.8	492.2	446.1	542.1	568.8	434.6
Property Tax	65.6	81.5	111.2	118.8	110.6	111.2	99.3
Oil Conservation Surcharge	10.1	11.7	11.1	10.3	9.7	9.4	7.8
<b>Total Unrestricted Revenue</b>	<b>\$4,481.4</b>	<b>\$9,956.0</b>	<b>\$5,181.0</b>	<b>\$4,912.9</b>	<b>\$7,048.9</b>	<b>\$8,857.8</b>	<b>\$6,352.0</b>
<b>% All Unrestricted Revenue</b>	<b>87%</b>	<b>93%</b>	<b>89%</b>	<b>89%</b>	<b>92%</b>	<b>93%</b>	<b>92%</b>
<b>Restricted Revenue</b>							
Royalties to Permanent Fund & School Fund	\$545.6	\$850.5	\$670.8	\$707.2	\$870.9	\$919.6	\$855.9
Tax Settlements to CBRF*	101.9	476.4	202.6	552.7	167.3	102.1	176.7
NPR-A Royalties, Rents, and Bonuses	12.8	5.2	14.8	21.3	3.0	4.8	3.6
<b>Total Restricted Revenue</b>	<b>\$660.3</b>	<b>\$1,332.1</b>	<b>\$888.2</b>	<b>\$1,281.2</b>	<b>\$1,041.2</b>	<b>\$1,026.5</b>	<b>\$1,036.2</b>
<b>% All Restricted Revenue</b>	<b>9%</b>	<b>57%</b>	<b>-26%**</b>	<b>15%</b>	<b>9%</b>	<b>25%</b>	<b>12%</b>
<b>TOTAL Oil Revenue</b>	<b>\$5,237.4</b>	<b>\$11,288.1</b>	<b>\$6,069.2</b>	<b>\$6,194.1</b>	<b>\$8,090.1</b>	<b>\$9,884.3</b>	<b>\$7,388.2</b>
<b>TOTAL Net State Revenue</b>	<b>\$12,213.5</b>	<b>\$13,083.7</b>	<b>\$2,459.1</b>	<b>\$13,940.9</b>	<b>\$13,564.2</b>	<b>\$13,564.2</b>	<b>\$15,810.6</b>
<b>% of All State Revenue</b>	<b>43%</b>	<b>86%</b>	<b>247%**</b>	<b>44%</b>	<b>41%</b>	<b>73%</b>	<b>47%</b>

Source: Alaska Department of Revenue.

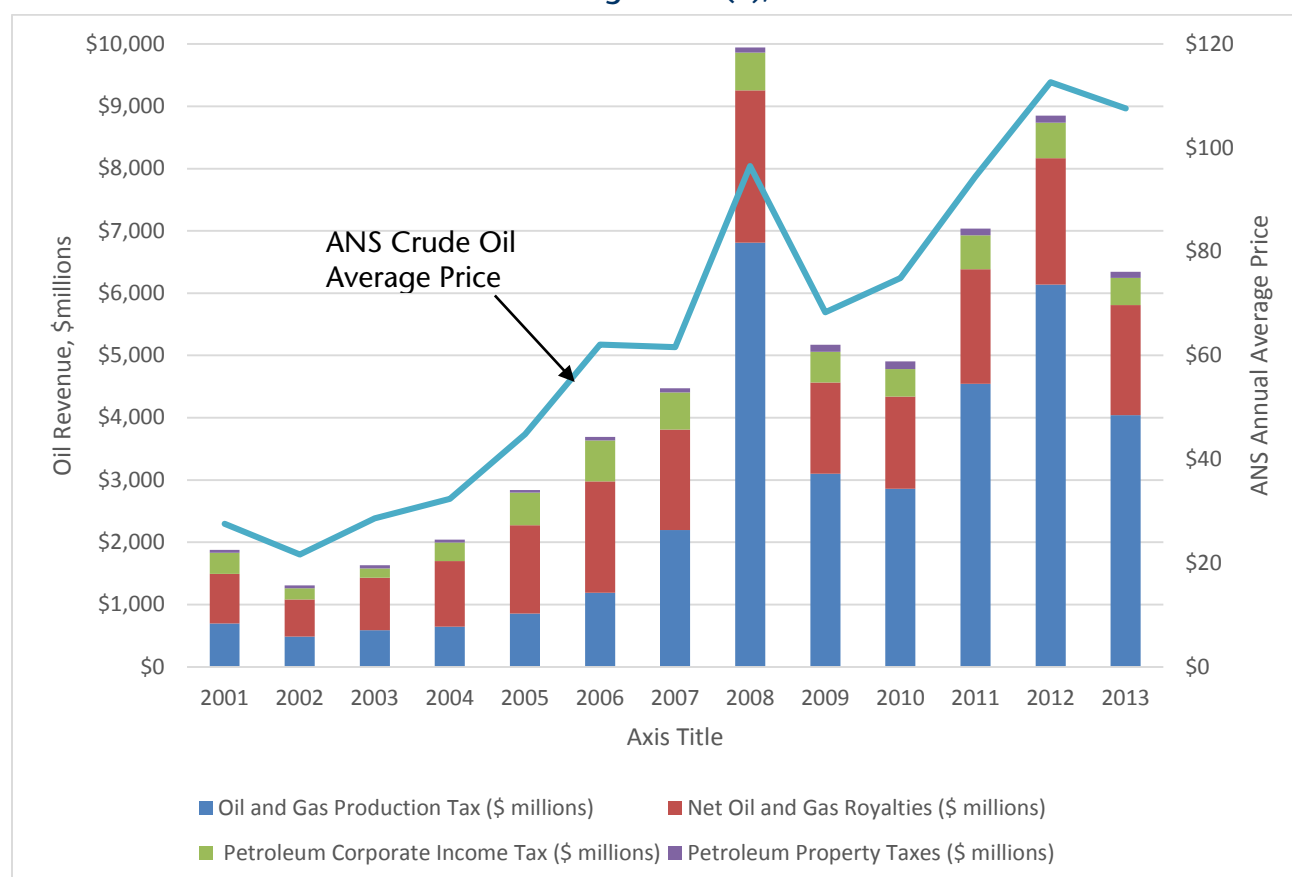
\*Constitutional Budget Reserve Fund.

\*\*Reflects poor investment earnings of the Constitutional Budget Reserve Fund, Alaska Permanent Fund, and other Treasury managed funds.

<sup>17</sup> <http://treasury.dor.alaska.gov/Investments/ConstitutionalBudgetReserve.aspx>

For more than a decade, oil revenue has fluctuated significantly as a result of volatile oil prices and changes in tax structure. In FY2002, total oil revenue was just \$1.3 billion and production taxes were below \$500 million. At the other extreme, FY2008 total oil revenue reached \$11.3 billion, and production taxes that year were 13 times higher at \$6.8 billion. When oil prices fell, state oil revenue also declined to around \$5 billion in 2009 and 2010. It rose again in FY 2011 (\$7 billion) and FY 2012 (\$9 billion), to dip once more to \$6.4 billion in FY2013.

**State Government Oil Revenue by Type (\$ millions) and  
ANS Annual Average Price (\$), FY 2001-2013**



Source: Alaska Department of Revenue.

## Oil Revenue-Related Impacts on State Government Funding and Employment

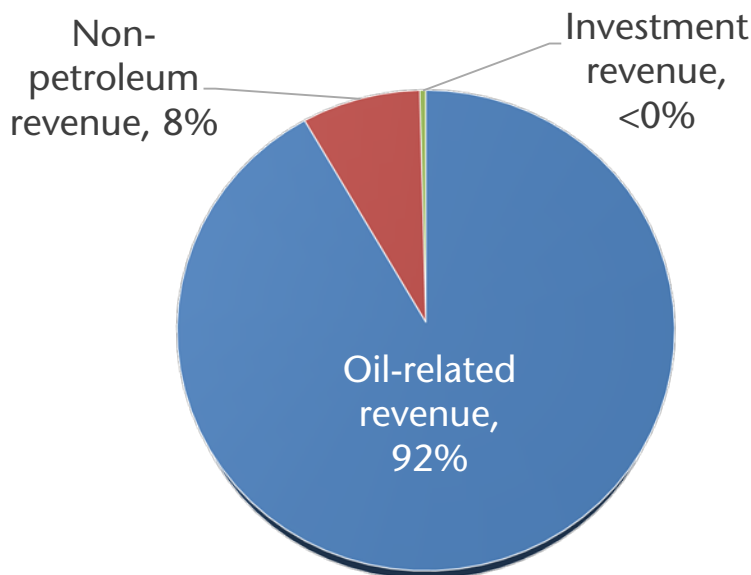
Employment and other indirect impacts are generated by taxes and other payments the oil and gas industry makes to state government. Those payments create jobs to support the operation of the state government and its programs, as well as support additional jobs in the private sector from state capital spending and non-payroll operational budget spending.

In FY2013, the state's combined operating and capital budget (authorized plus supplemental budget) was \$11.6 billion. Undesignated General Funds (UGF) make up the majority of these budgets (\$7.3 billion).

- In FY 2013, 58 percent (or \$6.7 billion) of the State's combined operating and capital budgets was funded by oil revenue-related UGF.

The impact of oil revenue-related UGF spending on state government employment and payroll is greater than the UGF spending alone. For example, UGF funds are used to leverage additional federal dollars, and there is the additional impact of restricted revenue spending. However, this analysis is limited to the direct impacts of oil revenue-related UGF to department spending and employment, and support of state government programs.

#### Sources of Unrestricted General Funds, FY2013



Source: Alaska Department of Revenue

#### STATE OF ALASKA FY2013 OPERATING BUDGET

In FY2013, the State's operating budget was \$8.5 billion, including:

- \$5.23 billion in UGF, or 62 percent of the total state operating budget, of which:
  - 92 percent, or \$4.8 billion, is oil-revenue-related UGF.

The remaining \$3.23 billion of the operating budget consisted of federal funds (\$2.0 billion or 24 percent of the total budget), Designated General Funds (\$756 million), and other funds (\$472 million).

#### Departmental Impacts

The following table shows department-by-department budget allocations by funding sources. While all departments depend on oil revenues to some extent, some are almost entirely dependent on oil revenues:

- By percent of total funding, departments most heavily dependent on oil-revenue-related UGF (50 percent or more) include: Corrections (81 percent of total operating budget), Public Safety (80 percent), Education and Early Development (77 percent), Law (62 percent) and Natural Resources (50 percent).
- By dollar amount, the Alaska Department of Education and Early Development (\$1.2 billion), and Health and Social Services (\$1.1 billion) are by far the largest recipients of oil-related UGF.

### State of Alaska Department Funding, By Source (\$Thousands), FY2013

State Departments	Undesignated General Funds (UGF)	Designated General Funds (DGF)	Other Funds	Federal Funds	Total Funding	% UGF from Oil Revenue of Total*	Funding Attributed to Oil Revenue
Corrections	\$279,385	\$20,662	\$15,735	\$3,113	\$318,893	81%	\$257,034
Public Safety	\$166,978	\$4,608	\$12,044	\$9,043	\$192,673	80	\$153,620
Education and Early Development	\$1,290,122	\$13,025	\$26,240	\$214,272	\$1,543,658	77	\$1,186,912
Law	\$62,993	\$2,430	\$26,952	\$834	\$93,209	62	\$57,953
Natural Resources	\$97,218	\$23,240	\$30,984	\$26,080	\$177,522	50	\$89,441
Health and Social Services	\$1,154,657	\$69,062	\$81,414	\$1,072,147	\$2,377,279	45	\$1,062,284
Transportation & Public Facilities	\$303,439	\$60,498	\$265,195	\$1,520	\$630,652	44	\$279,164
University of Alaska	\$362,945	\$279,521	\$78,012	\$127,525	\$848,003	39	\$333,909
Military and Veterans Affairs	\$22,787	\$16	\$11,018	\$19,592	\$53,413	39	\$20,964
Fish and Game	\$78,866	\$8,395	\$50,058	\$51,290	\$188,609	38	\$72,557
Commerce, Community, & Economic Development	\$57,904	\$69,928	\$31,811	\$32,694	\$192,337	28	\$53,272
Administration	\$82,909	\$24,140	\$198,411	\$2,874	\$308,334	25	\$76,277
Environmental Conservation	\$21,219	\$25,695	\$10,309	\$22,788	\$80,011	24	\$19,522
Labor and Workforce Development	\$35,062	\$30,185	\$20,488	\$73,616	\$159,351	20	\$32,257
Revenue	\$31,669	\$9,456	\$196,786	\$73,715	\$311,626	9	\$29,136

Source: Governor's Office of Budget and Management and Alaska Legislative Finance.

\*Assumes 92 percent of UGF derives from oil revenue to unrestricted funds.

In employment terms, because of the State's dependence on oil revenues to fund undesignated spending:

- Just over 10,210 positions (or 44 percent of all positions) in state government are funded by revenue from Alaska's oil and gas industry.
- The departments with the most positions (1,000+) supported by oil-related UGF include: University of Alaska system (1,949 positions, or 39 percent of all department positions), Department of Transportation & Public Facilities (1,690, or 44 percent), Department of Health and Social Services (1,631, or 45 percent), and Department of Corrections (1,377, or 81 percent)).

The table below provides a department by department employment allocation attributed to oil revenue-related UGF.

### State of Alaska Department Employment, FY2013

State Departments	Full-Time Positions	Part-Time Positions	Temporary Positions	All Positions	% of All Positions Supported by Oil Related UGF	# Positions Supported by Oil-Related UGF
University of Alaska	4,727	222	0	4,949	39%	1,949
Transportation & Public Facilities	3,185	405	227	3,817	44	1,690
Health and Social Services	3,469	65	116	3,650	45	1,631
Corrections	1,708	1	0	1,709	81	1,377
Public Safety	869	18	17	904	80	721
Fish and Game	928	715	68	1,711	38	658
Natural Resources	755	251	103	1109	50	559
Law	571	3	0	574	62	357
Education and Early Development	335	14	18	367	77	282
Administration	1,051	19	58	1,128	25	279
Labor and Workforce Development	869	77	46	992	20	201
Commerce, Community, & Economic Development	531	1	14	546	28	151
Environmental Conservation	551	0	7	558	24	136
Military and Veterans Affairs	339	2	2	343	39	135
Revenue	887	36	19	942	9	88
<b>Total</b>	<b>20,775</b>	<b>1,829</b>	<b>695</b>	<b>23,299</b>	<b>44%</b>	<b>10,214</b>

Source: Governor's Office of Budget and Management and Alaska Legislative Finance, and McDowell Group estimates.

### STATE OF ALASKA FY2013 CAPITAL BUDGET

In FY2013, the State's capital budget (authorized budget plus supplemental budget) was \$3.13 billion, including:

- \$2.1 billion in UGF, representing 66 percent of the total state capital budget, of which:
  - 92 percent, or \$1.9 billion, of UGF is directly connected to oil and gas revenue.

The remaining \$1.1 billion of the capital budget included federal dollars (\$901 million or 29 percent of the total budget), Designated General Funds (\$112 million), and other funds (\$48 million).

Capital funds allocated in one year may not actually be spent until the following year or even several years later. Using a three-year average of oil-related UGF (FY2011-FY2013) to take this spending lag into account:

- An average of approximately \$1.2 billion was spent in Alaska on state capital projects in FY2013. This activity generated approximately 7,000 jobs directly.



## ***Examples of Capital Projects***

Capital projects supported by General Fund allocations between FY2011 to FY 2013 covered a wide variety of infrastructure, such as:

- Sealaska Heritage Institute – Southeast Alaska Native Cultural and Visitor Center (\$1 million in General Funds, FY2011)
- University of Alaska Fairbanks Life Sciences Classroom and Lab Facility (\$88 million, FY2011)
- Palmer Senior Citizens Center (\$6 million, FY2011)
- Cordova Breakwater Extension and Boat Ramp (\$1.4 million, FY2012)
- Fort Yukon Solid Waste Disposal Facility (\$0.5 million, FY2012)
- Golden Valley Electric Association Eva Creek Wind Farm (\$10 million, FY2012)
- Sutton-Palmer Correctional Center Projects (\$0.6 million, FY2012)
- Angoon Headstart Playground (\$30,000, FY2013)
- Fairbanks North Star Borough Natural Gas Distribution System Development (\$3 million, FY2013)
- Kenai River King Salmon Sonar Assessment Program (\$1.8 million, FY2013)
- Kodiak High School Vocation and Physical Education Facilities (\$7 million, FY2013)

## **Statewide Impacts of Oil-related Revenue on Selected State Government Programs**

A multitude of state government programs have far-reaching impacts on Alaskans and Alaska communities. Below are some key examples of programs funded by oil- and gas-related revenue that have statewide implications, including:

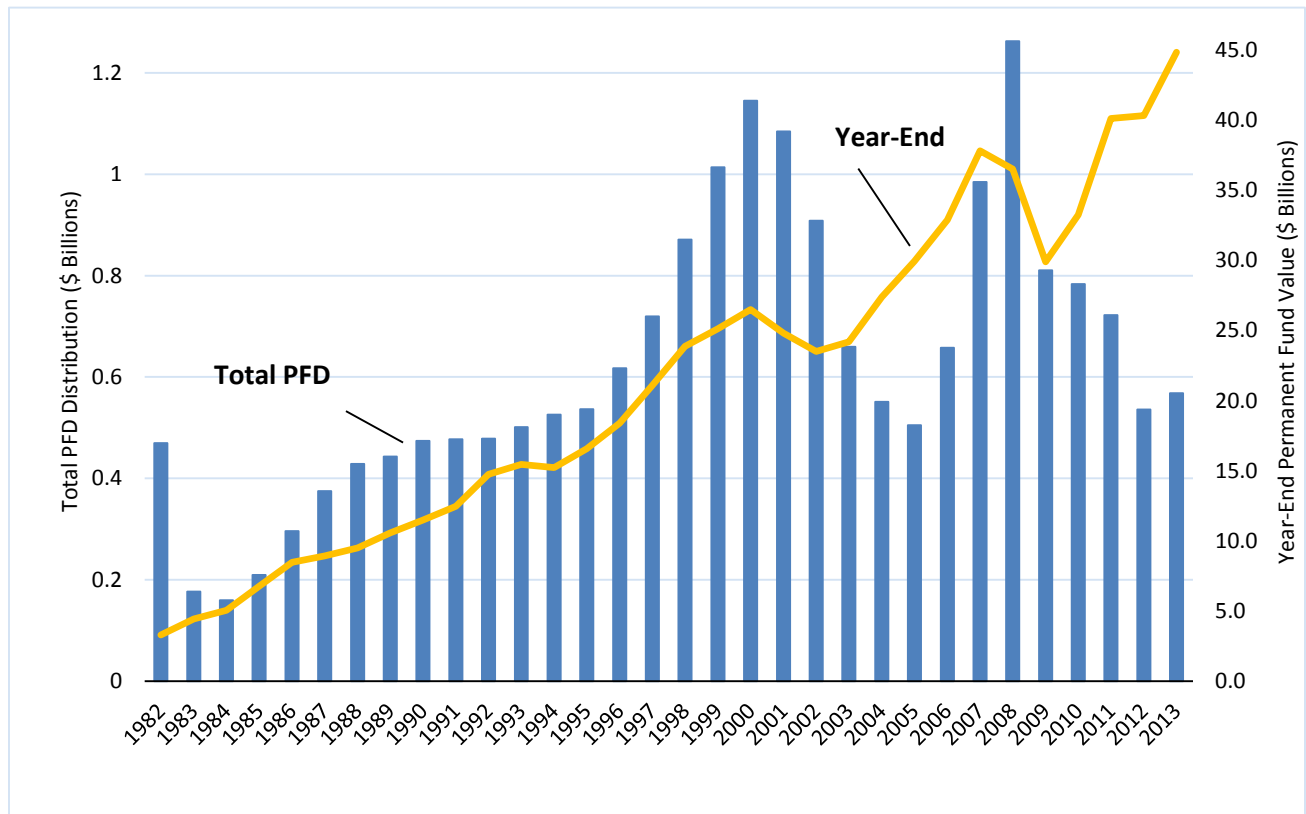
- Alaska Permanent Fund Dividend, affecting 631,470 Alaskans in 2013.
- State aid to K-12 Public Schools, affecting 129,021 Alaskan students, and funding to the University of Alaska in 2013.
- Medicaid payments, affecting approximately 137,700 recipients of health care services in 2013.
- Community Revenue Sharing Programs, affecting about 229 municipalities, boroughs, cities, and unincorporated communities throughout Alaska.

## **THE ALASKA PERMANENT FUND AND THE PERMANENT FUND DIVIDEND**

In 1976, as pipeline construction neared completion, Alaska voters approved a constitutional amendment to establish the Alaska Permanent Fund. The purpose of the Fund was to create a “Rainy Day” account to cover future volatility or decline in oil revenues. The principal of the fund represents at least 25 percent of all mineral lease rents, royalties, royalty sales proceeds, federal mineral revenue-sharing payments and bonuses.

- Virtually all of the Fund's principal comes from Alaska's oil and gas production royalty payments.
- By FY2013, the year-end balance of the Fund had grown to \$44.9 billion.<sup>18</sup>

### Year-End Permanent Fund Value and PFD Distributions, 1982-2013



Source: Alaska Permanent Fund Corporation

The Alaska Constitution says the principal of the Permanent Fund may not be spent. However, the earnings may be spent by the Alaska State Legislature for any public purpose, including Permanent Fund Dividend (PFD) distribution.

Perhaps the most recognizable impact the oil industry has had on the average Alaska resident is the PFD. Each fall, every Alaska resident – adults and children alike – receives a PFD check in an amount that has ranged from about \$400 to more than \$2,000. The initial legislation creating the dividend in 1980 was invalidated by the U.S. Supreme Court because it based the size of payments to recipients on their years of residency in Alaska. After adjustments were made to the legislation to authorize equal dividend payments to all residents, the first dividend of \$1,000 was distributed to Alaskans in 1982.

- A person who was a resident of Alaska from 1982 through 2013 – and filed their yearly applications for the dividend – received \$35,143 (or \$50,278 measured in 2013 dollars) in PFDs.
- In all, the Alaska Permanent Fund has paid about \$20 billion (or \$28 billion in 2013 dollars) to Alaskans over its history.

<sup>18</sup> [http://www.apfc.org/\\_amiReportsArchive/201403Proj.pdf](http://www.apfc.org/_amiReportsArchive/201403Proj.pdf)

These PFDs are a distinct and unique element of Alaska's economy. The PFD represents a large cash infusion that benefits every Alaska household:

- The PFD distribution in 2012 (\$536 million) represented 10 percent of all government transfer payments (\$5.3 billion) to Alaska residents.<sup>19</sup>

PFD payments serve an especially important role in rural Alaska, where opportunities to earn cash income are often limited. To illustrate, the 2013 median household income in Wade Hampton Census Area was an estimated \$40,608.<sup>20</sup> The average family household included five people. Assuming each member of the family received a \$900 PFD in 2013 (totaling \$4,500), the combined PFD income would represent 11 percent of that family's total household income.

A statewide survey conducted by McDowell Group in 2008 showed that 62 percent of Alaskans used a portion of their PFD to pay for household expenses (such as maintenance, rent, utility bills), 58 percent saved or invested a portion of their PFD, including college funds, 40 percent used it to pay debt (such as credit card debt, garnishment, child support payments), 33 percent used it for vacation, 31 percent donated a portion to a charity, and 19 percent used it to make a major purchase of more than \$500 (such as snow machines, TVs, four-wheelers).<sup>21</sup> Like other income that enters Alaska's economy, the PFD supports additional jobs and income beyond the initial payment to recipients and has far-reaching impacts on many sectors in Alaska's economy (which are described in more detail later in this chapter).

## STATE FUNDING OF K-12 SCHOOLS AND THE UNIVERSITY OF ALASKA

### *K-12 Support*

Support of Alaska's public K-12 school funding is determined using a "foundation formula" (adopted in 1998). The formula calculates the amount of state aid to individual school districts each year based on student enrollment, defined as the "average daily membership" (ADM). ADM is adjusted for variations in school size, geographic cost differentials, special and intensive needs student populations, correspondence programs, federal aid, and the ability of communities to provide local contributions. The adjusted ADM is then multiplied by the Base Student Allocation (BSA) to determine each district's level of state funding.

In FY2013,

- 76 percent (or \$1.2 billion) of Alaska Department of Education and Early Development (DEED)'s total budget (\$1.5 billion) was allocated to state aid to Alaska's K-12 public schools.
  - 97 percent (\$1.15 billion) of state aid to public schools was funded by UGF.
    - Oil revenue-related UGF was \$1.05 billion (92 percent of UGF).
- The ADM was 129,021 Alaska public school students.

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<sup>19</sup> Bureau of Economic Analysis, Personal Income data.

<sup>20</sup> American Community Survey 2008-2012 Five-Year Average data.

<sup>21</sup> McDowell Group, *A Statewide Household Survey of Alaskan Giving*, prepared for The Alaska Giving Coalition, March 2008.

- On average, each student received approximately \$9,100 in state aid, including a BSA of \$5,680, and other funding support (such as adjustments of ADM, pupil transportation, DEED grants, etc.).
  - Approximately \$8,900 per student was funded by UGF.
    - Approximately \$8,170 per student was oil revenue-related UGF, or \$9 out of every \$10 of K-12 student support was supported by oil revenue.
- Oil revenue supports 90 percent (\$5,100) of total BSA allocated to each public school student.

### ***University of Alaska System***

The University of Alaska system includes University of Alaska Anchorage (UAA), University of Alaska Fairbanks (UAF), and University of Alaska Southeast (UAS). About 35,000 full- and part-time students are enrolled system-wide. The university employs thousands of people and contributes an estimated \$1.1 billion annually to the Alaska economy.<sup>22</sup>

- In FY2013, \$363 million in UGF was used to support the University of Alaska system, or 43 percent of its total receipts from the state's operating budget, or 39 percent of its budget from oil-revenue-related UGF.
  - For the UAF campus, 45 percent (\$112 million) of its total operating budget is funded by oil-related revenue.
  - For the UAA campus, 39 percent (\$102 million) is oil-related revenue.
  - For the UAS campus, 52 percent (\$21 million) is oil-related revenue.

### **MEDICAID PAYMENTS**

Medicaid is the nation's major source of health insurance for low-income families and also covers long-term care services for the elderly and disabled. The Medicaid program in Alaska is administered by the Alaska Department of Health and Social Services.

Medicaid financing rules require states to spend their own funds to receive federal financial match for Medicaid services.<sup>23</sup> The federal government covers 50 percent of state expenditures for the majority of Medicaid services for eligible recipients and 65 percent of state expenditures for eligible children (ages 0-18) and expectant and new mothers (60 days after birth). Coverage for children and new mothers is handled through the Denali Kid Care program (Alaska's Children Health Insurance Program).<sup>24</sup>

In recent years, there has been a concentrated push to enroll eligible individuals in Medicaid, and the number of beneficiaries has grown 18 percent since 2008.

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<sup>22</sup> *Economic Impact of the University of Alaska*, prepared by McDowell Group, August 2012.

<sup>23</sup> There are no federal limits on program spending.

<sup>24</sup> The Federal Medical Assistance Percentage (FMAP) and Enhanced Federal Medical Assistance Percentage (eFMAP) are formula based and can vary. The eFMAP for 2013 is 65 percent.

- In 2012, 137,678 individuals received medical benefits through the Medicaid Program.<sup>25</sup>
- The state's FY2013 budget for Medicaid was \$1.4 billion, including \$605 million in UGF (42 percent of total), \$836 million in federal support (58 percent), and \$7 million in other funding (<1 percent).
  - UGF related to oil revenue accounted for 38 percent (or \$557 million) of Alaska's Medicaid program budget.
- Since state funds are required to obtain the federal match, without oil revenue the entire Medicaid program in Alaska would be at risk.
  - Approximately \$9 of every \$10 of Alaska's state match of federal dollars is related to oil revenue (\$557 million out of \$612 million total)
  - Approximately \$4 of every \$10 spent on Medicaid in Alaska (both state and federal funds) is related to oil revenue (\$557 million out of \$1.4 billion).

## COMMUNITY REVENUE SHARING PROGRAMS

The Community Revenue Sharing program is one of the most important sources of non-locally generated operating revenue for Alaska's communities (*AS 29.60.850-.879* and *3 AAC 180*). The Community Revenue Sharing Program annually provides Alaska's boroughs, cities, and unincorporated communities with funds vital to the delivery of basic public services. Payments received from the State by communities can be used at their discretion for any public purpose.<sup>26</sup> Municipalities and unincorporated communities may receive, upon application, a base payment, plus a per capita payment.

The Community Revenue Sharing Fund is established in the State's General Fund (of which 92 percent is funded by oil-revenue-related UGF). One-third of the Fund's amount is distributed by the Alaska Department of Commerce, Community and Economic Development. If the fund balance falls below \$60 million, no payments may be made from the fund. Historically, the Fund has had a balance of \$180 million, so \$60 million withdrawn by the Department for distribution is replenished each year.

- Since the Fund's inception in 1985, \$1.6 billion (or \$2.7 billion in 2013 dollars) has been distributed.
- An estimated \$9 of every \$10 distributed from the Fund is oil-revenue-related, reaching about 229 municipalities, boroughs, and unincorporated communities throughout Alaska.

The Legislature appropriates the fund using revenue from the Oil and Gas Production Tax at base payments of:

- \$480,000 for Municipalities, of which \$441,600 comes from oil-related UGF
- \$384,000 for Organized Boroughs (\$353,280 oil-related UGF)
- \$96,000 for Cities (\$88,320 oil-related UGF)

<sup>25</sup> Source: FY14 Budget Overview citing MMIS/JUCE. Count includes beneficiaries for whom a direct services claim was paid. Total associated payment is \$731.7 million. Excludes CAMA, Senior Care Drug and Public Assistance field service benefits.

<sup>26</sup> <http://www.commerce.alaska.gov/dnn/dcra/CommunityAidAccountability/CommunityRevenueSharing.aspx>

- \$32,000 for Unincorporated Communities in the unorganized borough (\$29,440 oil-related UGF)
- \$20,200 for Unincorporated Communities in organized boroughs (\$18,580 oil-related UGF)

If the amount of funding available exceeds the amount needed to fund the basic payments, the balance is distributed on a per capita basis, excluding the unincorporated communities located within organized boroughs.

For some of Alaska's smaller communities, the Revenue Sharing program is critical to sustain their operations. Two examples include Akhiok where program funding accounted for 57 percent of the community's revenues (\$138,880 out of \$241,437 total (FY2014)) and Eagle where receipts from the program's fund represented 70 percent of its total revenue (\$95,000 out of \$136,240 total (FY2013)). This funding helps support government services throughout communities and also generate economic activity (in the form of local government staffing, operating expenses, or community projects.)

## **Local Government Revenue**

Property taxes are paid directly to local governments by businesses and perform a similar role to state revenue sharing in that they represent unrestricted revenue to communities. The choice for both state and local governments if they did not have the oil-related revenue would be to provide fewer services and spend less on capital projects, raise more taxes from businesses and households, or most likely some combination of both.

### **Oil and Gas Property Taxes**

Oil and gas property is assessed and taxed by the state and then distributed to the local government entities in which the property is located.

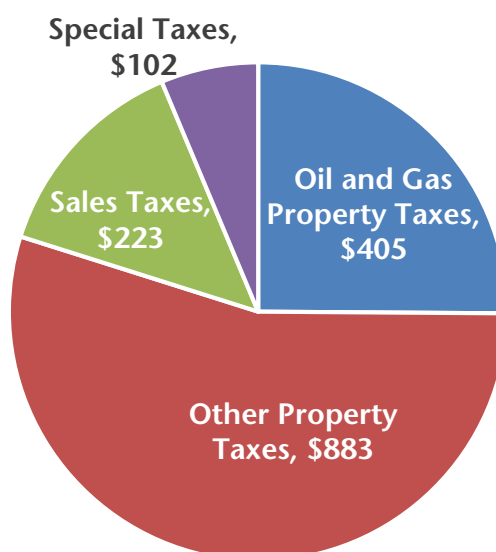
- Oil and gas property taxes totaled \$405 million in FY2013 and made up 25 percent of all local tax revenue collected in Alaska.

Oil and gas property tax revenue rose 6 percent from FY2012 to FY2013. During the same period, sales tax and special tax revenue increased 3 percent and 9 percent respectively.<sup>27</sup>

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<sup>27</sup> Special taxes apply to motor fuel, raw fish, hotel beds, and alcohol and tobacco products, among others.

**Local Government Tax Revenue by Major Category, FY 2013**  
(\$ millions)



Source: Alaska Department of Commerce, Community and Economic Development.

The table below shows the assessed full value of oil and gas property in Alaska, which is highest in the North Slope Borough (\$18.8 billion) because of the many production facilities there. High assessed values in the Fairbanks North Star Borough (\$952 million) and Valdez (\$2.6 billion) result from TAPS and marine terminal facilities. Production facilities in Kenai Peninsula Borough were assessed at \$990 million in 2013.

**State Taxable Oil and Gas Property, Full Value (\$ millions), 2007 – 2013**

	2007	2008	2009	2010	2011	2012	2013
<b>Borough or Municipality</b>							
Anchorage	\$264.9	\$92.3	\$235.9	\$229.0	\$255.4	\$283.3	\$350.8
Fairbanks North Star	369.5	508.8	694.1	763.4	705.6	669.2	951.7
Kenai	607.1	635.3	703.10	714.0	699.0	810.1	989.8
Mat-Su	2.7	7.2	6.0	7.7	7.2	7.1	7.8
North Slope	11,415.7	12,713.0	14,638.0	16,113.5	16,591.8	17,427.0	18,784.7
<b>Cities in Unorganized Boroughs</b>							
Cordova	\$4.40	\$5.9	\$9.0	\$10.1	\$8.7	\$8.6	\$12.5
Valdez	992.9	1,327.1	1,978.6	2,151.2	1,943.9	1,882.7	2,676.7
Whittier	0.7	0.9	1.5	1.7	1.5	1.5	2.1
<b>Subtotal</b>	<b>13,657.8</b>	<b>15,290.4</b>	<b>18,268.0</b>	<b>19,990.5</b>	<b>20,213.0</b>	<b>21,089.4</b>	<b>23,776.1</b>
<b>Outside Taxing Jurisdictions</b>	<b>1,957.5</b>	<b>2,634.0</b>	<b>3,813.2</b>	<b>4,045.6</b>	<b>3,609.2</b>	<b>3,402.3</b>	<b>4,874.6</b>
<b>State Oil &amp; Gas Full Value Assessment</b>	<b>\$15,615.30</b>	<b>\$17,924.40</b>	<b>\$22,082.10</b>	<b>\$24,036.10</b>	<b>\$23,822.19</b>	<b>\$24,491.7</b>	<b>\$28,650.6</b>

Source: Alaska Department of Commerce, Community and Economic Development.



- North Slope oil and gas property tax revenues were \$348 million in 2013, or 99 percent of all property tax revenue collected by the North Slope Borough.
- Oil and gas property taxes made up 88 percent of property tax revenue in Valdez and significant percentages in the Kenai Peninsula Borough (14 percent) and the Fairbanks North Star Borough (8.4 percent).
- In 2013, oil and gas property taxes accounted for a third (34 percent) of all property tax revenue to all of Alaska's municipalities and boroughs that receive property tax payments for oil and gas infrastructure in their jurisdictions.
- Total oil and gas property taxes to local governments increased by \$148 million, or 74 percent, between 2007 and 2013.

### Local Revenues from Oil & Gas Property Taxes (\$ millions), 2007 - 2013

	2007	2008	2009	2010	2011	2012	2013	% of Total 2013 Property Tax Receipts
<b>City, Borough, or Municipality</b>								
Anchorage	\$4.2	\$3.5	\$1.4	\$3.5	\$3.4	\$3.9	\$5.5	1.1%
Fairbanks North Star Borough	5.7	5.3	6.9	9.3	10.7	9.6	9.1	8.4
Also taxed by City of Fairbanks	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.7
Kenai Peninsula Borough	7.0	6.7	6.6	6.8	7.1	6.7	7.8	13.7
Also taxed by City of Kenai	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3
Mat-Su	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1
North Slope	199.1	211.5	235.2	270.8	307.1	322.4	347.5	99.2
Valdez	19.9	26.5	39.6	43.0	43.8	38.9	34.5	88.0
All Other (Cordova/Whittier)	<0.1	<0.1	<0.1	0.1	0.1	<0.1	<0.1	2.4
<b>Total Oil &amp; Gas Property Tax Revenues</b>	<b>\$236.0</b>	<b>\$253.7</b>	<b>\$289.9</b>	<b>\$333.9</b>	<b>\$372.3</b>	<b>\$382.1</b>	<b>\$405.2</b>	<b>33.9%</b>
<b>Adjusted Tax Revenues (2013 Dollars)</b>	<b>\$265.2</b>	<b>\$274.5</b>	<b>\$314.8</b>	<b>\$356.7</b>	<b>\$385.6</b>	<b>\$387.5</b>	<b>\$405.2</b>	<b>33.9%</b>

Source: Alaska Department of Commerce, Community and Economic Development.

## Employment Impact of State and Local Oil Revenue

As described above, taxes and royalties payments from the oil and gas industry to state and local governments are used to fund a broad range of agency operations, programs and projects. As these oil-related revenues are spent, thousands of jobs and millions of dollars in wages are generated across Alaska. Economic modelling conducted for purposes of this study provide estimates of the total (direct, indirect, and induced) employment and wage impacts associated with government spending of oil-related revenue. The results of that analysis are summarized in the following table (*see next page*).

## Employment and Wages Related to Oil Industry Taxes and Royalties in Alaska, 2013

	Spending of Oil & Gas Taxes & Royalties (\$billions)	Total Employment	Total Annual Wages (\$billions)
State Agencies (agencies plus UA)	\$2.3	19,500	\$1.03
State Programs (K-12 education, Medicaid, etc.)	\$1.9	22,200	\$1.02
State Capital Projects (3-year average)	\$1.2	12,000	\$0.63
Permanent Fund Dividend (3-year average)	\$0.6	3,300	\$0.14
Local Government Operations and Projects	\$0.4	3,500	\$0.16
<b>Grand Total</b>	<b>\$6.3</b>	<b>60,500</b>	<b>\$2.98</b>

Source: Alaska Legislative Finance and McDowell Group estimates.

Employment and wages impacts in FY2013 include,

- *State Agency Operations:* \$2.3 billion in unrestricted oil and gas revenues were used to fund state agency operations (including the University of Alaska). That spending funded a total of 19,500 jobs, included approximately 10,000 state government jobs and another 9,500 jobs in the support sector. These jobs accounted for a total of \$1.03 billion in annual wages.
- *Statewide Program Expenditures:* Approximately \$1.9 billion in state program expenditures (of oil and gas derived revenues) generated approximately 22,200 jobs in schools, medical care facilities, and throughout the support sector.
- *Capital Spending:* Approximately \$1.2 billion of oil-related revenue was used to fund capital projects. While this capital funding is often matched with funding from other sources (especially federal dollars), in general this level of construction spending would have direct, indirect, and induced effects of approximately 12,000 jobs and \$630 million in wages.

Oil revenues also fund the Alaska Permanent Fund. Over the past three an average of \$600 million has distributed to Alaska's through the PFD program. The portion of those dividends that is spent in Alaska creates jobs and income.

- *PFD Distribution:* Assuming the dividends are spent much like other household income, PFD spending accounts for an estimated 3,300 jobs and \$140 million in annual wages.

Finally, local governments took in \$405 million in property tax payments from the oil and gas industry in FY2013. Property tax revenues are spent to provide a range of local government services, somewhat similar to state government.

- *Local Government:* An estimated 3,500 direct, indirect and induced jobs are connected to spending oil and gas property taxes paid to local governments. These jobs account for approximately \$160 million in annual wages.

In summary, taxes and royalties paid by the oil and gas industry account for just over 60,000 jobs in Alaska and \$3 billion in annual wages.

## Appendix A. Published Trends in Alaska's Oil and Gas Industry

This appendix discusses trends in the oil and gas industry as it is narrowly defined in government statistics, including those compiled by ADOLWD, the Alaska Department of Revenue, the U.S. BEA, the U.S. Bureau of Labor Statistics, and others.

Published employment data indicates Alaska oil and gas industry employment – as defined and published by the U.S. Bureau of Labor Statistics and ADOLWD – peaked in August 2013 at 14,500 jobs. Between 2003 and 2013, the industry added 6,000 jobs (computed as annual average employment). This was a 74 percent increase from the 2003 level of 8,100 jobs.

**Alaska Oil & Gas Industry Employment, Published Data,\*  
2001 to 2013**

Year	Annual Average	Peak Month
2001	9,500	9,800
2002	8,900	9,200
2003	8,100	8,400
2004	8,200	8,500
2005	8,700	9,300
2006	10,100	10,700
2007	11,500	12,000
2008	12,800	13,700
2009	12,900	13,600
2010	12,700	13,400
2011	13,000	13,400
2012	13,600	14,300
2013	14,100	14,500

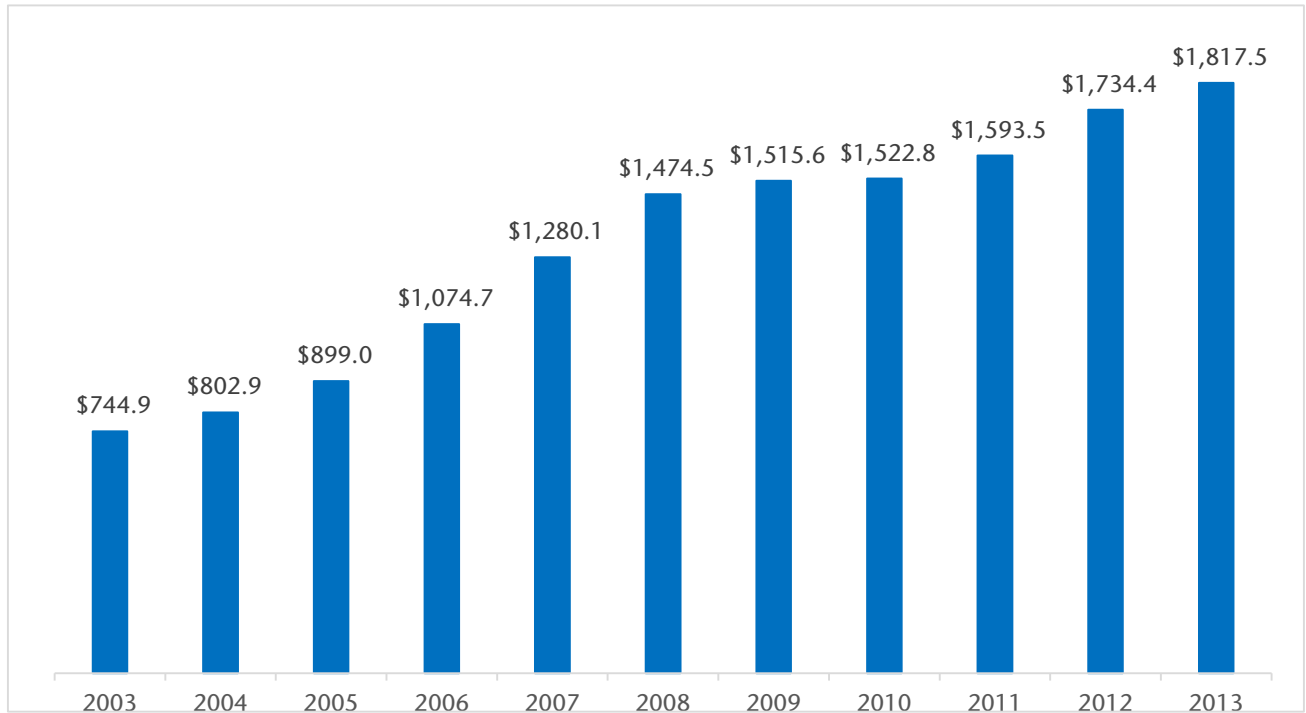
Source: ADOLWD.

\*NAICS Sectors 211 (oil and gas extraction), 213111 (drilling oil and gas wells), and 213112 (support activities for oil and gas operations).

Published wage data, as shown in the following table, for the oil and gas industry shows a leveling off of wages between 2009 and 2010, with renewed growth since 2011. Between 2012 and 2013, published wage data indicates a 5 percent increase.

The subsequent table shows North Slope oil employment since 1980 compared to annual average daily production. Even with improvements in technology and more employment, production has continued its steady decline since peak production in 1988.

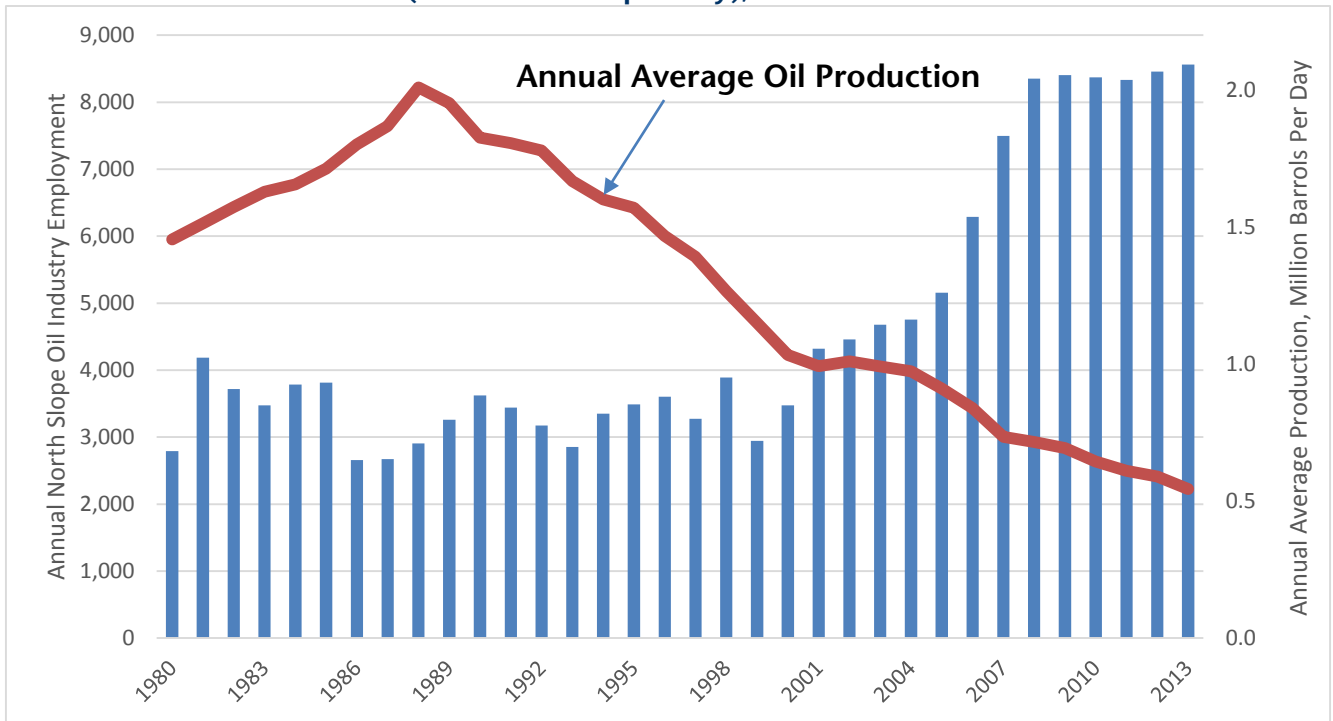
### Annual Oil and Gas Industry Wages, Published Data, 2003-2013 (\$ millions)



Source: ADOLWD

\*NAICS Sectors 211 (oil and gas extraction), 213111 (drilling oil and gas wells), and 213112 (support activities for oil and gas operations).

### Annual North Slope Oil Industry Employment and Average Daily Production (Millions Barrel per Day), 1980-2013



Source: Bureau of Economic Analysis, Alaska Department of Revenue, and McDowell Group (2013) employment estimates

# Appendix B: Published Workforce Residency Data

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## Published Trends in Oil and Gas Workforce Residency

ADOLWD's methodology for calculating workforce residence is based on Permanent Fund Dividend (PFD) applications and produces a conservative estimate of "resident" employment. A new resident to Alaska must reside in the state for a full calendar year before he or she is eligible to apply for a PFD. A new Alaska resident who arrived in the state in March of 2013, for example, would not be eligible to apply for a PFD until the 2015 application period. As a result, this person would actually reside in Alaska for nearly two years before being recorded as an Alaska resident.

ADOLWD publishes data on the residency of Alaska's oil and gas industry workforce, again using a narrower description for the industry that excludes the refineries, pipeline transportation companies, and the large number of businesses that provide services directly to oil and gas producers, including construction companies, transportation providers, camp support services firms, engineering firms, and others.

The data on nonresident and resident employment are slightly different than the employment numbers in that they are a count of individual workers who worked in the industry at any point during the year, rather than an average number of jobs in the industry over 12 months. That is why the total number of workers in the chart below does not match the annual average employment totals in the chart above.

In the last 12 years, the total number of Alaskans employed in the oil and gas industry at some point during the year hit a low point in 2003 at just over 8,000 workers. The low point for nonresident employment was also in 2003 at about 2,900. Between 2008 and 2012, overall employment increased and held steady just under the 12,000 mark with a similar ratio of resident to nonresident workers.

The share of nonresidents in Alaska's oil and gas industry workforce has been fairly steady at between 26 percent and 32 percent over the decade.

**Alaska Oil & Gas Industry Workforce Residency, 2001 – 2012**  
**Oil and Gas Extraction and Support Services Combined**

Year	Alaska Resident Employment	Nonresident Employment	Total	Nonresident Percent of Total
2001	10,480	4,068	14,548	28%
2002	9,315	3,200	12,515	26
2003	8,056	2,914	10,970	27
2004	8,126	3,167	11,293	28
2005	8,186	3,442	11,628	30
2006	10,102	4,495	14,597	31
2007	10,941	4,531	15,472	29
2008	11,887	5,043	16,930	30
2009	11,841	4,627	16,468	28
2010	11,853	5,226	17,079	31
2011	11,747	5,302	17,049	31
2012	11,971	5,530	17,501	32

Source: ADOLWD.

ADOLWD provided 2012 data on worker residency for the oil and gas extraction, drillers, support services, refineries and pipelines. On average, just under 30 percent of oil and gas industry workers are not residents of Alaska (i.e., were not eligible to receive a PFD).

**Alaska Residents in the Oil & Gas Industry Workforce, 2012**

	Resident Workers	Nonresident Workers	Nonresident % of Total	Resident Wages (\$millions)	Nonresident Wages (\$millions)	Nonresident % of Total
Oil & Gas Extraction	3,272	1,155	26.1%	\$548.9	\$195.2	25.2%
Drilling Oil and Gas wells	776	293	27.4	68.8	21.8	24.1
Support Services	7,925	4,080	34.0	628.1	323.0	34.0
Refineries and Pipelines	1,503	118	7.2	165.1	10.0	5.7
<b>Total</b>	<b>13,476</b>	<b>5,646</b>	<b>29.5%</b>	<b>\$1,410.9</b>	<b>\$550.0</b>	<b>28.0%</b>

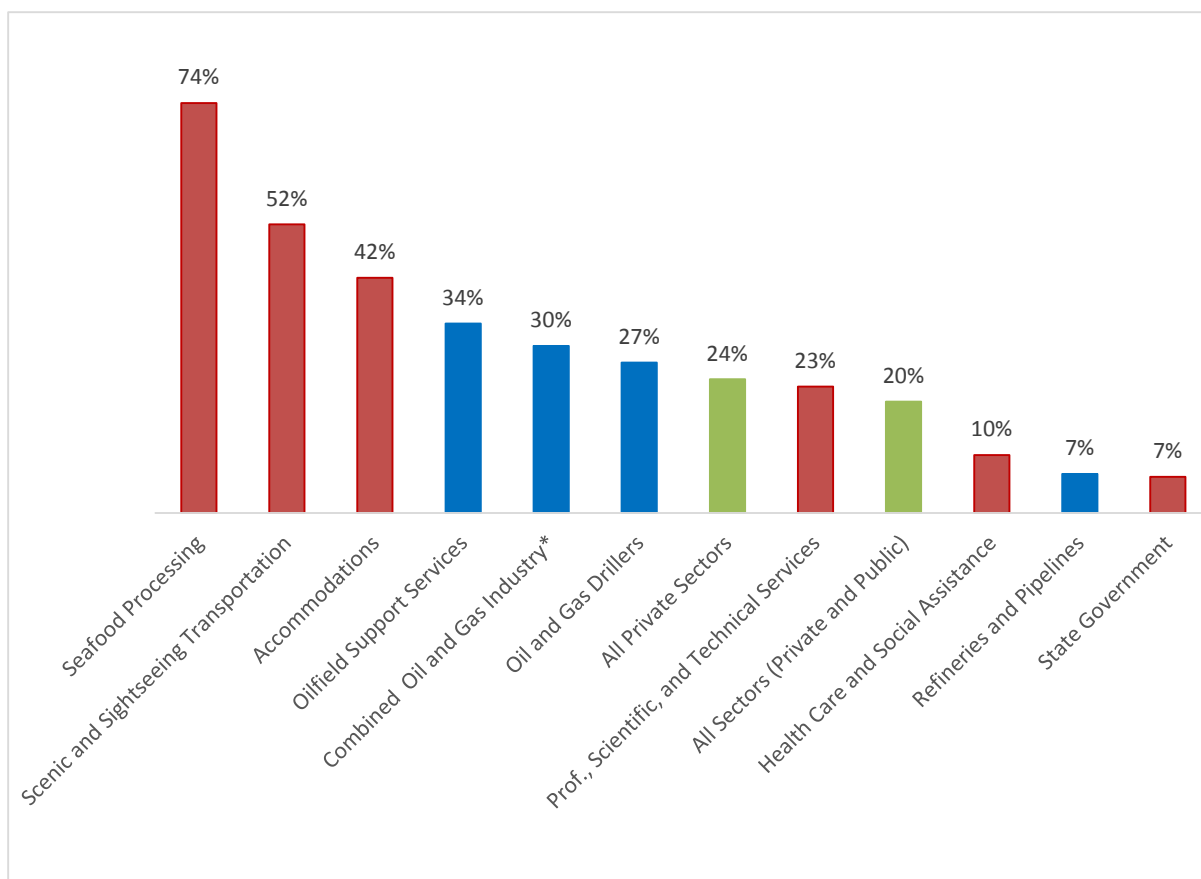
Source: ADOLWD.

Note: Data based on worker counts rather than annual average employment.

A more complete picture of resident participation in Alaska's oil and gas industry would include those businesses that provide goods and services directly to oil and gas producers. However, those figures are not captured by published government statistics.

Regardless of the measure used, it is important to note Alaska's economy overall relies on a significant nonresident workforce. Statewide, 24 percent of the private workforce was defined as nonresident in 2012. Sectors with higher nonresident participation than the oil and gas industry include seafood processing (74 percent nonresident), Scenic and Sightseeing Transportation (52 percent), and Accommodations (42 percent). Even state government has 7 percent nonresident workers, mainly because of the lag between the time a person may move to the state and the time when the data recognizes them as a resident.

### Percent Nonresident Workers in Alaska, by Sector, DOLWD Published Data, 2012



Source: ADOLWD.

Note: \*Combined oil and gas industry includes oil and gas extraction, drillers of oil and gas wells, oil and gas support services, refineries, and pipeline companies.