OKLAHOMA'S OIL AND GAS ECONOMY

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Defining Oklahoma's Oil and Gas Cluster

Oklahoma has served as a major domestic oil and gas hub for more than a century and remains home to a substantial and growing concentration of oil and gas related activity. The largest and most visible components of state oil and gas activity remain the two traditional tasks of drilling and production. However, often ignored in evaluating the state's oil and gas presence is the large and vibrant group of ancillary oil and gas-related industries that have long operated across the state. The largest among these are refineries, petroleum product manufacturing, oil field machinery and equipment, pipelines, and surveying and mapping. Firms in these related industries are closely tied to oil and gas production and tend to locate within or adjacent to oil and gas producing regions over time.

The combination of the traditional sectors along with related ancillary industries comprise the Oklahoma oil and gas *cluster*. Clusters are defined as geographic concentrations of industries related by knowledge, skills, inputs, demand, and/or other linkages. By many measures, oil and gas is the largest and most strategic industry cluster in the Oklahoma economy. Empirical economic research continues to demonstrate that the concentration of an industry cluster such as oil and gas can have significant positive effects on a regional economy through job creation and business formation. Wherever the core of an industry is based, related firms will follow. Most firms in the ancillary sectors of the oil and gas cluster likely would not be located within Oklahoma if traditional oil and gas drilling and production were not taking place in the state.

Cluster Industries. In defining and examining Oklahoma's oil and gas cluster, this report uses the set of industry sectors defined by the U.S. Cluster Mapping Project. The approach measures the relatedness of industries using economic input-output linkages, patterns in labor use, co-location of employment, and proximity of establishments. Only industries that are deeply integrated with the core oil and gas sectors are considered for inclusion in the state's oil and gas cluster.

Throughout the report the oil and gas cluster consists of eight NAICS industry sectors at various levels of aggregation. The first three sectors include the traditional areas of oil and gas drilling, production, and support activity: 1) *drilling new wells* (NAICS 213111), 2) *production of crude oil and natural gas* (NAICS 211), and 3) *support functions for drilling and production* (NAICS 213112). The remaining five sectors include industries with well-established ties to oil and gas drilling and production: 1) *refineries* (NAICS 324110), 2) *other forms of petroleum manufacturing* (NAICS 32419), 3) *oil and gas field machinery and equipment manufacturing* (NAICS 33313), 4) *pipelines* (NAICS 486), and 5) *surveying and mapping* (NAICS 541360).

Firms that comprise the state's oil and gas cluster are found upstream, midstream, and downstream in the oil and gas channel. The traditional tasks of drilling and exploration are the primary upstream activities but include other related sectors such as oil and gas field equipment manufacturing, seismology, surveying, mapping, data analysis, and other sectors. Firms engaged in the midstream activities of transportation, storage, and marketing include the state's extensive pipeline and storage sectors along with many firms engaged in marketing and wholesaling of oil and gas-related products. Firms engaged in downstream activities, primarily refining and processing, include the state's refineries, processing plants, and other forms of manufacturing from petroleum products.

Other Related Oil and Gas Industries. In evaluating the state's oil and gas cluster, it is important to note that the approach used by the U.S. Cluster Mapping Project is quite conservative in that it captures only those ancillary industries that are typically present across all oil and gas clusters. The approach used can exclude other industry sectors that may have a more highly developed presence in some oil and gas producing regions, particularly highly developed regions such as Oklahoma.

Several additional industries are closely tied to the state's oil and gas sector, either through buying/selling arrangements, shared workforce, proximity, or other linkages but are not included in Oklahoma's oil and gas cluster in this report. These potential sectors include Natural gas distribution (NAICS 221210), Oil and gas pipeline construction (NAICS 237120), Petrochemical manufacturing (NAICS 325110), Industrial gas manufacturing (NAICS 325120), Cyclic crude, intermediate, & gum and wood chemical manufacturing (NAICS 325194), Plastics and resins manufacturing (NAICS 325211), Industrial valve manufacturing (NAICS 332911), Other industrial machinery manufacturing (NAICS 333249), Wholesale industrial machinery and equipment merchants (NAICS 423830), Petroleum bulk stations and terminals (NAICS 424710), Petroleum and petroleum products merchant wholesalers 424720), and Fuel Dealers (NAICS 454310).

These sectors are often classified within another cluster (e.g., chemicals, utilities, or construction) rather than attributed to oil and gas. While this may be consistent with industry patterns in non-energy states, the size of these sectors is typically far larger in Oklahoma and other major oil and gas producing states yet go unaccounted for using standard cluster definitions. Hence, the definition used throughout the report is believed to represent a conservative definition of the size and breadth of the state's oil and gas cluster.

I. Current Conditions - COVID and Oklahoma's Oil and Gas Sector

2020 Market Downturn. Oklahoma's oil and gas industry was already undergoing contraction and restructuring in early 2020 when the Covid-19 pandemic surfaced. The industry was facing an aggressive surge in OPEC+ oil production, loss of global market share, a steep pullback in domestic drilling, and concerns over industry debt burdens. Recently increased state severance tax rates were weighing on margins and limiting the state's competitiveness relative to other producing regions.

Industry uncertainty spiked further in the first half of 2020 as energy demand plummeted and energy prices collapsed. An already contracting industry was further weakened by an immediate and steep decline in global demand for petroleum products as federal, state, and local governments instituted stringent closure and social distancing rules.

The weakness in drilling that began in 2019 accelerated in early 2020 and left the state with fewer than a dozen active drilling rigs, the fewest rigs operating in Oklahoma in the modern era of oil and gas exploration. A significant share of state oil and gas production was shut-in, reducing top-line revenue, royalties, and production taxes.

The resulting collapse in oil prices in April 2020 reset the thinking on how low oil prices can go as oil futures collapsed to negative prices. The negative demand shock produced a surge in oil inventories in Cushing, Oklahoma and other storage locations, including sea-based storage on rented tankers.

Subdued Recovery Underway. Conditions stabilized relatively quickly following the collapse in oil prices, but at far lower levels of prices, production, and drilling. International threats diminished as OPEC+ announced production cuts, but oil prices climbed back to only the $40 per barrel range.

Modest industry expansion was visible in the 3rd and 4th quarters of 2020, with stronger growth finally resuming in early 2021. Oil prices steadily rebounded to more than $80 per barrel by the 4th quarter of 2021 as concerns over the pandemic eased. Natural gas prices similarly surged above $5 per mcf in early 2021 due to seasonal factors before cycling back to similar levels again in late 2021. The stronger than expected recovery in both oil and gas prices greatly mitigated the potential damage to the industry from the 2020 collapse.

Recovery is now fully underway in the production of both crude oil and natural gas. U.S. crude oil output remains just below previous highs while natural gas output has returned to new highs. Rig counts are growing nationally and in Oklahoma but at a far slower pace than expected as drillers continue to pull down inventories of drilled but uncompleted wells.

Hiring by oil and gas firms remains well below pre-pandemic levels. The number of wage and salary workers in the oil and gas sector fell to near modern era lows in early 2020, both nationally and in Oklahoma. The industry has seen only a modest rebound in hiring to date as firms face continued uncertainty over the pandemic, global energy demand, energy price volatility, and government policy toward the industry.

Significant Risks Remain. More volatility in the energy sector is expected in the near term. The greatest risk may still be traced to continued variants of the Covid virus. Future variants

are certain to come, but the unpredictability of the public policy response to variants looms as the major source of uncertainty.

Other risks remain from rising OPEC+ production targets, ongoing debt concerns, and possible permanent erosion of petroleum demand. Most recently, the current U.S. administration ordered a record 50 million barrels released from the U.S. Strategic Petroleum Reserve, more than 8% of the total reserve, to push gasoline prices lower.[1]

Concerns over rising inflation and accelerated Federal Reserve policy tightening further increase the risk of a near-term domestic recession. These risks are expected to greatly influence oil and gas activity in 2022 and beyond.

II. Economic Profile of Oklahoma's Oil and Gas Cluster

Figure 1 provides an economic profile of Oklahoma's oil and gas cluster and its component sectors.

In 2020, the cluster:

- was comprised of more than 4,000 business establishments
- produced $19.0 billion in state gross domestic product (GDP)
- provided Oklahoma households with $16.5 billion in earnings
- provided employment for a combined 85,050 workers (both wage & salary workers and self-employed proprietors)
- employed 39,600 wage and salary workers who earned $5.4 billion in compensation
- provided business opportunities for 45,450 self-employed proprietors who earned $11.1 billion in proprietor income

The state's oil and gas cluster continues to produce an outsized share of total statewide economic activity (*Figure 2*).

In 2020, firms in the oil and gas cluster represented only 3.6% of all firms statewide but accounted for:

- 3.8% of total statewide employment (both wage and salary and self-employed proprietors)
- 10.1% of state gross domestic product
- 12.8% of household earnings statewide
- 5.2% of all compensation paid to wage and salary workers in the state
- 46% of all self-employed proprietors' earnings statewide

Relative to all state industries, the oil and gas cluster produces:

- 2.6 times more GDP per worker ($222,800 per worker)
- 2.2 times more compensation per wage and salary worker ($136,625 per worker)
- 5.6 times more proprietors' income per self-employed proprietor ($245,000 per proprietor)

Figure 1. Economic Profile of Oklahoma's Oil and Gas Cluster (2020)

Cluster Industry Sectors	NAICS	Business Establish-ments	Output ($Mil.) Gross Domestic Product	Income ($Mil.) House-Hold Earnings	Employee Compen-sation	Pro-prietor Income	Employment Total Employ-ment	Wage & Salary Employ-ment	Pro-prietor Employ-ment
Traditional Sectors:									
Oil & Gas Extraction	211	1,028	9,193	7,893	2,503	5,390	52,223	13,355	38,868
Oil & Gas Drilling	213111	139	195	238	193	45	2,173	1,547	626
Oil & Gas Support Activities	213112	1,927	1,127	1,377	1,116	261	16,567	11,794	4,774
Oil & Gas Drilling, Extraction, & Support		**3,093**	**$10,515**	**$9,508**	**$3,813**	**$5,695**	**70,963**	**26,695**	**44,268**
Ancillary Sectors:									
Refineries	324110	13	1,408	730	353	377	2,160	1,894	266
Other Petroleum & Coal Products Mfg.	32419	17	267	138	67	71	645	565	80
Oil & Gas Field Mach. & Equip. Mfg.	33313	219	814	535	527	8	6,365	6,182	183
Pipelines	486	181	5,847	5,542	577	4,965	3,415	3,311	104
Geophysical Surveying and Mapping	541360	519	103	93	75	18	1,510	964	546
Other Oil and Gas-Related Sectors		**948**	**$8,438**	**$7,038**	**$1,599**	**$5,439**	**14,095**	**12,916**	**1,179**
Oil and Gas Cluster		**4,041**	**$18,953**	**$16,546**	**$5,412**	**$11,134**	**85,059**	**39,612**	**45,447**

Notes: NAICS represents the North American Industry Classification System code for each industry sector in the oil and gas cluster.
Source: Bureau of Economic Analysis, Bureau of Labor Statistics, and RegionTrack calculations

Figure 2. Oil and Gas Cluster Share of State Economic Activity (2020)

Economic Measure	Oil and Gas Cluster	State of Oklahoma	Share of State Total
Business Establishments	4,041	112,637	3.6%
Wage & Salary Employment	39,612	1,667,511	2.4%
Proprietors' Employment	45,447	557,888	8.1%
Total Employment	85,059	2,225,399	3.8%
Gross Domestic Product	$19.0 billion	$188.1 billion	10.1%
GDP per Employee	$222,821 per employee	$84,505 per employee	263.7%
Household Earnings	$16.5 billion	$129.4 billion	12.8%
Earnings per Employee	$194,530 per employee	$58,125 per employee	334.7%
Employee Compensation	$5.4 billion	$104.9 billion	5.2%
Compensation per Worker	$136,613 per worker	$62,914 per worker	217.1%
Proprietors' Earnings	$11.1 billion	$24.4 billion	45.6%
Proprietors' Earnings per Proprietor	$245,011 per proprietor	$43,811 per proprietor	559.2%

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, and RegionTrack calculations

Composition of the Cluster

Traditional Sectors. The three traditional oil and gas sector activities (drilling, production, and support) account for most of the economic activity generated by the state's oil and gas cluster (*Figure 1*). Nearly 80% (3,100) of the more than 4,000 business establishments in the cluster operated in the three traditional sectors. These firms accounted for slightly more than half ($10.5 billion) of cluster GDP and 83% (71,000) of total cluster employment in 2020.

Ancillary Sectors. Despite the dominant role of the traditional sectors, firms in the five ancillary NAICS sectors produced a large and growing share of total cluster activity. As a group, the ancillary sectors included 950 firms that produced $8.4 billion in state GDP, $7 billion in household earnings, and 14,100 total jobs in 2020.

Component Size. Among all eight individual NAICS sectors in the cluster, oil and gas extraction (production) is the dominant component and accounted for nearly half (48%) of total cluster GDP in 2020. However, the ancillary pipeline sector produced more than 30% of total cluster GDP. Refineries, another ancillary sector, accounted for 7.5% ($1.4 billion) of cluster GDP in 2020. The drilling sector was severely retrenched in 2020, producing only about 1% ($195 million) of cluster GDP in 2020.

Wage and Salary Employment. Approximately two-thirds (26,700) of the 39,600 wage and salary workers in the cluster are in the three traditional oil and gas sectors. Among the ancillary sectors, the cluster includes 6,200 wage and salary workers in oil and gas field machinery manufacturing, 1,900 in refineries, and 3,300 in the pipeline sector. Firms in the cluster also employ 1,000 wage and salary workers in geophysical surveying and mapping and 565 in other forms of petroleum product manufacturing.

Self-Employed Proprietors. Self-employment remains an important source of employment and household income within the oil and gas cluster. The 45,450 self-employed proprietors in the cluster outnumber the 39,600 wage and salary workers in the industry. Self-employment earnings also far exceed wage and salary earnings paid by firms in the cluster ($11.1 billion vs. $5.4 billion). In 2020, nearly all (97% or 44,300) self-employed proprietors in the cluster were in the traditional drilling, extraction, and support sectors, with most (38,900) in the production (or extraction) sector. This group includes the many thousands of state residents earning self-employment income from proprietorships and partnerships involved in oil and gas production, as well as individuals receiving royalties, lease payments, and other financial payouts related to production.

Household Earnings – Traditional vs. Ancillary. Total household earnings in the traditional areas of extraction, drilling and support ($9.5 billion) exceed those in the ancillary sectors of the cluster ($7.0 billion). Proprietors' earnings in the traditional oil and gas sectors reached $5.7 billion in 2020, only slightly higher than the $5.4 billion earned in the ancillary sectors of the cluster. Pipelines account for most of the proprietor earnings among the ancillary sectors of the cluster.

Establishment Size. The level of employment at firms in the state's oil and gas cluster ranges from a single employee to more than 1,000 employees. Figure 3 provides a breakdown of private sector oil and gas firms by employment size in the first quarter of 2021 using data on

the Oklahoma mining sector (NAICS 21).[2] The data exclude government workers and provides industry coverage roughly equivalent to the three core sectors of the oil and gas cluster. Wage and salary employees are captured but self-employed proprietors are excluded.

Measured by number of wage and salary employees, most oil and gas firms in the state are relatively small. More than two-thirds (69%, 2,556) have fewer than five employees, and more than 80% have fewer than 10. However, the more than 2,500 small firms with less than 10 employees comprise only 20.2% of total wage and salary employment and 10.6% of payroll in the cluster.

An additional 474 firms (15.2%) have 10 to 49 employees. These firms account for almost 36% of jobs and 23% of payroll.

Firms with fewer than 50 employees paid average annual wages of $74,640 in 2021, 44% more than the overall state wage per employee of $51,858 in the same period.

The middle layer of the industry measured by employment and payroll consists of 75 firms in with 50 to 250 employees each. These firms comprise only 2.4% of firms in the cluster but account for 24% of employment 22% of total payroll. Average wages among these 75 firms reached $115,200 in the first quarter of 2021, more than double the overall state average per worker.

There are an additional 9 large firms in the oil and gas cluster with 250 or more employees. These 9 firms represent only 0.3% of firms in the cluster but represent an outsized share of employment (20%) and payroll (45%). These large firms pay far higher wages on average than smaller firms in the cluster, reaching $282,550 in the period. The high wages paid to workers at the state's largest oil and gas firms underlies much of the economic impact exerted by the industry on the state economy.

Figure 3. Private Sector Establishments in the Mining Sector by Employment Size (2021Q1)

Establishment Size	Establish-ments	Share	Employment	Share	Total Annual Wage	Share	Average Annual Wage
<5 employees	2,139	68.7%	2,722	10.2%	$185,568,000	5.5%	$68,165
5 to 9 employees	417	13.4%	2,695	10.1%	170,920,336	5.1%	63,429
10 to 19 employees	265	8.5%	3,457	12.9%	256,853,832	7.6%	74,292
20 to 49 employees	209	6.7%	6,073	22.7%	502,352,244	14.9%	82,724
50 to 99 employees	50	1.6%	3,185	11.9%	340,861,028	10.1%	107,021
100 to 249 employees	25	0.8%	3,190	11.9%	393,645,152	11.7%	123,387
250+ employees	9	0.3%	5,401	20.2%	1,525,995,832	45.2%	282,557
All establishments	3,114	100.0%	26,723	100.0%	$3,376,196,424	100.0%	$126,340

Source: Bureau of Labor Statistics and RegionTrack calculations

Large-Firm Share of Production. A small number of very large firms in the oil and gas extraction sector continue to produce most of the output from the sector (*Figure 4*). Measured by production of oil, the five largest producers contribute 44% of total state output, the top 10 contribute 58%, and the top 25 account for two-thirds of total state oil output. For natural gas, the top five producers generate 39% of state output, the top 10 produce 57%, and the top 25 produce almost 80% of total state natural gas output.

Measuring the combined production of oil and gas on a barrel-of-oil-equivalent (BOE) basis, the five largest producers account for 39% of state oil and gas output, the top ten produce 57% of state oil and gas output, and the top 25 produce 77% of total state oil and natural gas output.

Figure 4. Concentration of Oklahoma Oil and Natural Gas Production

Producers	Share of State Oil Production	Share of State Natural Gas Production	Share of State BOE Oil and Gas Production
Top 5	44.0%	38.8%	38.9%
Top 10	58.2%	57.0%	56.6%
Top 25	74.7%	79.4%	76.6%
Top 50	83.3%	90.2%	87.2%
Top 100	89.4%	95.6%	93.1%

Notes: Production covers the 12 months of data ended November 2021. BOE is barrel-of-oil equivalent production of both oil and natural gas. Natural gas production is converted to oil production using a ratio of 6 Mcf per barrel.
Source: IHS Enerdeq

Trends in the Cluster

The long-run revitalization of the state's oil and gas cluster underway since 2003 paused in 2020 during the pandemic driven global recession. Reduced demand for energy and overextended supply created challenging conditions for the industry. Oklahoma's oil and gas cluster contracted substantially in 2020 as drilling and exploration collapsed and production of crude oil and natural gas was curtailed in response to low energy prices.

Figures 4 and 5 provide a historical profile of economic activity in the cluster over the past two decades including the pullback in industry activity in 2020.

Industry Growth. GDP produced by firms in the cluster fell to only $19.0 billion in 2020, the lowest output level for the cluster since 2005 (*Figure 5a*). Cluster GDP was down nearly 50% from the recent peak of $37.4 billion in 2018. GDP produced in 2020 was more reflective of the $22.0 billion produced during the Great Recession period in 2009.

Earnings paid to households was far less affected by the industry contraction. Earnings of $16.5 billion roughly matched the averaged reported for the 2017 to 2019 period (*Figure 5b*). The stability in earnings produced by the sector aided the overall state economy in 2020. Proprietor earnings were stronger than expected in 2020, exceeding the average in the 2017 to 2019 period. Wage and salary earnings were more reflective of the overall industry contraction, falling by nearly 25% to $5.4 billion in 2020.

Total employment in the oil and gas cluster continued its slide underway since 2013 (*Figure 5c)*. The downtrend accelerated in 2020, falling 18% to only 85,060 total workers. Most of the contraction since 2013 is in the number of self-employed proprietors. More recently, the drop in wage and salary workers was most significant, falling 29% to only 39,600 in 2020.

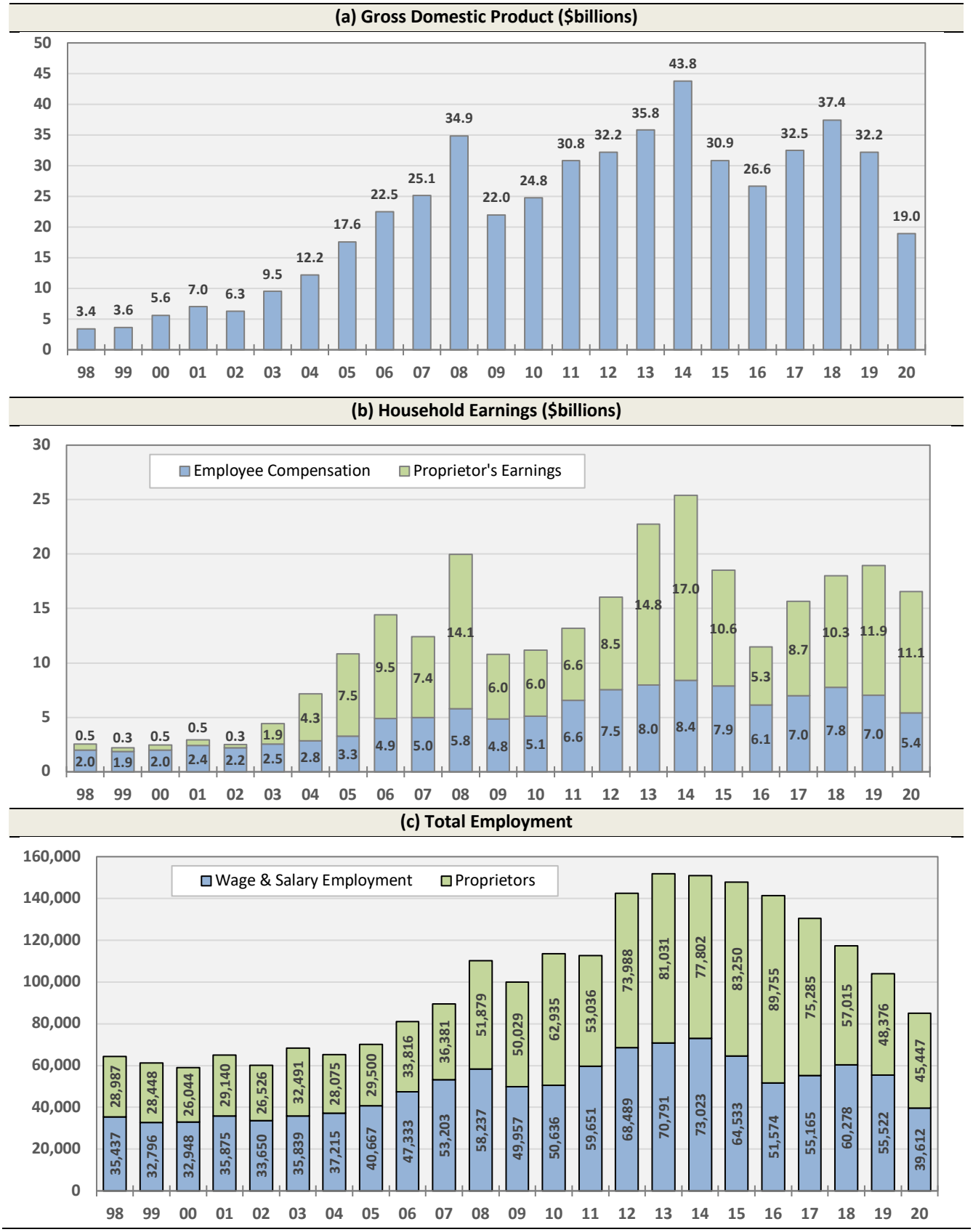
Current total hiring is the lowest in the cluster since 2006 while wage and salary hiring is the lowest yearly total since 2004. At the depths of the recession in late 2020, wage and salary employment in the traditional sectors of the cluster fell below 24,900 on a monthly basis, the lowest level in the modern era of oil and gas production in Oklahoma.

Traditional vs. Ancillary Sectors. Most of the contraction in GDP in 2020 took place in the traditional drilling, extraction, and support sectors, falling by more than half from 2019 levels (*Figure 6a*). The ancillary sectors posted a far smaller 10.6% decline in GDP in 2020.

Earnings and employment were also hit disproportionately hard in the traditional sectors (*Figures 6b-d*). Household earnings dropped 18% in the traditional drilling, extraction, and support sectors versus only 4% in the ancillary sectors.

Similarly, the traditional sectors lost more than 18,000 total jobs (-20%), including 15,000 wage and salary positions (-36%); the ancillary sectors lost only 750 total jobs (-5%) with nearly all wage and salary positions.

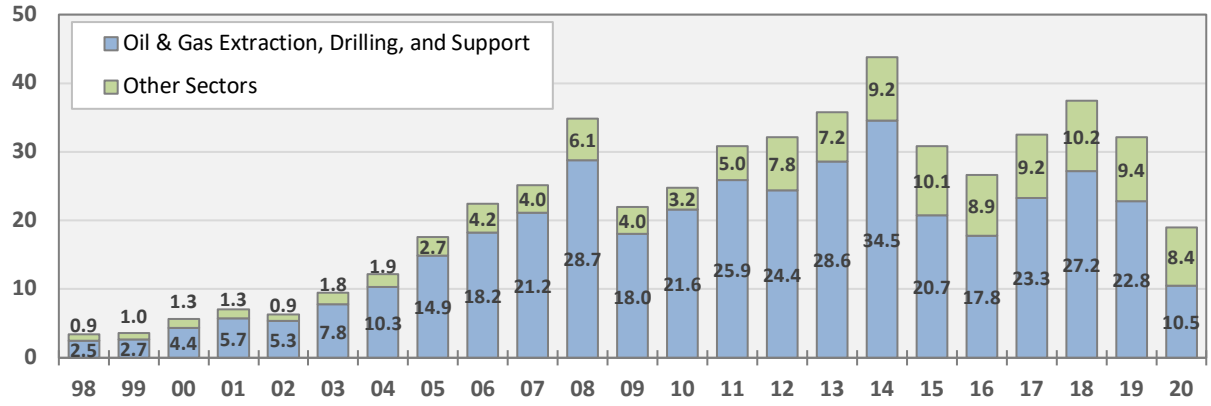
Figure 5. Historical Profile of Oklahoma's Oil and Gas Cluster



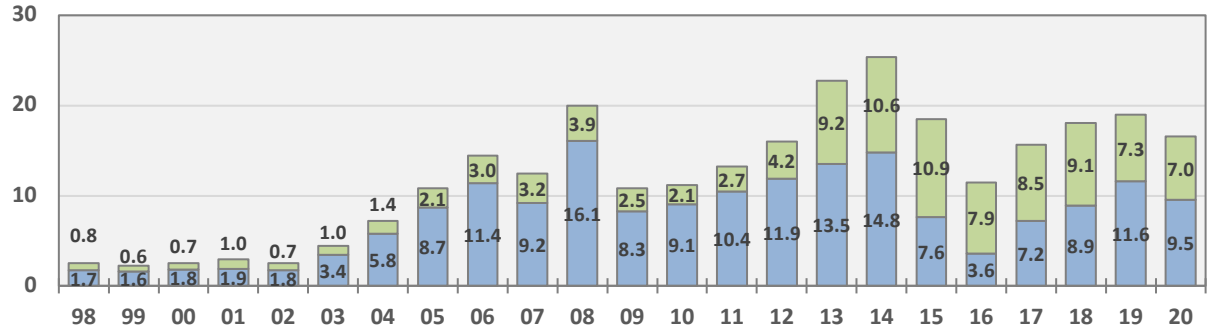
Source: Bureau of Economic Analysis and RegionTrack calculations

Figure 6. Traditional vs. Ancillary Components of Oil and Gas Cluster

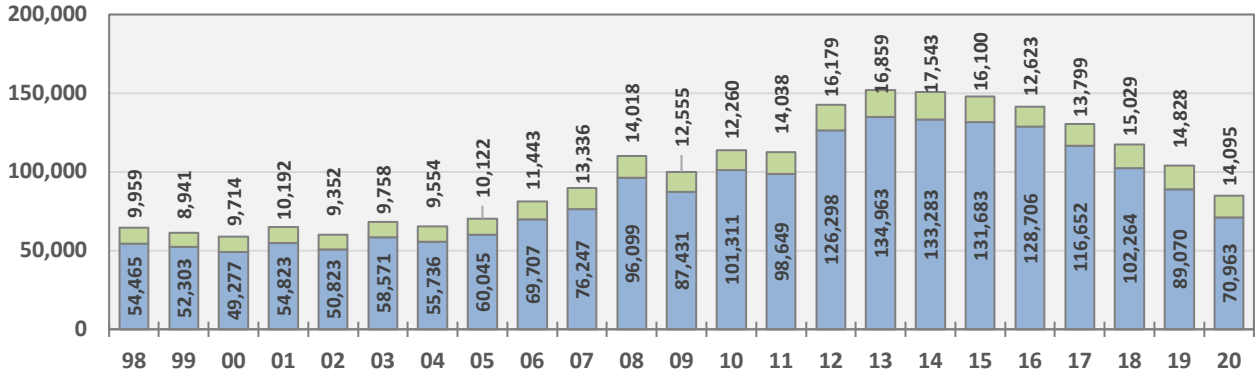
(a) Gross Domestic Product ($billions)



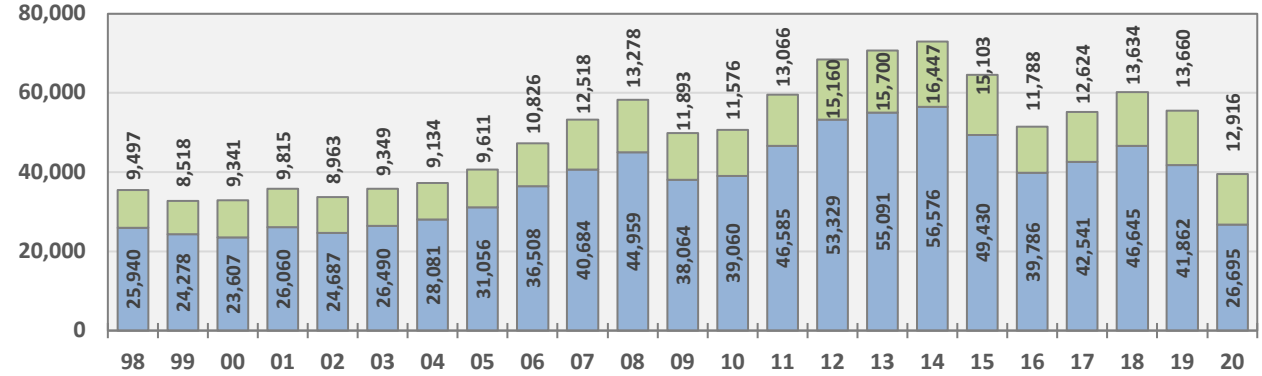
(b) Household Earnings ($billions)



(c) Total Employment



(d) Wage and Salary Employment



Source: Bureau of Economic Analysis and RegionTrack calculations

III. Oklahoma Oil and Gas Production

Long-Run Production Trends

Despite the pullback in activity in the state's oil and gas cluster in 2020, production of crude oil and natural gas in Oklahoma remains in a significant long-run expansion. Both crude oil and natural gas production remain well above lows from the early 2000s.

2020 Production. State oil production pulled back to 171.7 million barrels in 2020, a 20.4% decline from record production of 215.6 million barrels in 2019 (*Figure 7*). State oil output remains nearly triple the 61.3 million barrels produced at the recent low in 2005. However, this leaves state oil production in 2020 nearly 40% below the all-time high of 278 million barrels in 1927 during the early boom days of the industry (see Figure 8).

Natural gas production fared far better, falling only 8.2% in 2020 to 2.79 trillion cubic feet (Tcf) in 2018 (*Figure 7*). State natural gas output remains nearly 25% above the prior historical high of 2.26 Tcf set in 1989. State natural gas production also remains nearly 80% above the recent bottom in production in 2003.

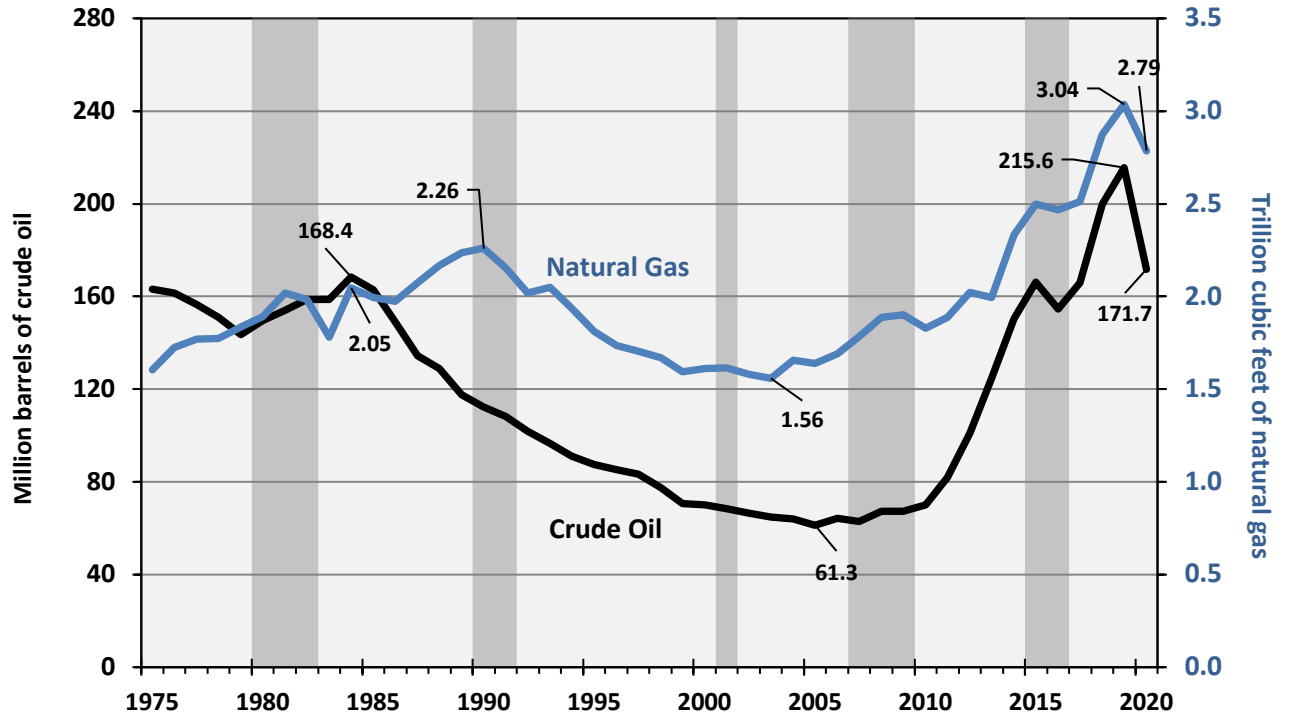
2021 Production. Current state production levels reported by EIA through September 2021 suggest state crude oil output remains in a downtrend and is running about 20% below 2020 levels year-to-date. Annualized production through the remainder of 2021 at this rate would total 138.2 million barrels. For comparison, U.S. oil production fell from 13.0 million barrels per day to only 9.7 million barrels in the first half of 2020. Recent production is reported at 11.4 million barrels per day in October 2021, or exactly half the lost production recovered to date.

For natural gas, state production through September of 2021 has leveled off about 10% less than 2020 year-to-date production. Annualized production through the end of 2021 is equivalent to 2.52 Tcf of natural gas. For comparison, U.S. natural gas production fell from 103.1 billion cubic feet (Bcf) per day in March 2020 to 92.4 Bcf per day in February 2021, a 10.4% decline. Recent production is reported at 103.2 Bcf per day in August 2021, marking approximately full recovery in U.S. natural gas production.

State crude oil and natural gas production are likely to fall across consecutive years in 2020 and 2021, with oil falling by approximately 35% and natural gas falling by 17% across the period.

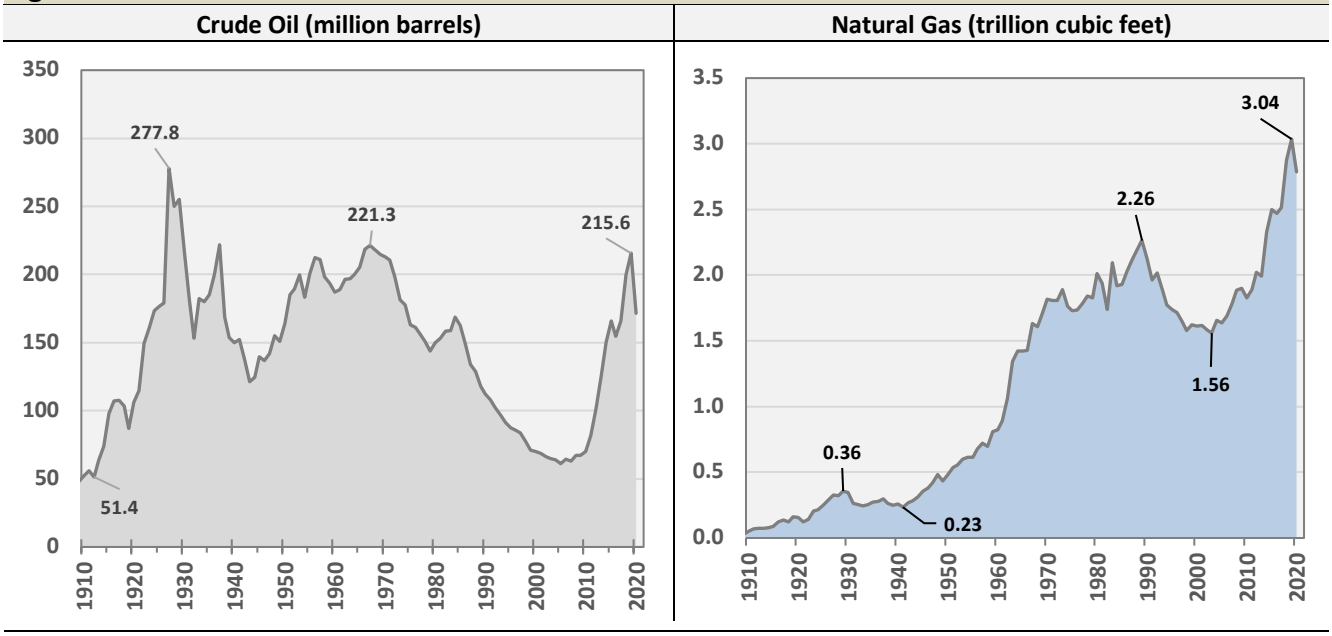
U.S. Production Outlook. Current EIA forecasts suggest U.S. crude oil and natural gas production will rise steadily through the end of 2022.[3] EIA's most recent oil production outlook calls for an increase in output through the end of 2021 to 12.25 million barrels per day, up 7.5% from the October 2021 level. EIA forecasts for U.S. natural gas production suggest output of 106.7 Bcf per day by the end of 2022, up 3.4% from the August 2021 level.

Figure 7. Oklahoma Oil and Gas Production Trends



Source: U.S. Energy Information Administration and RegionTrack calculations

Figure 8. Oklahoma Historical Production of Crude Oil and Natural Gas



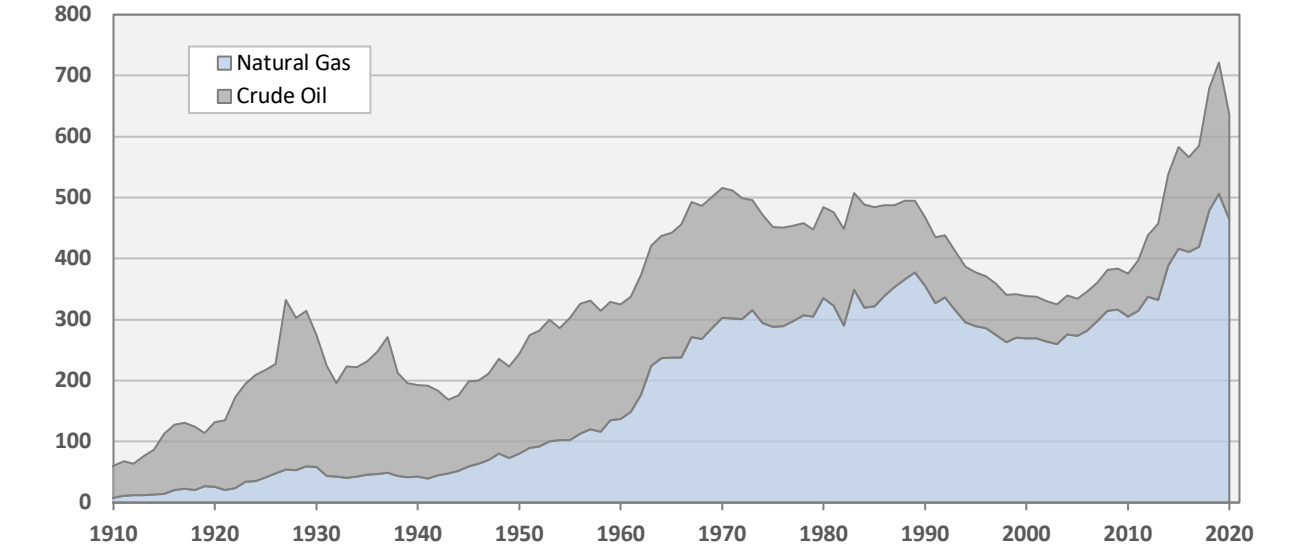
Source: U.S. Energy Information Administration

Total BOE Production. Based on a physical barrel-of-oil-equivalent (BOE) basis, total production of oil and natural gas in Oklahoma fell to 636.1 million barrels equivalent in 2020, down 12% from the record high of 721.6 BOE produced in 2019 (*Figure 9a*). Record BOE levels have been produced steadily the past two decades, leaving current BOE production almost double the low from 2003.

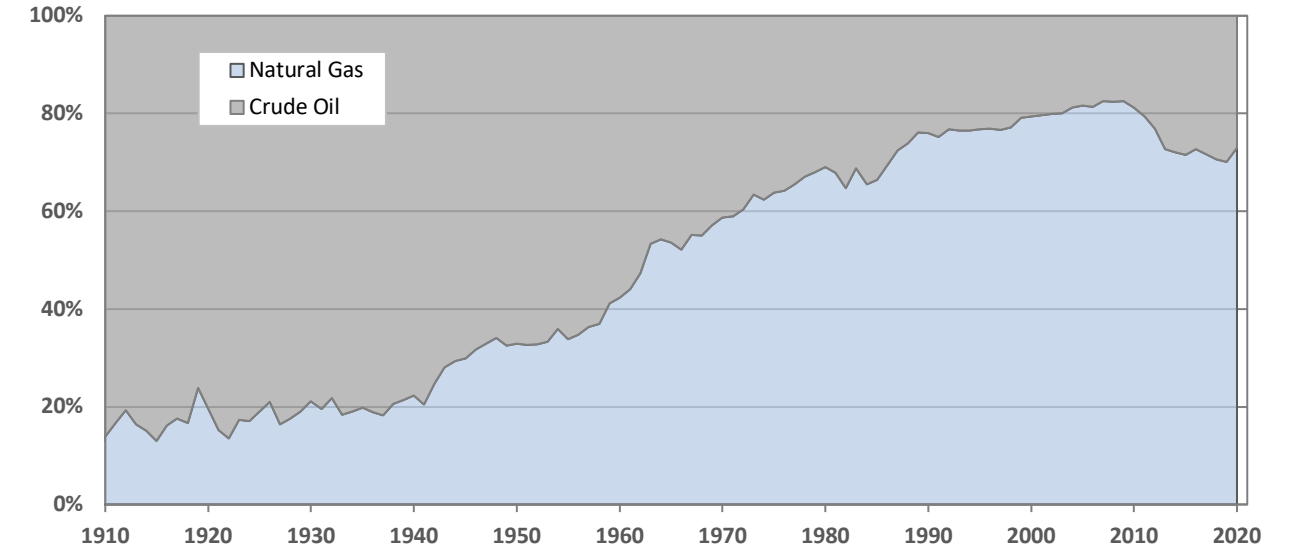
Natural gas remains the largest component of total state output by barrel-equivalent volume, with approximately 73% (464.4 million BOE) of total state output volume in 2020 (*Figure 9b*). The 171.7 million barrels of crude oil produced statewide comprised the remaining 27% of BOE production. This reflects a three-percentage point gain in the share of natural gas production volume relative to oil from 2019 to 2020.

Figure 9. Oklahoma Total BOE Production of Crude Oil and Natural Gas

(a) Total BOE Production (million barrels-of-oil-equivalent)



(b) Share of Total BOE Production



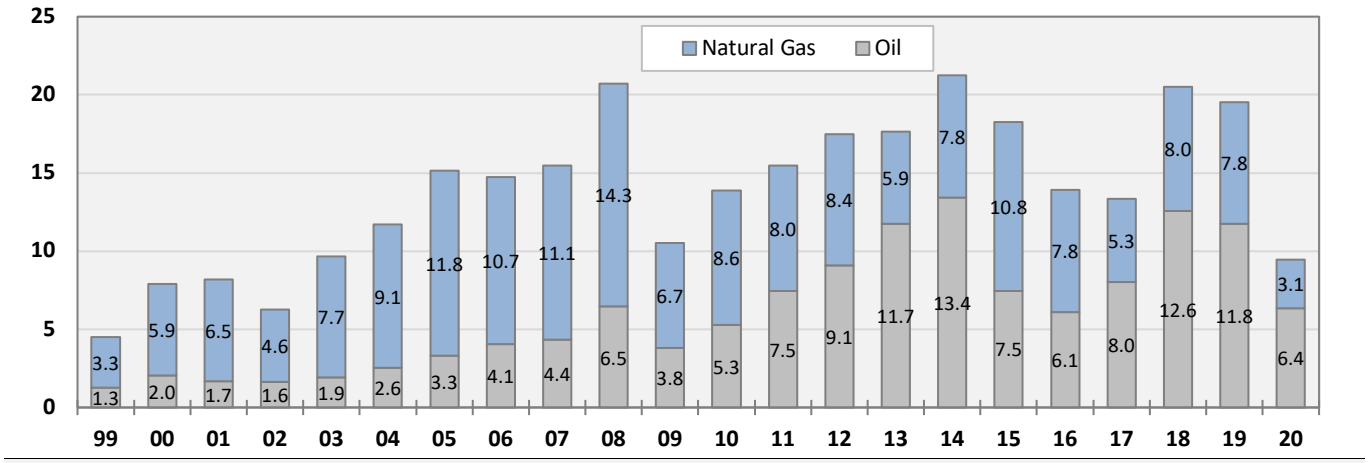
Notes: Natural gas is converted to barrels equivalent using 6 mcf of natural gas per barrel of oil.
Source: U.S. Energy Information Administration and RegionTrack calculations

Market Value of Oil and Gas Production

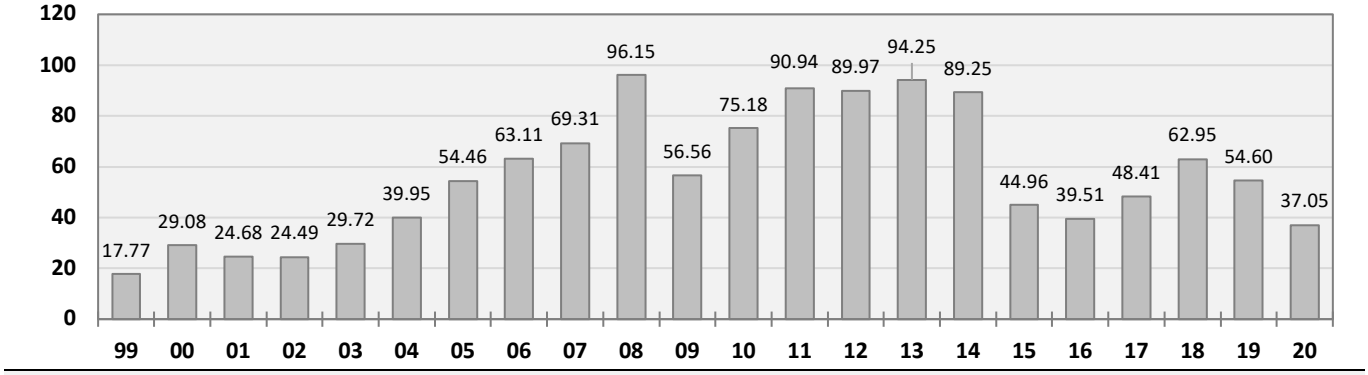
Oklahoma's oil and gas producers continue to face an environment of significantly lower market prices since the collapse in energy prices in 2014 and 2015 (*Figures 10b and 10c*). The generally low-price environment has offset much of the expected positive effects of long-run volume gains on the total value of production. The pandemic affected both production volume and price as total value of state oil and gas production dropped to only $9.5 billion in calendar year 2020, the lowest value since 2002 (see Figure 9a). Total production value dropped 51% relative to the $19.6 billion produced in 2019.

Figure 10. Value of Oklahoma Crude Oil and Natural Gas Production

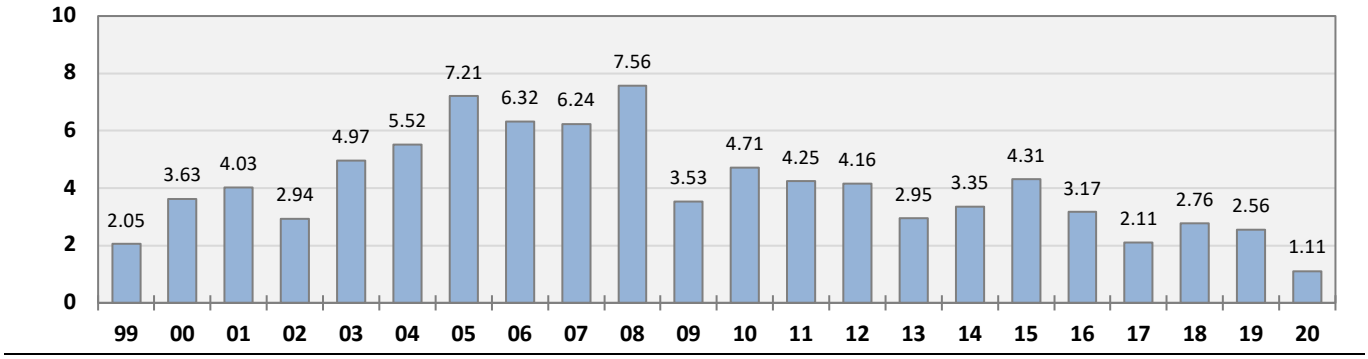
(a) Value of Oil and Gas Production (billions of dollars, calendar year)



(b) Price of Oklahoma Crude Oil – First Purchase Price (dollars per barrel, calendar year)



(c) Price of Oklahoma Natural Gas (dollars per mcf, calendar year)



Notes: All production estimates are derived from EIA data. Production of crude oil is based on EIA estimates of field production. The price of oil is based on the first purchaser price at the state level. Production of natural gas is based on EIA estimates of marketed production. The price of natural gas is from EIA through 2011 and from the Oklahoma Tax Commission from 2012 to 2020.
Source: U.S. Energy Information Administration, NGI, Oklahoma Tax Commission, and RegionTrack calculations

By commodity type, crude oil production in 2020 was valued at $6.4 billion, down 45% from $11.8 billion in 2019 as both falling production volume and weak oil prices weighed on value (*Figure 10b*). Crude oil prices in the state averaged only $37.05 per barrel in 2020, the lowest price since 2003. State natural gas production value dropped to $3.1 billion in 2020, down 60% from $7.8 billion produced in 2019 and the lowest valuation in more than two decades. The steep decline in production value is traced to the lowest natural gas prices in the state in more than two decades (*Figure 10c*). State natural gas prices averaged only $1.11 per Mcf in 2020 under a combination of pandemic conditions and surging state production.

State Production Trends and Rankings

Oklahoma remains a key component of the nation's energy infrastructure and a leader among the oil and gas-producing states. The state's output of 171.7 million barrels of crude oil and 2.79 Tcf of natural gas in 2020 continue to rank among the leading states (*Figure 11*). Oklahoma ranked 4th in crude oil production with a 4.2% share of total U.S. output and 4th in natural gas production with a 7.7% share of U.S. output in 2020. The state's shares of U.S. production are down from a 5.0% share of oil and a 9.0% share of natural gas in 2018.

Oklahoma trails Texas, North Dakota, and New Mexico in crude oil production and Texas, Pennsylvania, and Louisiana in natural gas production. The state has experienced some shift in the rankings following the pullback in the industry in 2020. The state's position as the third largest natural gas producer was ceded to Louisiana in 2018 following strong natural gas gains.

Measured by barrel-of-oil equivalent[4] production of both crude oil and natural gas, Oklahoma is ranked 4th among the producing states in 2020 with a 6.3% share of total U.S. output. This share is down from 7.3% in 2018. Oklahoma trails New Mexico by about 60 million BOE in total production and leads both large oil producer North Dakota and large gas producer Louisiana by about 50-60 million BOE in total production. The state's overall position as 3rd largest producer was assumed by New Mexico in 2018 following very strong oil gains.

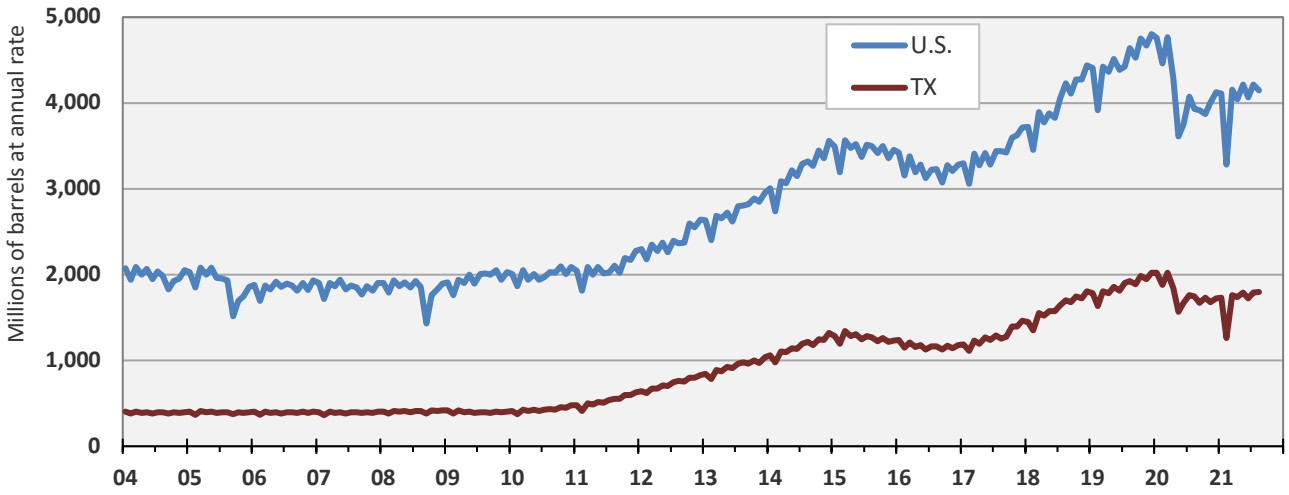
Figure 11. Leading Crude Oil and Natural Gas-Producing States (2020)

	State	Crude Oil (thou. bbls)	U.S. Share		State	Natural Gas (million cf)	U.S. Share		State	Oil & NG (BOE)	U.S. Share
1	Texas	1,776,449	43.0%	1	Texas	9,336,110	25.8%	1	Texas	3,332,467	32.8%
2	North Dakota	434,889	10.5%	2	Pennsylvania	7,148,295	19.7%	2	Pennsylvania	1,196,915	11.8%
3	New Mexico	370,402	9.0%	**3**	Louisiana	3,206,163	8.9%	**3**	New Mexico	695,097	6.8%
4	**Oklahoma**	**171,740**	**4.2%**	**4**	**Oklahoma**	**2,786,366**	**7.7%**	**4**	**Oklahoma**	**636,134**	**6.3%**
5	Colorado	167,832	4.1%	5	West Virginia	2,592,319	7.2%	5	North Dakota	581,963	5.7%
6	Alaska	163,852	4.0%	6	Ohio	2,378,902	6.6%	6	Louisiana	571,069	5.6%
7	California	143,114	3.5%	7	Colorado	1,990,462	5.5%	7	Colorado	499,576	4.9%
8	Wyoming	89,091	2.2%	8	New Mexico	1,948,168	5.4%	8	West Virginia	451,112	4.4%
9	Louisiana	36,708	0.9%	9	Wyoming	1,306,368	3.6%	9	Ohio	420,303	4.1%
10	Utah	30,951	0.7%	10	North Dakota	882,443	2.4%	10	Wyoming	306,819	3.0%
11	Kansas	28,260	0.7%	11	Arkansas	480,982	1.3%	11	Alaska	220,240	2.2%
12	Ohio	23,819	0.6%	12	Alaska	338,329	0.9%	12	California	171,544	1.7%
13	West Virginia	19,059	0.5%	13	Utah	241,989	0.7%	13	Arkansas	84,307	0.8%
14	Montana	18,985	0.5%	14	California	170,579	0.5%	14	Utah	71,283	0.7%
15	Mississippi	14,166	0.3%	15	Kansas	163,356	0.5%	15	Kansas	55,486	0.5%
	U.S. Total	**4,129,563**			**U.S. Total**	**36,202,446**			**U.S. Total**	**10,163,304**	

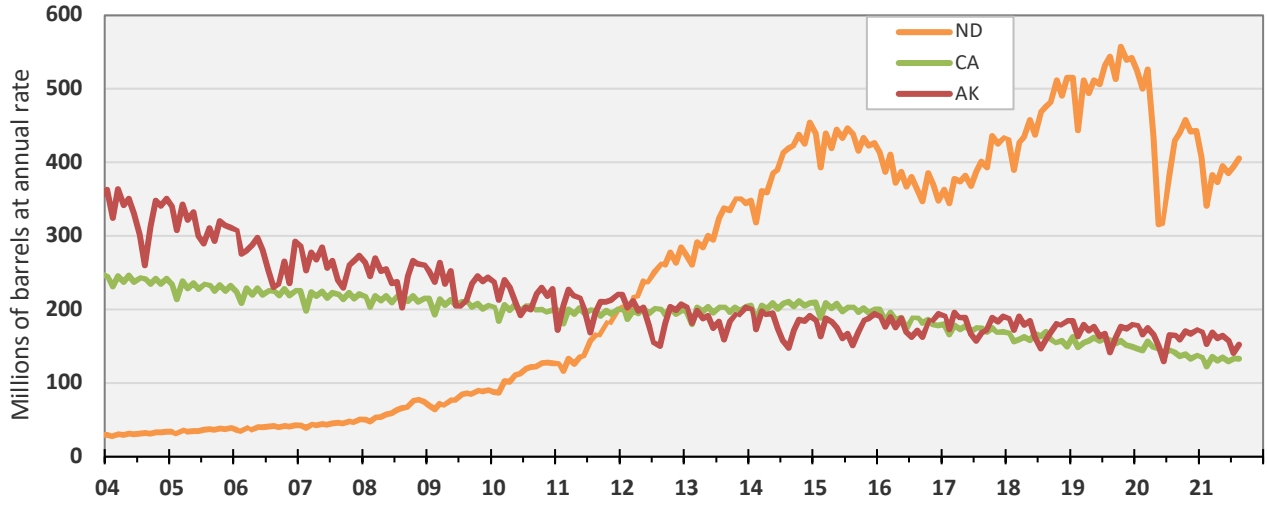
Notes: Natural gas is converted to barrels-of-oil-equivalent using a ratio of 6 Mcf of natural gas per barrel of oil.
Source: U.S. Energy Information Administration and RegionTrack calculations

Figure 12. Crude Oil Production in Major Oil-Producing States

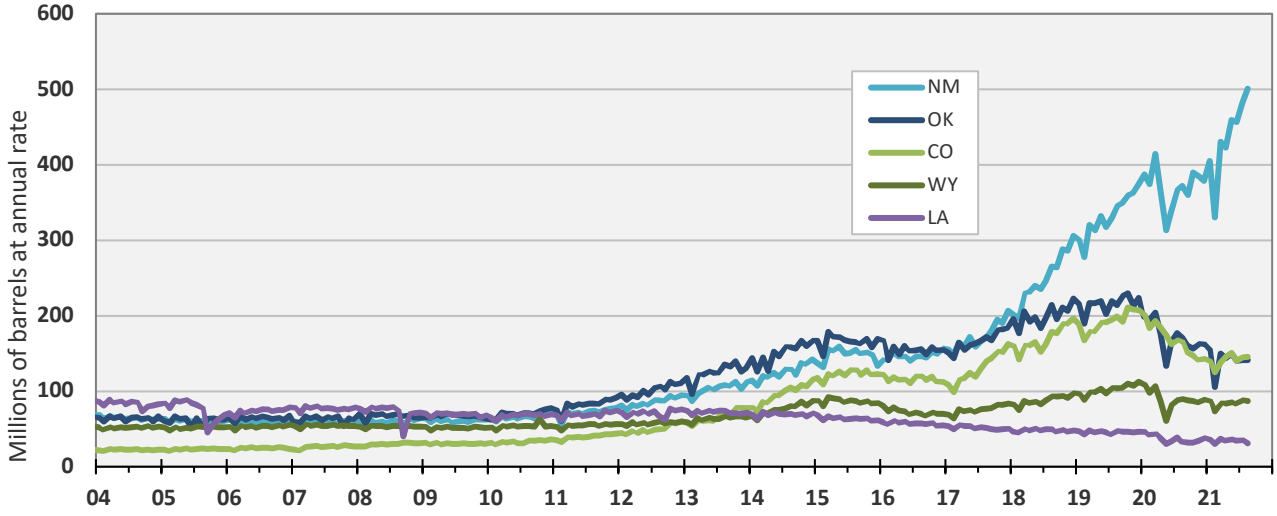
(a) U.S. and Texas



(b) North Dakota, California, and Alaska



(c) Other Major Producers - NM, OK, CO, WY, and LA



Source: U.S. Energy Information Administration and RegionTrack calculations

State Crude Oil Production Trends. Production in nearly every producing state was hard-hit in 2020 during the pandemic. However, the trend in production coming out of the downturn varies greatly across the producing states.

Dominant producer Texas has managed steady gains in the post-Covid period through August 2021. The state had annualized production of nearly 2 billion barrels per year prior to Covid (Figure 12a) before falling to 1.6 billion barrels annually. Texas has since recovered about half its lost oil production.

North Dakota, the 2nd ranked oil producer, reached a record pace of more than 500 million barrels annually prior to Covid before seeing production decline by nearly 40% in the first half of 2020 (Figure 12b). Only about one-third of North Dakota's lost oil production has been recovered.

New Mexico has fared far better in the aftermath of Covid when production dropped by 25%. The state has since seen production surge more than 25% above the pre-Covid level, the strongest rebound among the oil-producing states (*Figure 12c*).

Conversely, production in the traditional oil-producing states of California and Alaska was little changed by Covid. These two states remain mired in a steady downtrend and have made no progress in halting their oil production declines in the era of unconventional production (*Figure 12b*). Both states are now producing at a rate of less than 150 million barrels annually and have been surpassed in recent years by New Mexico, Oklahoma, and Colorado in oil production.

Colorado has closely tracked Oklahoma's production trend and surpassed Oklahoma in the five most recent months of production.

Smaller oil producer Wyoming experienced a roughly 30% drop in production post-Covid. The state has since seen little sustained recovery in oil production.

State Natural Gas Production Trends. U.S. natural gas production has fully rebounded from the Covid period, and many producing states are now experiencing strong production gains.

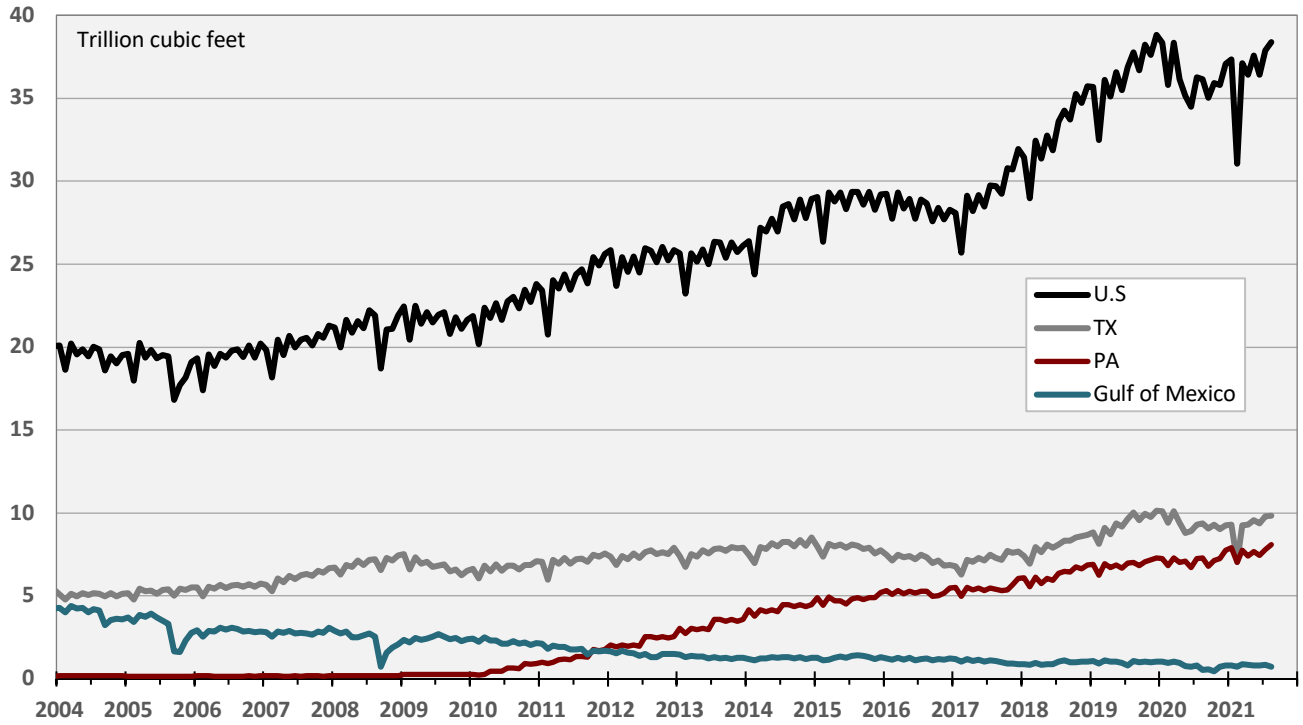
Dominant gas producers Texas and Pennsylvania remain in a steady uptrend, with Texas slightly below its pre-Covid level and Pennsylvania at record highs (*Figure 13a*). In contrast to onshore activity, gas production from the Gulf of Mexico remains in a slow downtrend.

Among a second tier of major gas producers, Louisiana, West Virginia, and New Mexico are posting large and sustained gains in natural gas output through August 2021(*Figure 13b*).

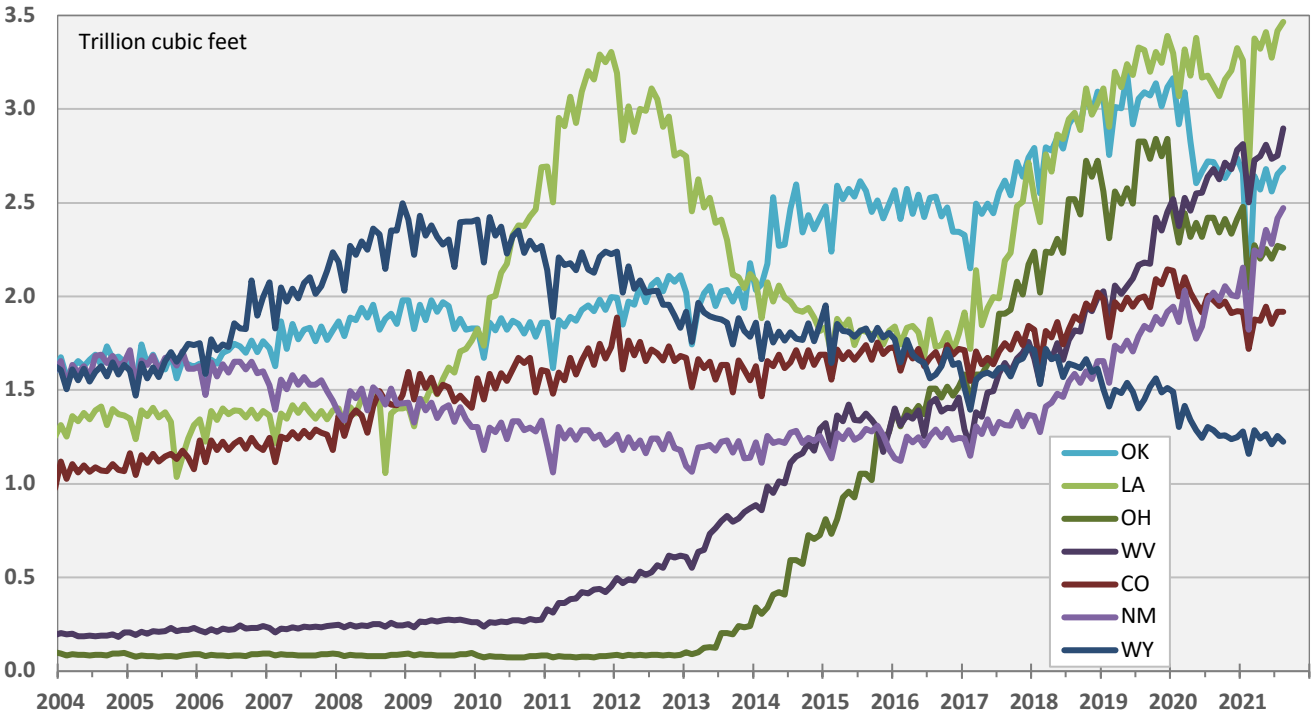
Oklahoma and Ohio have seen a leveling off in natural gas production well below pre-Covid levels. Colorado and Wyoming continue to see declining production of natural gas through August 2021.

Figure 13. Gas Production in Major Natural Gas-Producing States

(a) U.S., Texas, Pennsylvania, and Gulf of Mexico



(b) Second Tier Major Producers



Source: U.S. Energy Information Administration and RegionTrack calculations

Royalties Follow Production Drop

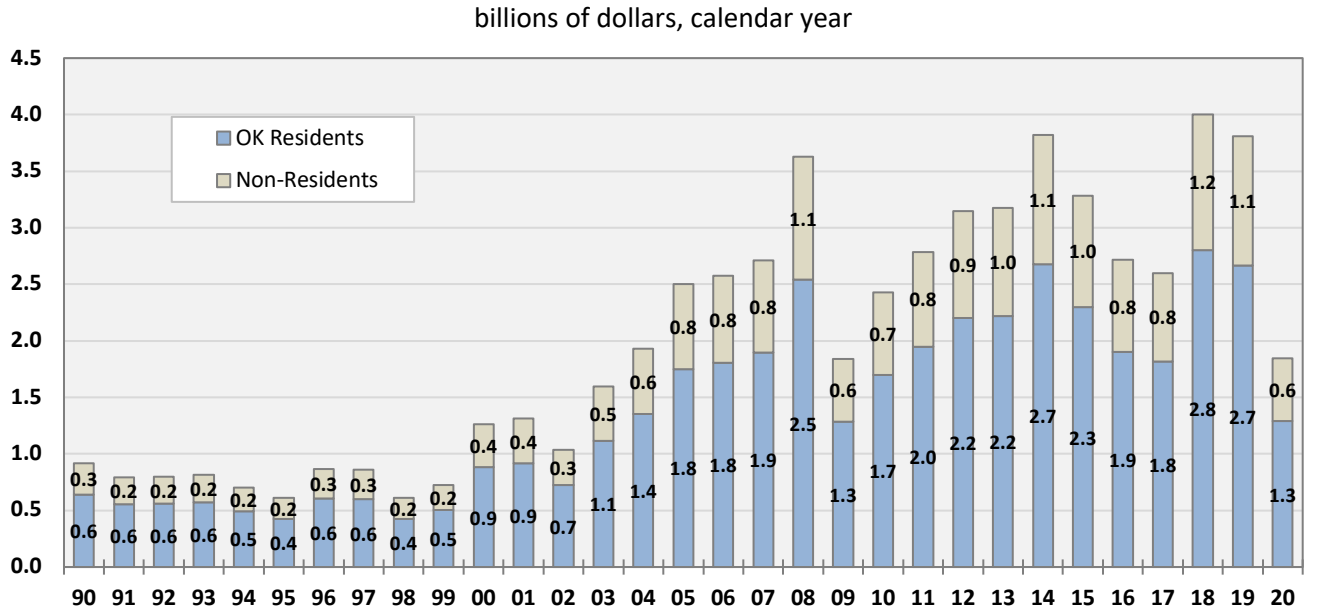
Total royalty payments from state oil and gas production totaled an estimated $1.9 billion in 2020, a decline of 50% from 2019 (*Figure 14*). The softness reflects both weak market prices and declining production of both crude oil and natural gas.

Of the $1.9 billion in total payments, an estimated $1.3 billion (68%) was received by Oklahoma-based recipients, with the remaining $600 million (32%) accruing to recipients outside the state.[5]

Total royalty payments to state residents in 2020 are comparable to those received in 2004 and 2009.

Since the reemergence of the industry began in 2003, estimated royalty payments to Oklahoma residents from state production have totaled $35.3 billion and averaged $2.0 billion annually. For long-term comparison, current royalties of $1.3 billion paid to Oklahoma residents in 2020 are more than double the $610 million annual average from 1990 to 2002 prior to the reemergence of the industry.

Figure 14. Royalty Payments from Oklahoma Oil and Gas Production



Source: Royalty rates and residency shares are derived from proprietary firm reports of royalty amounts and recipient addresses. Market values of production used in estimating royalty payments are based on calendar year production values in Figure 10a.

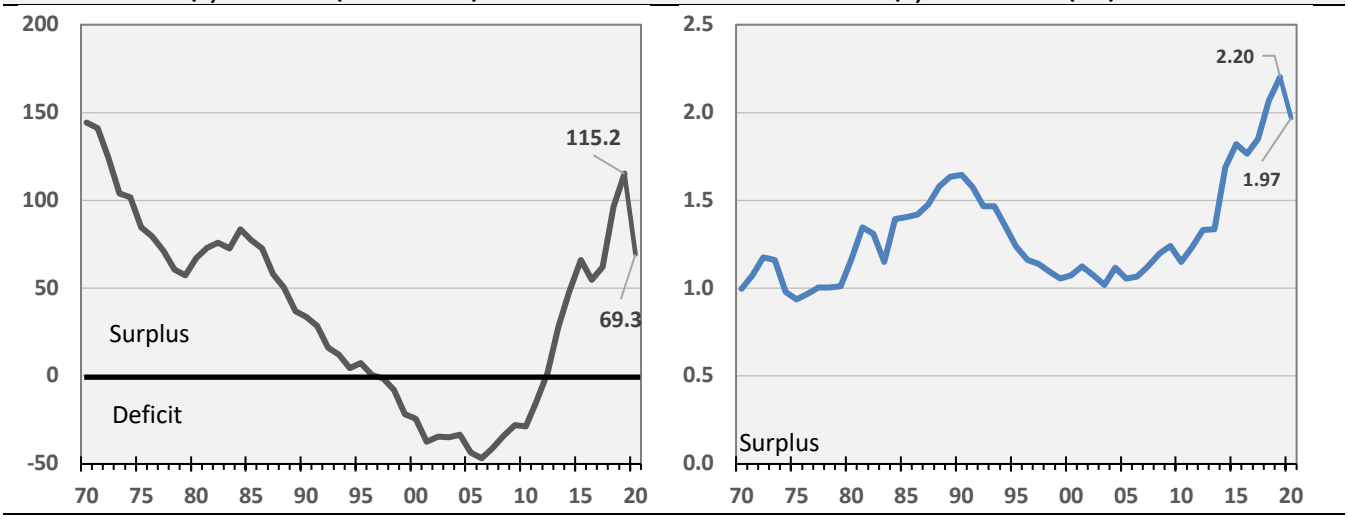
Oil and Gas Exports Slow

Oklahoma remains a significant exporter of both crude oil and natural gas outside the state. From an economic policy perspective, producing exports for external consumption is a far more significant economic event for the state economy than producing for in-state consumption.

Crude Exports. The decline in oil state oil production in 2020 is reflected in weak net oil exports from the state. After posting record oil exports of 115.2 million barrels 2019, exports dropped 40% to only 69.3 million barrels in 2020 (*Figure 15a*). Oil exports comprised approximately 40% of total state oil production in the period. Continued weakness in oil production estimates through the third quarter of 2021 suggest that the state's oil export position eroded even further in 2021.

Natural Gas Exports. Natural gas exports fared far better than oil in 2020, falling a little more than 10% from a record high of 2.20 Tcf in 2019 to 1.97 Tcf in 2020 (*Figure 15b*). Current natural gas exports remain roughly double the 1.1 Tcf reported in 2008, the point at which state natural gas production began to ramp up. The state's natural gas export share is approximately 70% of total state natural gas output.

Figure 15. Net Exports of Oklahoma Crude Oil and Natural Gas



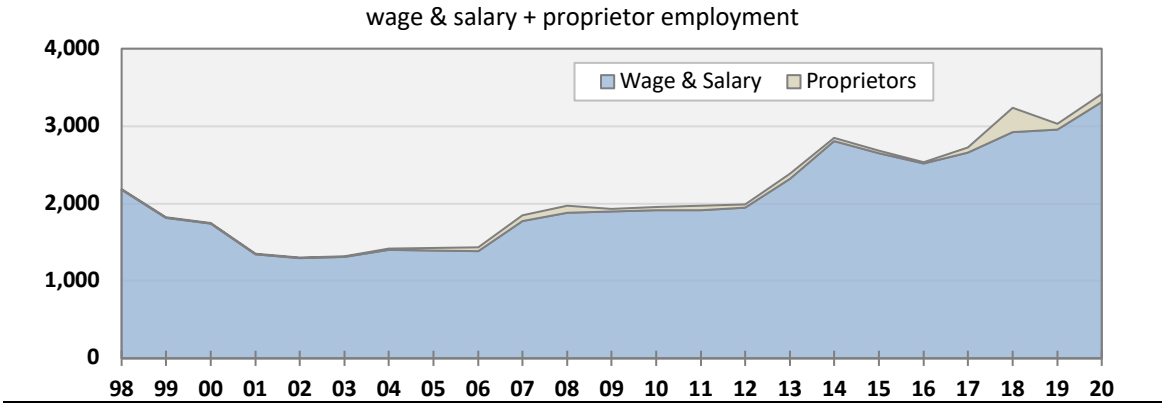
Notes: Net exports are measured as state production minus state consumption as defined by EIA.
Source: U.S. Energy Information Administration and RegionTrack calculations

Export Value. The market value of oil and gas exports from Oklahoma totaled an estimated $6.6 billion in 2020.[6] The 69.3 million barrels of exported oil are valued at $2.6 billion, approximately 39% of the total export value. The 1.97 Tcf of state natural gas exports are valued at $4.0 billion and represent 61% of the total value of oil and gas exports from the state. Combined oil and gas exports totaled $6.6 billion in 2020, approximately 70% of the $9.5 billion in total value of oil and gas produced in Oklahoma in 2020.

Pipelines Remain Key Component of Cluster

Pipeline Industry Contribution. Rising energy production has led to significant added pipeline-related activity in Oklahoma in recent years. In 2020, the pipeline sector consisted of 181 firms that produced $5.8 billion in GDP (*Figure 1*). The numerous partnerships and other business entities operating pipelines in the state employed more than 3,400 total workers in 2020 (*Figure 16*). Employment includes 3,300 wage and salary workers earning an average of $174,267 in compensation and more than 100 self-employed proprietors with $5.0 billion in earnings from their interest in pipeline firms. Wage and salary employment has more than doubled since the reemergence of the oil and gas industry in 2003.

Figure 16. Total Employment – Oklahoma Pipeline Sector

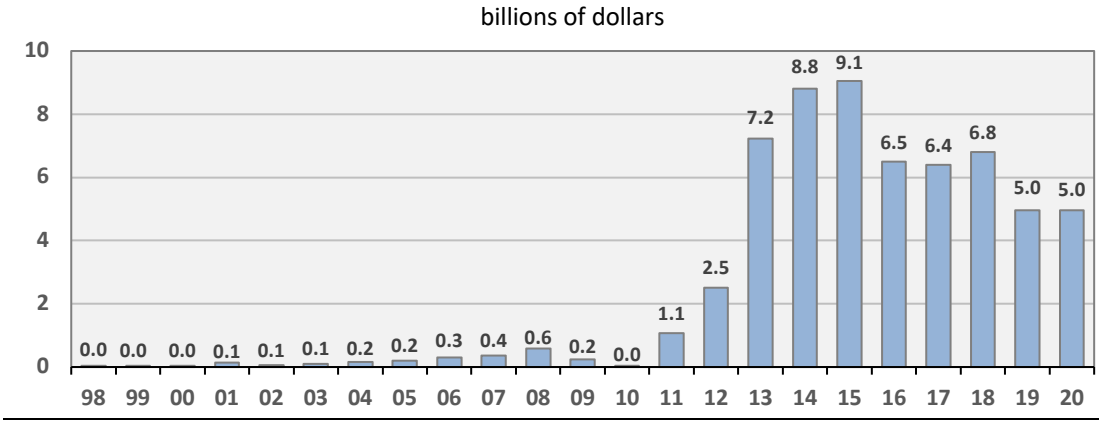


Source: Bureau of Economic Analysis

Pipelines accounted for the second largest share (33.5%) of GDP produced in the state's oil and gas cluster in 2020, trailing only oil and gas extraction (NAICS 211). Longer-term, the pipeline sector has posted a more than 20-fold increase in GDP since the state's oil and gas industry began to reemerge in 2003.

Pipeline Proprietor Earnings. Earnings received by self-employed proprietors in the pipeline sector totaled $5.0 billion in 2020 (*Figure 17*). This represents 45% of total proprietor income earned in the state oil and gas cluster. Proprietors' earnings in the pipeline sector accelerated sharply beginning in 2013 and have averaged $6.8 billion annually through 2020. This income has provided a significant boost to overall state household income the past decade.[7]

Figure 17. Proprietors' Earnings – Oklahoma Pipeline Sector



Source: Bureau of Economic Analysis

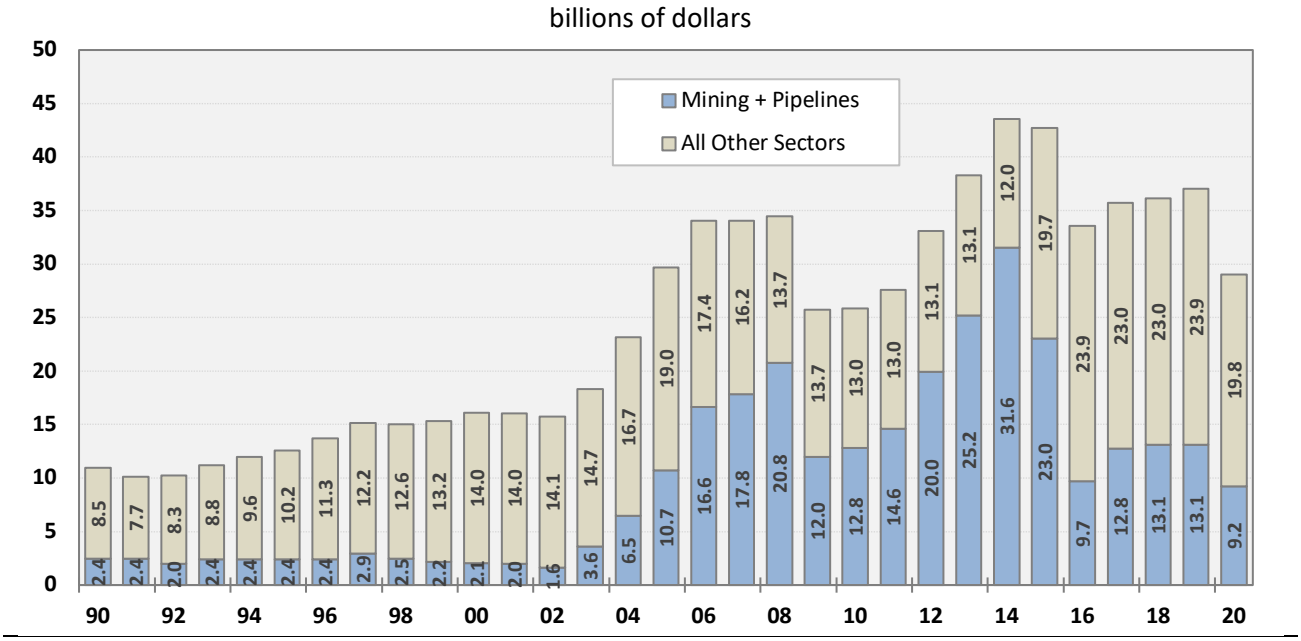
IV. Drilling and Exploration Activity

Many segments of the state's oil and gas cluster are historically highly capital-intensive and have become increasingly so in recent years. The investment activity in the oil and gas cluster can easily sway overall statewide capital investment activity. Within the cluster, most investment in recent years is tied to either traditional drilling and production activity or the development of pipelines. The share of pipelines has risen substantially since 2013. The remaining sectors in the state's oil and gas cluster account for far smaller amounts of ongoing fixed private investment.

Investment in the Oil and Gas Cluster

The oil and gas cluster remains a key source of private investment in the Oklahoma. A pullback in drilling began in 2019 and intensified with the outbreak of Covid. Estimates of investment for the mining and pipeline sectors are shown relative to all other sectors combined statewide in Figure 18 in the 1990 to 2020 period.[8] The broader mining sector is used in the estimates rather than the traditional oil and gas sector for greater consistency with national databases on fixed investment. However, approximately 97% of mining sector activity in Oklahoma is within the traditional oil and gas sectors of the cluster.

Figure 18. Annual Private Fixed Investment – Oklahoma



Notes: Fixed investment includes structures, equipment, and intellectual property. State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik (see endnotes).
Source: U.S. Bureau of Economic Analysis and RegionTrack calculations

The estimates indicate that of the $29.0 billion in total private investment made in the state in 2020, $9.2 billion (32%) was made by firms in the state's mining and pipeline sectors. All other state industries combined made investments totaling $19.8 billion in 2020, or slightly more than two-thirds of total state investment (68%).

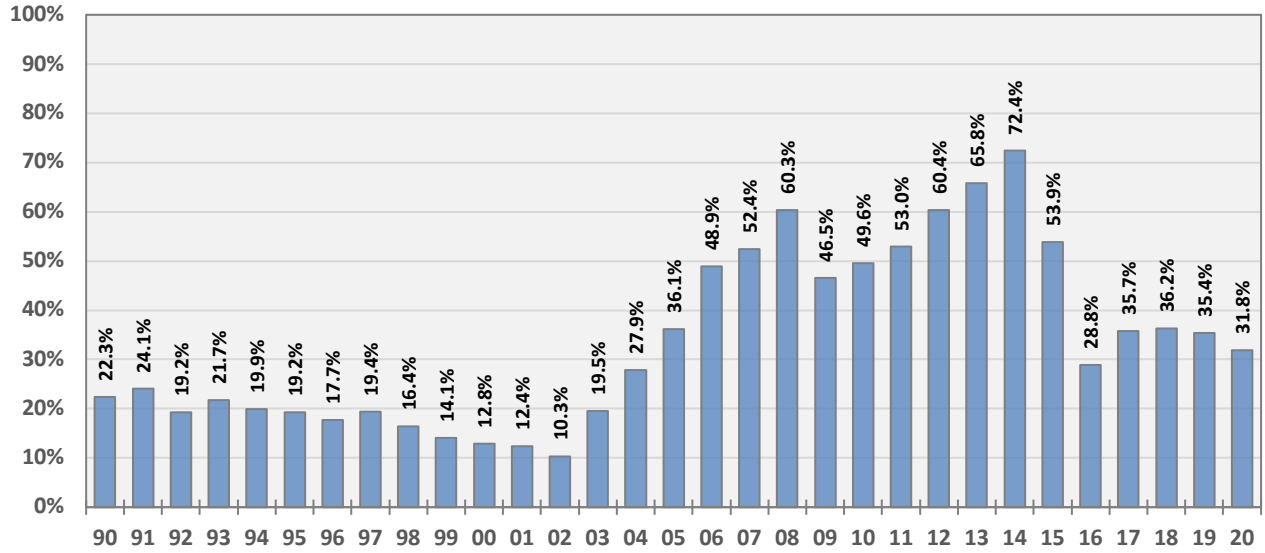
Capital investment in the mining and pipeline sectors has been subdued since 2016 relative to peaks in the prior decade under pressure from lower crude oil and natural gas prices.

Average annual investment in mining and pipelines has averaged only $11.6 billion annually versus $19.4 billion annually in the decade from 2006 to 2015. Prior to the reemergence of the industry in 2003, total investment spending in these two sectors averaged only about $2 to $3 billion annually in the 1990 to 2002 period.

Since the industry began to reemerge in 2003, the mining and pipeline sectors of the oil and gas cluster in Oklahoma have made cumulative investments of an estimated $273 billion, or an average of $15.2 billion annually. This is consistent with Oklahoma capturing a roughly 6-12% share of total domestic investment in traditional oil and gas activity and pipelines in recent years.[9] Oklahoma captured 6.4% of domestic investment in mining and pipelines in 2020.

The share of total state private investment taking place through the mining and pipeline sectors dropped to 31.8% in 2020. The current share is just below the average share of 34% since 2016 following the downshift to lower energy prices in 2014 and 2015. Despite the slowing in investment, the state's oil and gas cluster remains the largest single source of capital spending in Oklahoma, by a substantial margin.[10]

Figure 19. Mining and Pipeline Share of Total State Private Fixed Investment – Oklahoma

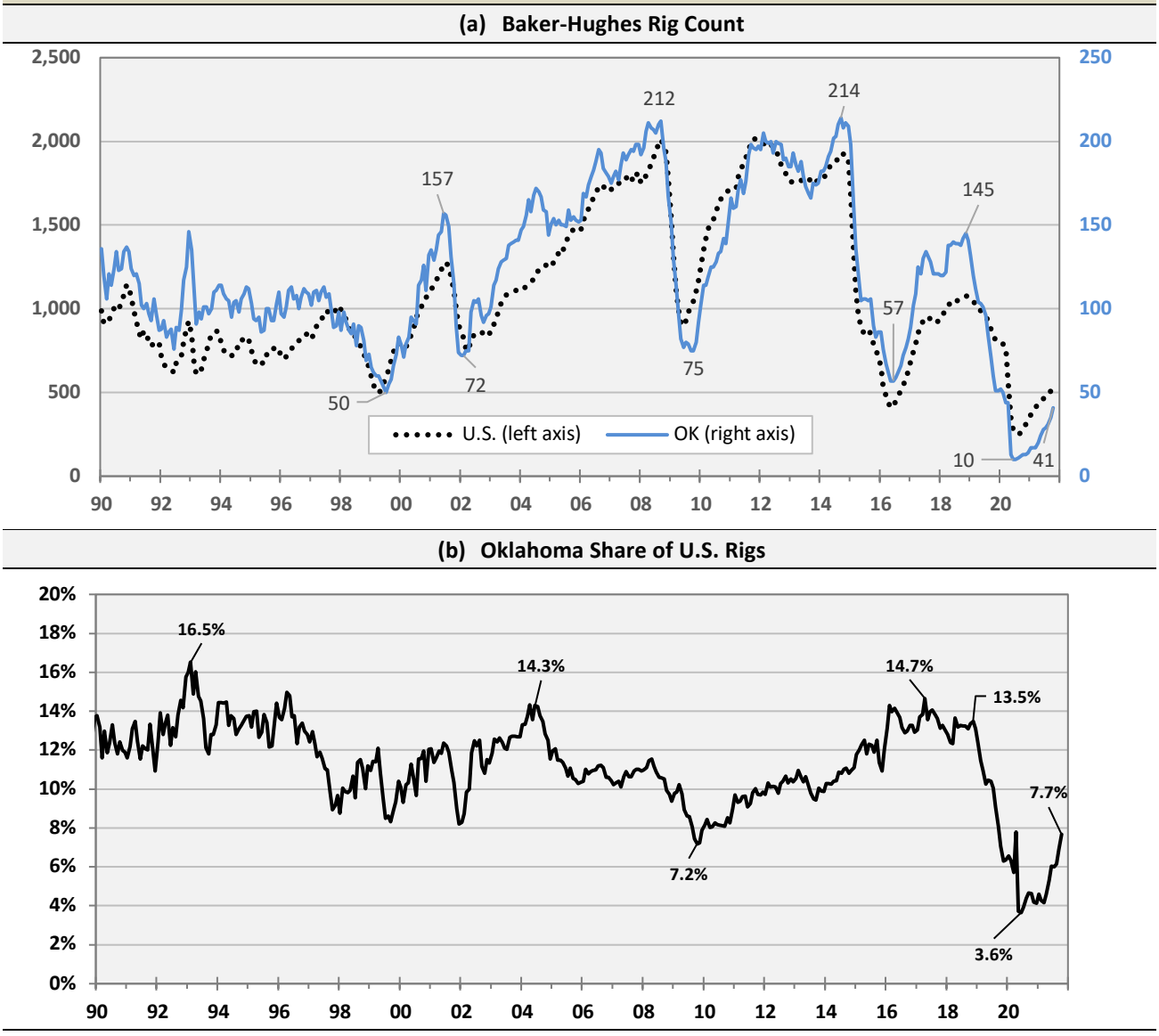


Notes: Fixed investment includes structures, equipment, and intellectual property. State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik (see endnotes above). The oil and gas cluster share includes the mining and pipeline sectors.
Source: U.S. Bureau of Economic Analysis and RegionTrack calculations

Drilling and Completion Activity

Rig Counts. The number of drilling rigs operating in Oklahoma slowed sharply in 2019 under pressure from falling energy prices. The count peak at 145 rigs before falling to about 50 rigs prior to the onset of Covid (*Figure 20*). As Covid spread, the rig count in the state plummeted to a low of only 10 rigs in mid-year 2020, the lowest rig count in the state in the modern oil and gas era. The rig count bottomed in early 2021 and has since made a modest recovery to just above 40 rigs. The count remains 70% below the recent 2019 peak and 80% below the post-Oil Bust peak of 214 rigs in late 2014.

Figure 20. Drilling Rig Count – OK vs. U.S.



Source: Baker-Hughes and RegionTrack calculations

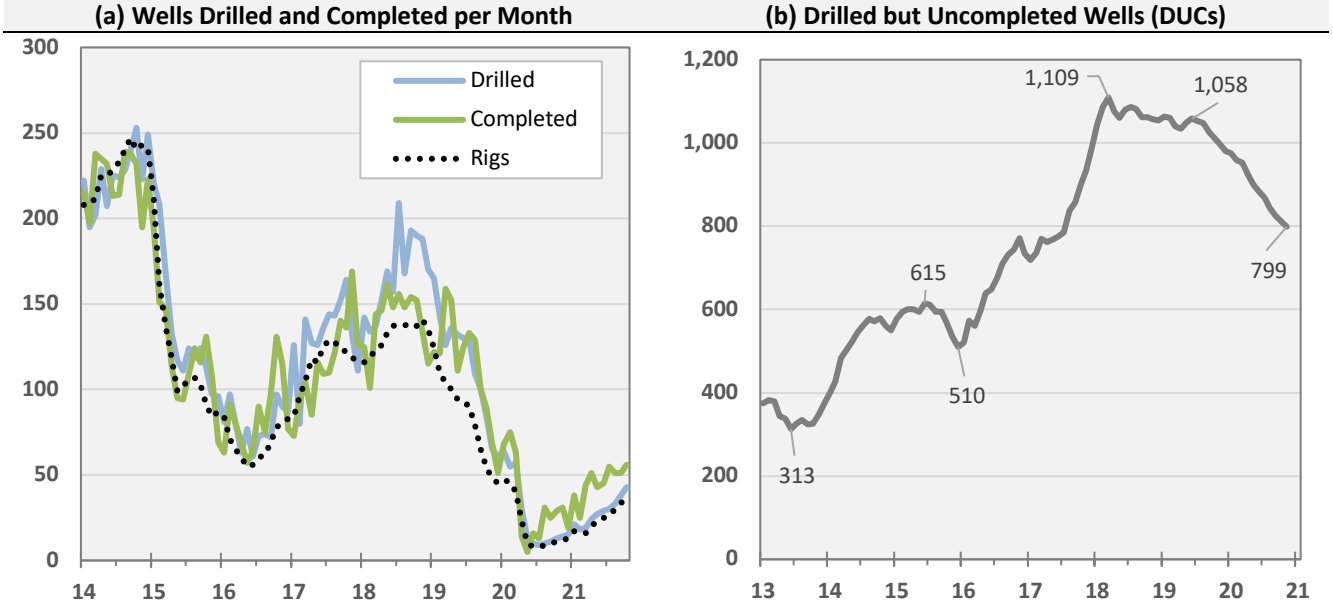
Currently, the state's 7.7% share of U.S. rigs is near historical lows after hovering near historical highs of approximately 14% as recently as 2018. The share of U.S. rigs fell to a low of only 3.6% immediately post-Covid, the lowest share for the state in the modern drilling era.

Drilling and Completions. EIA data on drilling and completions in the Anadarko Basin (which includes the most active drilling counties in western Oklahoma and the north tip of the Texas Panhandle) indicates a bottom in drilling activity in the 4th quarter of 2020, with steady but moderate gains through October 2021 (*Figure 22a*). Only 10 wells per month were drilled in the Summer of 2020 under pressure from the pandemic-driven collapse in global oil demand. Wells drilled in the Anadarko have since rebounded slowly and topped 40 per month in the most recent data through October 2021.

Completions in the Anadarko have been far stronger since late 2020, rising from a dozen or so wells completed monthly in the Summer of 2020 to more than 50 completions per month currently (*Figure 22a*). Completions remain only about one-third the peak rate of 150 wells completed per month in early 2019.

Activity Shifts to Wells Drilled but Uncompleted (DUC). Producers in the Anadarko Basin have been steadily depleting the inventory of drilled but uncompleted (DUC) wells since early 2019 (*Figure 22b*). The number of DUCs in the Anadarko region reached a record high of 1,109 in early 2019 and has since fallen steadily to only 799 in October 2021. The pace of DUC completions picked up sharply beginning in the second half of 2019, with firms conserving drilling budgets amid the national recession and continued uncertainty over the pandemic. The continued reduction in the number of DUC wells underlies much of the relatively weak rebound in drilling so far in 2021, despite the unexpectedly strong rebound in oil and gas prices in 2021.

Figure 22. Wells Drilled Completed/Uncompleted (DUC) – Anadarko Basin



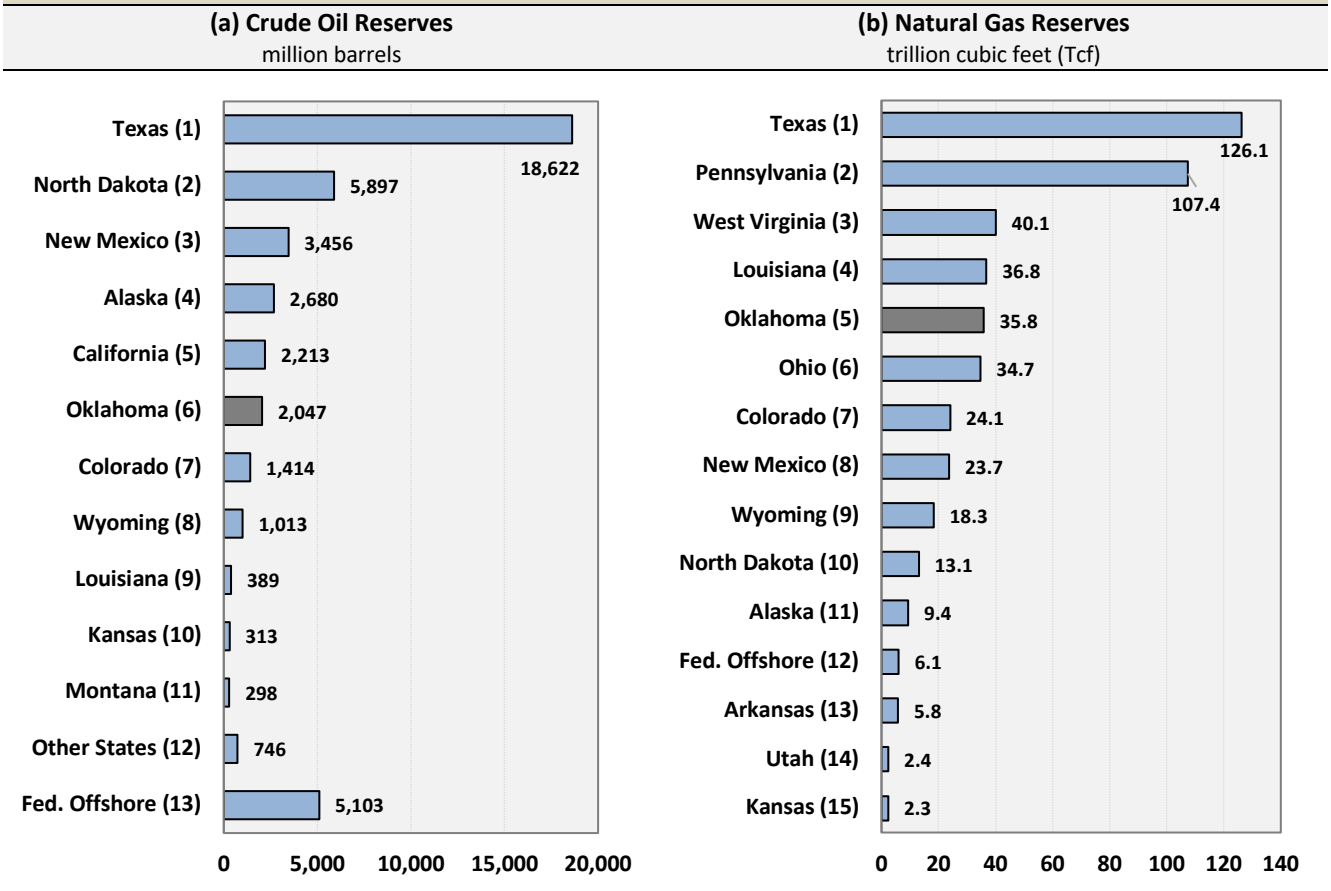
Notes: The Anadarko Basin as defined and tracked by EIA contains counties primarily located in the SCOOP and STACK formations in west central Oklahoma, two counties in the Oklahoma Panhandle, and five counties in the northeast tip of the Texas panhandle.
Source: U.S. Energy Information Admiinistration

Proved Reserves

Oklahoma remains home to substantial reserves of both crude oil and natural gas. Figure 23 provides the most recent EIA estimates of 2019 proved reserves in Oklahoma versus other top producing states.

For crude oil, Oklahoma continues to rank 6th among the states with 2.05 billion barrels in proved reserves (see Figure 23a). This slightly trails traditional large crude producers Alaska and California but is well ahead of traditional oil producers Colorado, Wyoming, Louisiana, and Kansas. State production of 171.7 million barrels in 2020 represents about 8.4% of the state's 2019 proved oil reserves.

Figure 23. Proved Reserves of Crude Oil and Natural Gas (2019)



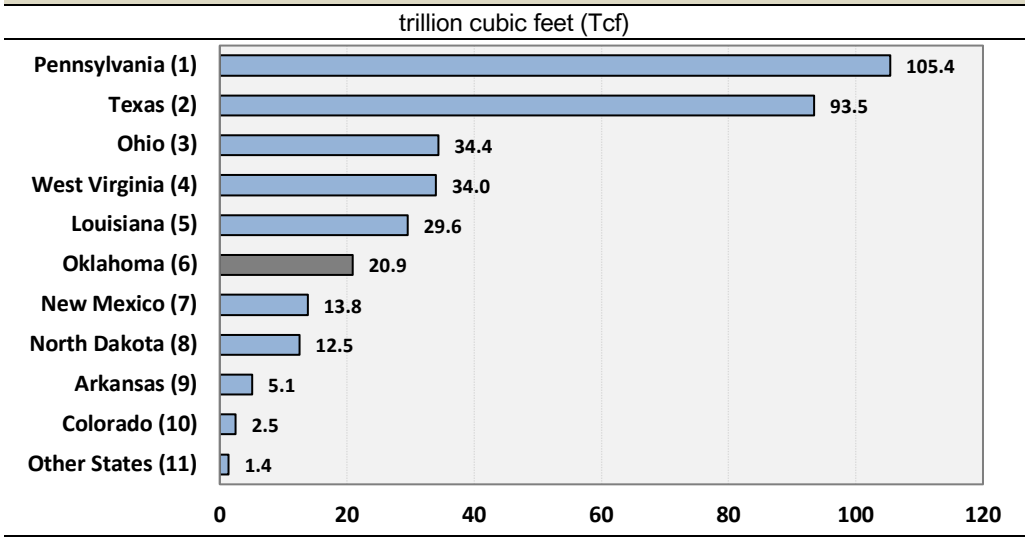
Notes: Crude oil reserves include both crude oil and lease condensate. Natural gas reserves include both dry gas and liquids.
Source: U.S. Energy Information Administration

Oklahoma's 35.8 Tcf of natural gas reserves ranks 5th among the major producing states (*Figure 23b*). Dominant gas producers Texas and Pennsylvania are both home to more than 100 Tcf of proved natural gas reserves, roughly triple or more the level in Oklahoma. West Virginia and Louisiana both moved ahead of Oklahoma in the natural gas reserve rankings for 2019.

Oklahoma continues to lead Ohio by a small margin but remains well ahead of Colorado, New Mexico, and Wyoming. State production of 2.79 Tcf of natural gas in 2020 represents about 7.8% of the state's 2019 proved reserves.

In terms of natural gas reserves in shale formations, Oklahoma continues to rank 6th among the producing states with 20.9 Tcf in proved reserves in 2019 (*Figure 24*). Shale gas represents nearly 60% of the total proved natural gas reserves in Oklahoma.

Figure 24. Shale Gas Reserves by State (2019)



Source: U.S. Energy Information Administration

V. Oil and Gas Cluster Share of Total State Economic Activity

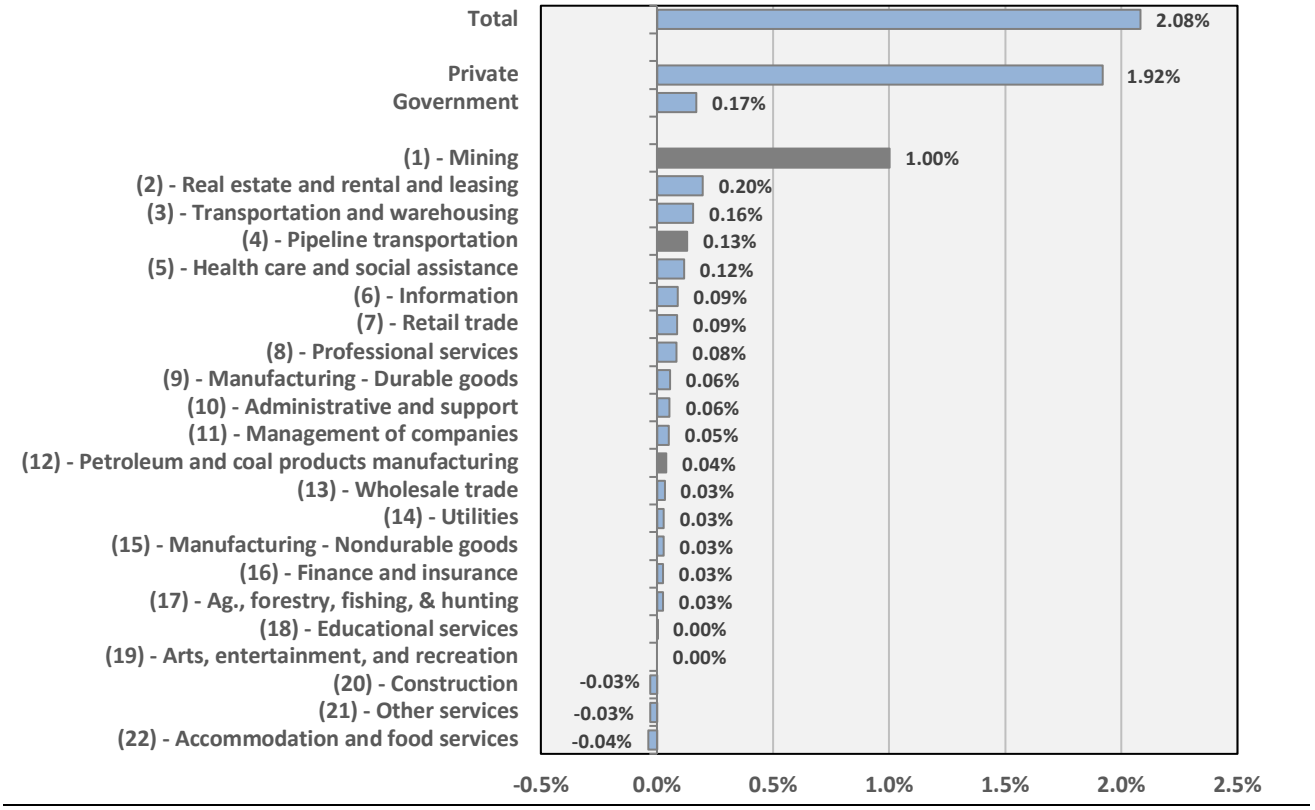
The Oklahoma oil and gas cluster continues to make an outsized economic contribution to the Oklahoma economy. This section of the report evaluates two key measures of the economic influence of the sector. The first evaluates the contribution of the oil and gas cluster to state real GDP growth over time. The second measures the share of total household earnings paid by firms operating in the cluster in recent years.

Oil and Gas Cluster Contribution to State GDP Growth

Since the reemergence of the domestic oil and gas industry beginning in 2003, the oil and gas cluster has been the largest contributor to economic growth in Oklahoma across all major sectors, by a substantial margin. Figure 25 summarizes industry-level measures of the contribution of each major NAICS sector to real GDP growth in Oklahoma from 2003 through 2020.

Figure 25. Industry Level Contributions to Real GDP Growth – Oklahoma

average annual percent change in GDP by sector in the 2003–2020 period



Notes: The mining sector is used in this section to represent traditional oil and gas activity because the Bureau of Economic Analysis makes these calculations readily available only for major NAICS sectors. The oil and gas sector represents nearly all mining sector activity in Oklahoma.
Source: Bureau of Economic Analysis

The three major components of the oil and gas cluster – mining (primarily the traditional oil and gas sectors), pipelines, and refineries – are highlighted in Figure 25 to illustrate the relative rankings and contributions of these components of the oil and gas cluster to total state growth.

Across the full period, the Oklahoma economy posted average real GDP growth of 2.08% annually. The private sector contributed 1.92% of total growth, while government added 0.17%.

The mining sector alone contributed nearly half (1.00% annually) of all real GDP growth in the state in the period. This is the largest contributing sector in the state in the period.

The pipeline industry produced the 4th largest contribution to real GDP growth in the period, with a 0.13% annual contribution. Refineries (i.e., petroleum and coal products manufacturing in Figure 25) contributed an additional 0.04% to annual real state GDP growth in the period.

Combined, the mining, pipeline, and refinery components of the state oil and gas cluster contributed an average of 1.17% per year to real state GDP since 2003. This represents more than half (56%) of total real growth in the state in the period. All other sectors combined contributed only 0.91% annually in the period, or less than half (46%) of the total increase in real GDP in Oklahoma since the reemergence of the oil and gas sector in 2003.

The state's mining sector far outpaced the contribution of all other major sectors. The GDP produced in mining far exceeded the contribution of the 2nd ranked Real Estate (0.20% annually) and 3rd ranked Transportation and Warehousing (0.16% annually) sectors.

The 0.13% contribution of the Pipeline sector exceeded that produced by all other remaining sectors including Health Care (0.12% annually).

No other industry sectors contributed 0.1% or more to GDP annually in the period. Many industries contribute negligible amounts to overall state real GDP growth in the period.

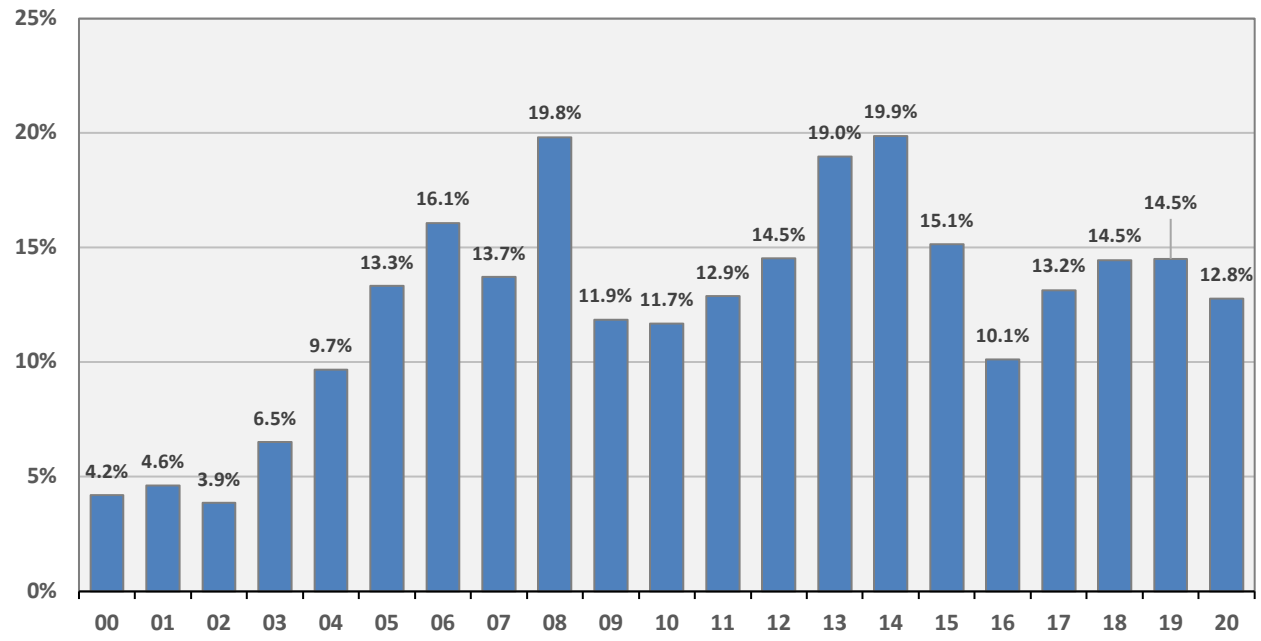
Oil and Gas Share of Household Earnings

The influence of oil and gas activity on the state economy is closely tied to the high share of total household earnings derived directly from the state's oil and gas cluster. Household earnings includes both the compensation paid to wage and salary workers and income received by self-employed proprietors and participants in oil and gas partnerships.

Firms in the oil and gas cluster provided $16.5 billion in earnings to households across the state in 2020. This equates to 12.8% of total household earnings statewide (*Figure 26*). The share of earnings pulled back slightly in 2020 from 14.5% in 2019 due to the pandemic's disproportionate effect on the oil and gas industry. Again, the cluster represents only 3.6% of all firms statewide and 3.8% of total statewide employment but accounts for 12.8% of total household income.

The environment of lower energy prices faced by the industry has worked to keep the earnings share well below the peak rates of nearly 20% in 2013 and 2014. The share also neared 20% in 2008 during a period of elevated energy prices. The share in 2020 is only slightly below the 13.2% average in the 2016 to 2020 period.

Figure 26. Share of State Household Earnings Derived from Oil and Gas Cluster



Notes: Household earnings is defined by Bureau of Economic Analysis as employee compensation plus proprietors' income. Proprietor's income consists primarily of the income of sole proprietors and partnerships.
Source: Bureau of Economic Analysis and RegionTrack calculations

VI. Economic Spillovers from Oil and Gas

The direct activity taking place within the state's oil and gas cluster produces a substantial economic contribution to the state economy. In 2020, the 4,041 firms in the cluster directly produced $19 billion in gross domestic product, $16.5 billion in household earnings, and employed 85,050 wage and salary and self-employed workers. Like all industry sectors, the state's oil and gas cluster has a strong degree of economic interdependence with the other components of the state economy. In this section, we provide estimates of the economic spillover activity and gross contribution of the oil and gas cluster to the overall state economy.

Modeling Regional Linkages. The direct production within the oil and gas cluster creates measurable spillover activity that can be measured in the form of GDP (or value added), employment, and household earnings created as spillover effects in other sectors of the economy. Estimates of spillover effects from the cluster are formed using RIMS II input-output multipliers produced by the U.S. Bureau of Economic Analysis (BEA).[11] RIMS II multipliers provide model-based estimates of the impact that a local final demand shock has on total value added, earnings, and employment within a region.[12] The multipliers can also be used to estimate an industry's total (or gross) contribution to the state economy.

The approach uses the direct activity of firms operating within the cluster along with a model of the flow of expenditures between businesses, households, and the government sector within the state.[13] The spillover activity occurs as firms in the oil and gas cluster purchase goods and services from firms in other sectors of the economy. In other words, the multipliers provide a convenient method for estimating the spillover effects that a change in *GDP*, *employment*, or *earnings* within the oil and gas cluster may have on broader state economic activity.

To accommodate the various activities taking place within the oil and gas cluster, data for each component of the cluster are matched by natural business segment to the RIMS II industry structure. The individual effects of each sector of the cluster are estimated and then aggregated to determine the overall cluster effect.[14]

Figure 27. Gross Economic Contribution - Oklahoma Oil and Gas Cluster (2020)

	Direct Effects			Indirect & Induced Effects			Total Effects		
Cluster Sector	GDP	House-hold Earnings	Total Employ-ment	GDP	House-hold Earnings	Total Employ-ment	GDP	House-hold Earnings	Total Employ-ment
Oil & Gas Extraction	$9,193	$7,893	52,223	$7,446	$6,946	90,346	$16,639	$14,839	142,569
Oil & Gas Drilling	195	238	2,173	158	209	3,759	353	447	5,932
Oil & Gas Support Activities	1,127	1,377	16,567	1,330	1,033	22,200	2,457	2,410	38,767
Refineries	1,408	730	2,160	1,873	810	4,406	3,281	1,540	6,566
Other Petroleum & Coal Prod. Mfg.	267	138	645	355	153	1,316	622	291	1,961
Oil & Gas Field Mach. & Equip. Mfg.	814	535	6,365	757	637	12,666	1,571	1,172	19,031
Pipelines	5,847	5,542	3,415	1,930	4,655	8,913	7,777	10,197	12,328
Geophysical Survey. Mapping	103	93	1,510	91	56	1,374	194	149	2,884
Oil and Gas Cluster – Total	**$18,954**	**$16,546**	**85,058**	**$13,939**	**$14,499**	**144,981**	**$32,893**	**$31,045**	**230,039**
Traditional Oil and Gas Sectors	10,515	9,508	70,963	8,934	8,188	116,305	19,449	17,696	187,268
Ancillary Sectors	8,439	7,038	14,095	5,005	6,311	28,676	13,444	13,349	42,771

Source: Bureau of Economic Analysis: RIMS and RegionTrack calculations

Gross Economic Contribution of the Oil and Gas Cluster.[15] Gross economic spillover impacts resulting from the operation of the state's oil and gas cluster in 2020 are detailed in Figure 27. Included are estimates of the amount of statewide employment, household earnings, and value added (GDP) supported by firms in the oil and gas cluster, both directly and through spillover effects.[16]

The overall results in Figure 27 suggest that the operations of the oil and gas cluster along with its spillover effects have a sizeable influence on the broader state economy. In total, the state's oil and gas cluster supported an estimated $32.9 billion in state GDP, $31.0 billion in household earnings, and 230,040 jobs in 2020.

GDP. The $32.9 billion in total state GDP is the broadest measure of the total economic contribution of the cluster and can be partitioned into direct, indirect, and induced effects.[17] The *direct* effect includes $19.0 billion in GDP generated directly by the cluster. The direct output of the cluster in turn supports an incremental $13.9 billion in indirect and induced output in other industries statewide. In other words, each dollar of direct output within the cluster supports an additional $0.74 in estimated GDP statewide. The *indirect* effect is the economic output generated in the state resulting from spending by firms in the cluster on goods and services for production or to fund capital expenditures. The *induced* effect reflects the economic output generated in other sectors of the state economy resulting from new household spending in the state out of household earnings received as part of the direct and indirect effects. The $32.9 billion in estimated state GDP supported by the activity of firms in the oil and gas cluster represents 17.5% of total statewide GDP in 2020.

Household Earnings. The total impact of $31.0 billion in household earnings supported by the cluster's activities and expenditures can also be partitioned into direct, indirect, and induced effects. The *direct* effect is the $16.5 billion in earnings paid directly to employees and self-employed proprietors in the cluster. The direct earnings support an incremental $14.5 billion in indirect and induced earnings for workers in other industries statewide. Each dollar of direct earnings by cluster employees and proprietors supports an additional $0.88 of household earnings statewide. The *indirect* effect is the earnings paid in the state resulting from expenditures on goods and services by the cluster. The *induced* effect reflects the earnings paid in other sectors of the state economy resulting from new household spending in the region out of earnings received as part of the direct and indirect effects. The $31.0 billion in estimated gross household earnings supported by the activity of firms in the oil and gas cluster represents 24.0% of total statewide household earnings in 2020.

Employment. Measured by direct employment, 85,050 employees worked as either wage and salary workers or self-employed proprietors in the Oklahoma oil and gas cluster in 2020. This employment supports an additional 144,980 jobs statewide through estimated indirect and induced effects. The *indirect* effect is the employment generated across the state as a result of spending by the cluster on goods and services. The *induced* effect reflects the employment generated in other sectors of the economy resulting from new household spending in the state out of household earnings received as part of the direct and indirect effects. In total, the operations of the oil and gas cluster directly and indirectly support more than 230,000 jobs statewide. The estimated 230,000 workers supported by the activity of firms in the oil and gas cluster represent 10.2% of total statewide employment in 2020.

VII. Tax Contributions of the Oil and Gas Industry

Oklahoma's oil and gas cluster continues to make significant state and local government tax payments. Gross production taxes (comprised of severance taxes plus excise tax payments on the production of crude oil and natural gas) remain a significant source of tax revenue to state and local governments in Oklahoma. These taxes are based on the value of oil and natural gas production and are subject to significant volatility as commodity prices and oil and natural gas output fluctuate over time.

Firms in the cluster also pay significant ad valorem taxes on assets located in the state. These taxes are used for many dedicated state and local expenditures, primarily public education.

Measured more broadly, the cluster pays a high share of all business taxes paid in the state.

The overall tax contributions of firms in the state's oil and gas cluster are reviewed throughout this section of the report.

Gross Production Taxes

Gross production tax revenue declined sharply beginning in FY2020 as the pandemic pushed oil and natural gas prices lower and weighed on state oil and gas production (*Figure 28*). Total gross production taxes fell to $799 million in FY2020, a nearly 30% decline from a near-record $1.13 billion in FY2019. Gross production tax payments fell an additional 10% to $720 million in FY2021.

Low prices for both crude oil and natural gas weighed heavily on the value of production and gross production taxes in both FY2020 and FY2021. Crude oil prices averaged less than $50 per barrel and natural gas prices remained below $2 per Mcf in both fiscal years. Natural gas prices experienced unusual weakness in the period as surging state production faced severely restricted demand following the onset of Covid restrictions.

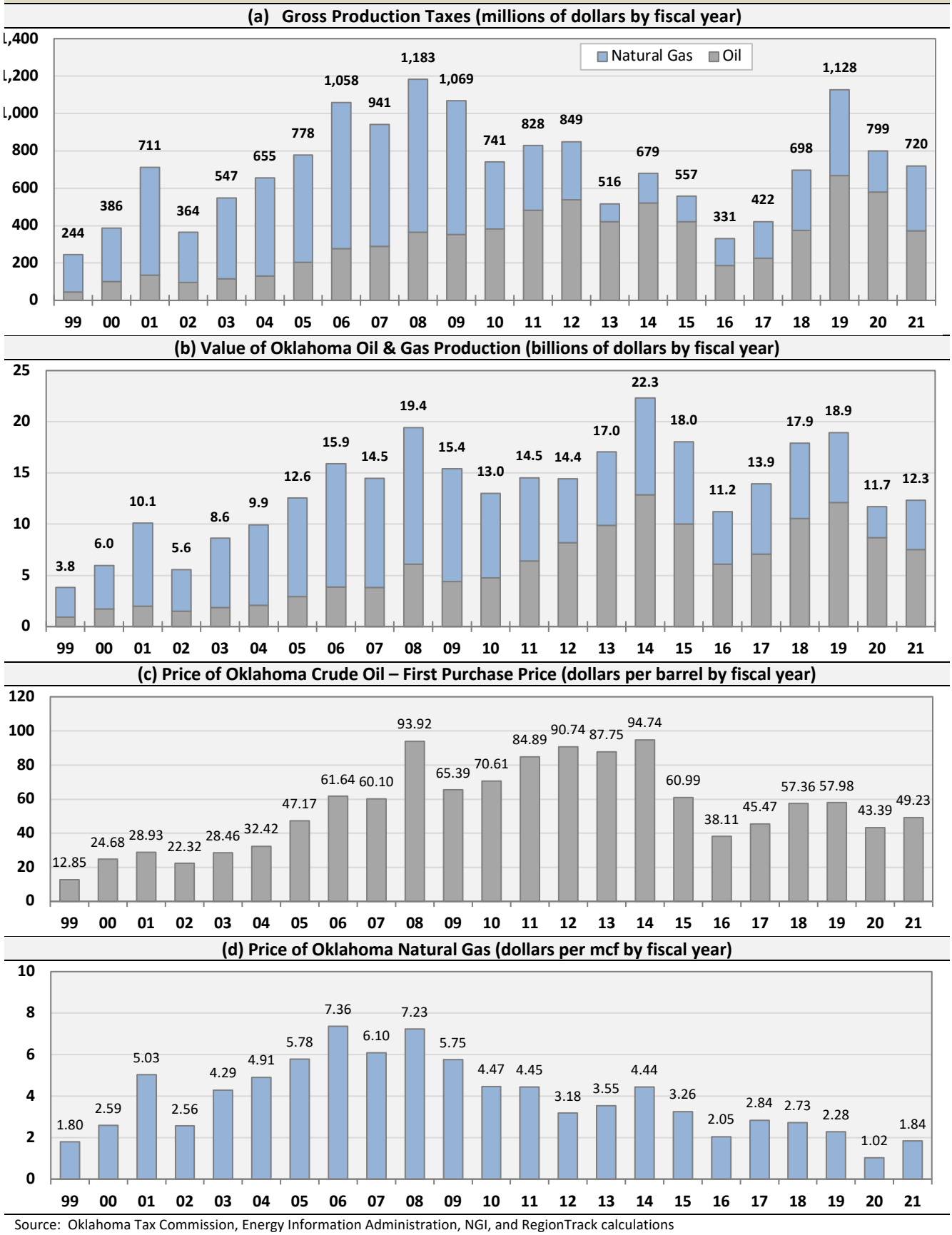
Monthly gross production receipts began to accelerate in the second half of calendar year 2021 in response to the rebound in crude oil and natural gas prices. Monthly severance taxes averaged nearly $100 million per month from July to September 2021.

Effective Gross Production Tax Rate

Figure 29 provides updated effective gross production tax rates for oil and gas production in Oklahoma from FY1999 through FY2021. The effective tax rate is calculated as total gross production tax receipts (net of refunds) divided by the estimated market value of crude oil and natural gas production.[18] Gross production revenue used in the calculation includes both severance and excise taxes on production. Oil and natural gas prices are stated on a fiscal year basis.

The effective gross production tax rate on production in Oklahoma has increased sharply since 2018, from a recent low of 3.0% in FY2017 to 6.0% in FY2019 and 6.8% in FY2020. The effective rate dropped to 5.8% in FY2021 but remained elevated well above 2017 levels. Year-to-year volatility in the effective tax rate reflects differences in timing between the period in which production is valued and the period of receipt of tax payments.

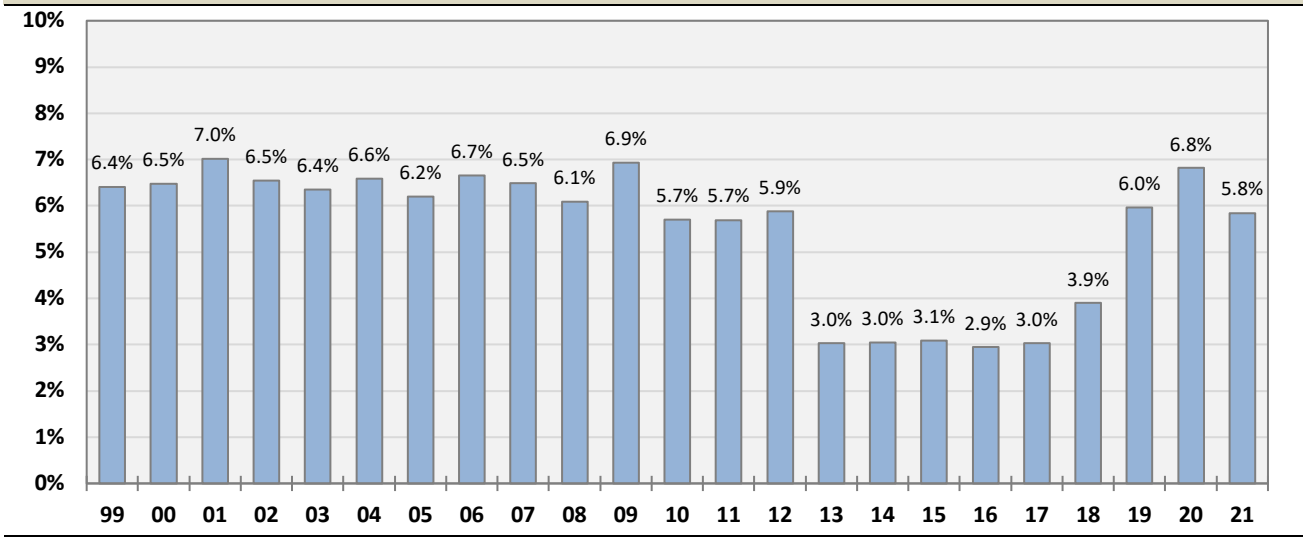
Figure 28. Net Annual Oil and Gas Gross Production Tax Receipts – Oklahoma



Source: Oklahoma Tax Commission, Energy Information Administration, NGI, and RegionTrack calculations

Increased Severance Tax Rate. The rise in the effective rate in recent years since 2018 reflects the implementation of House Bill 1010XX raising severance tax rates in the state. Beginning July 1, 2018, production of crude oil and natural gas from all new wells and all existing wells taxed at the previous 2% rate are taxed at a new 5% rate for the first 36 months of production. All wells revert to a 7% rate after 36 months of production.

Figure 29. Effective Gross Production Tax Rate – Oklahoma (Fiscal Year)



Source: Oklahoma Tax Commission, Energy Information Administration, and RegionTrack calculations

Gross Production Tax - Changes in Tax Rates vs. Production

Annual changes in gross production tax collections can be apportioned to either a change in the effective gross production tax rate or a change in the taxable value of production. Annual changes in collections since FY2000 are apportioned to changes in either the effective tax rate or production value in Figure 30. Figure 30a reflects the total change in annual payments while Figure 30b reflects the relative contribution of changes in tax rates and production value.

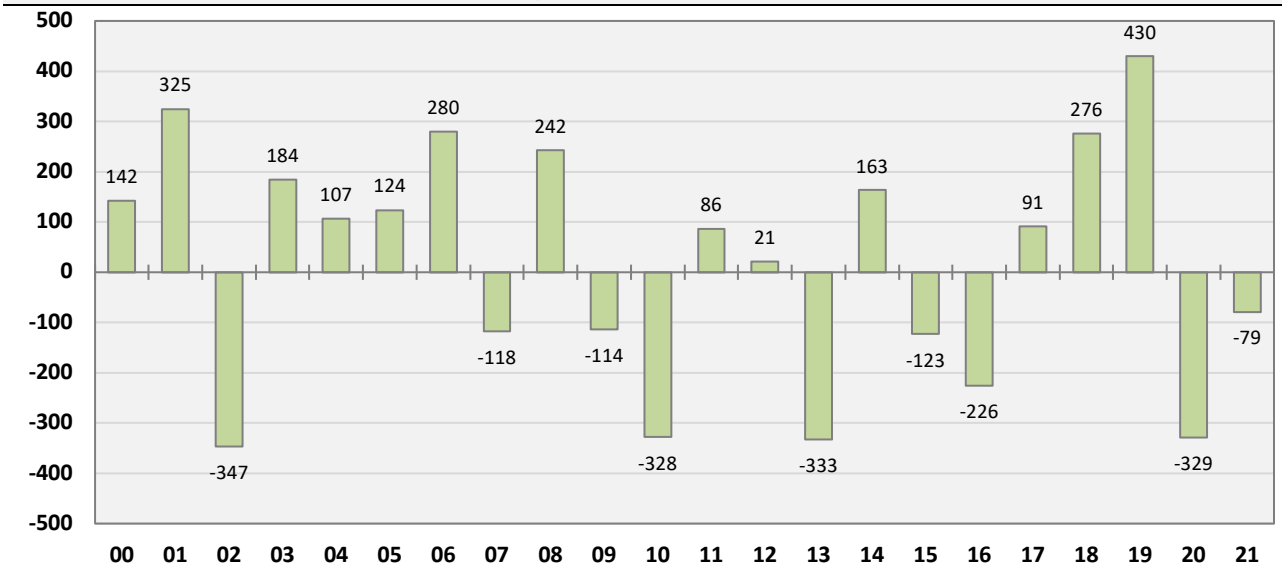
Beginning in FY2018, rising severance tax collections due to an increase in the effective severance tax rate explain a major share of the change in revenue in the FY2018 to FY2020 period. Tax revenue increases due to a rising effective tax rate totaled $155 million in FY2018, $390 million in FY2019, and $101 million in FY20.

The decline in revenue in FY2020 of $329 million is split between a $101 million increase due to a rise in the effective tax rate and a $430 million decline traced to falling production value (*Figure 30b*). This is roughly opposite the conditions present in FY2019 when a $430 million rise in severance tax collections is traced almost fully to a rising effective tax rate ($390 million), with a small positive contribution from an increase in production value ($39 million).

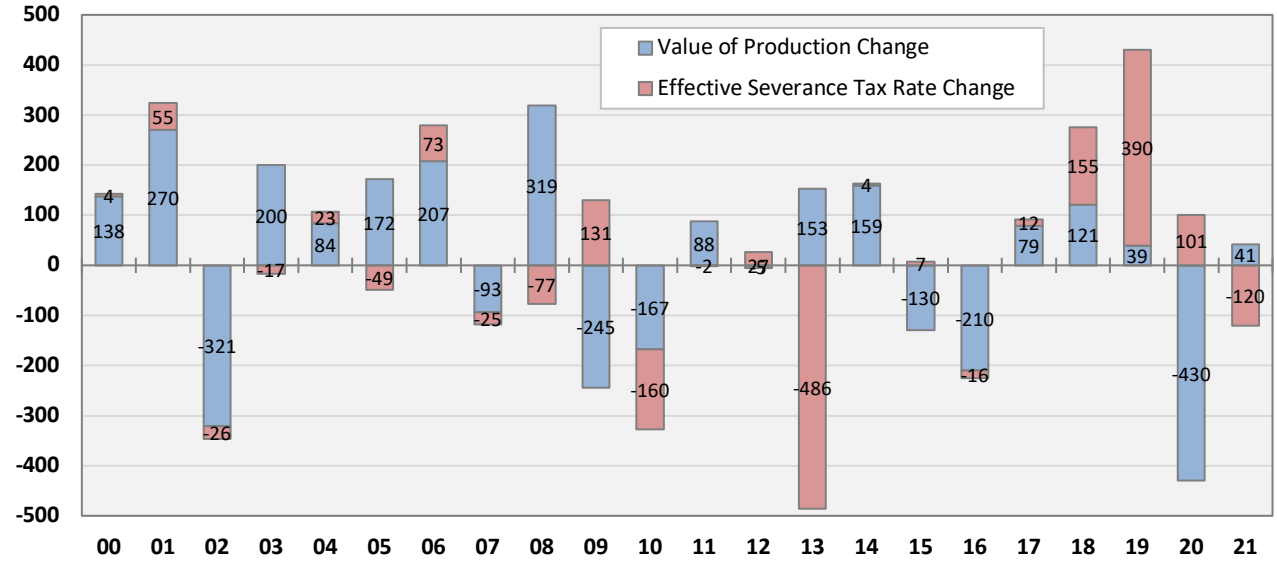
Most of the pandemic-related valuation effects on gross production taxation were felt in FY2020. In FY2021, the $79 million decline in gross production receipts is traced to a $120 million decline tied to a declining effective tax rate and a $41 million increase tied to rising production value. This behavior is similar to the stability of the two components in FY2017.

Figure 30. Oklahoma Gross Production Tax – Source of Annual Changes (Fiscal Years)

(a) Total Annual Change in Gross Production Tax Revenue ($millions)



(b) Annual Change Apportioned to a Change in Either Production Value or Effective Tax Rate ($millions)



Source: Oklahoma Tax Commission and RegionTrack calculations

Severance Taxes Play Key Role in Budget Stabilization

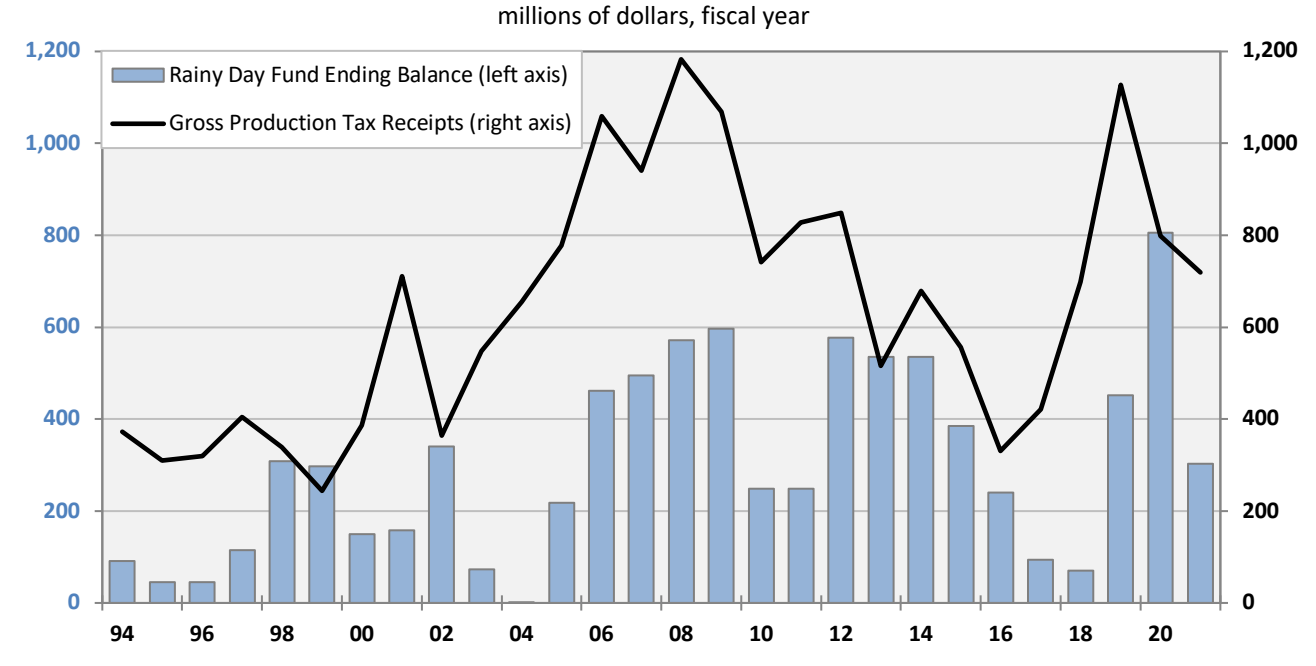
It is important to recognize the critical historical role played by severance taxes as a buffer against recessions and the state's energy-price sensitive economic cycle. Historically, most national recessions are accompanied by elevated energy prices which tend to raise severance taxes to the state and increase the share of the state budget supported by oil and gas production.

This countercyclical budget support is evident in the 1973-75, 1980-83, 2001, and 2007-09 recessionary periods. Similar but smaller budget support is found in earlier recessions in 1954 and 1957. Continued volatility in oil and gas prices and the rising value of oil and gas production suggest that severance taxes are likely to continue to transmit volatility to state tax collections going forward.

Severance tax revenue has long played a key role in budget stabilization through the state's Rainy Day Fund.[19] Historically, deposits to the Fund are highly correlated with years when severance tax receipts exceed budget projections. Figure 31 compares the Rainy Day Fund balance with gross production tax receipts in the FY1994 to FY2021 period. Even after refunds, gross production taxes have supported large contributions to the Fund to stabilize the state budget.

The Rainy Day Fund balance reached nearly $800 million prior to the pandemic, fueled by strong gross production tax receipts. During the Covid-driven recession, appropriations totaling nearly $750 million were made from the fund for spending in FY2020 and FY2021. The most recent deposit of $355 million was made in FY2020, leaving an ending balance of $303 million in FY2021.

Figure 31. Oklahoma Rainy Day Fund Balance and Gross Tax Collections



Source: FY2021 Executive Budget for the State of Oklahoma and Oklahoma Tax Commission

Ad Valorem Tax Payments

In Oklahoma, a severance tax is levied in lieu of a local property tax on the value of minerals in the ground. However, local governments in the state have authority to assess ad valorem taxes on the value of other oil and gas-related equipment and infrastructure. This includes gathering lines, processing equipment, and other assets. In addition to firms in the traditional drilling and production sectors, ad valorem tax also extends to assets owned by other sectors of the state's oil and gas cluster, primarily pipelines and refineries.

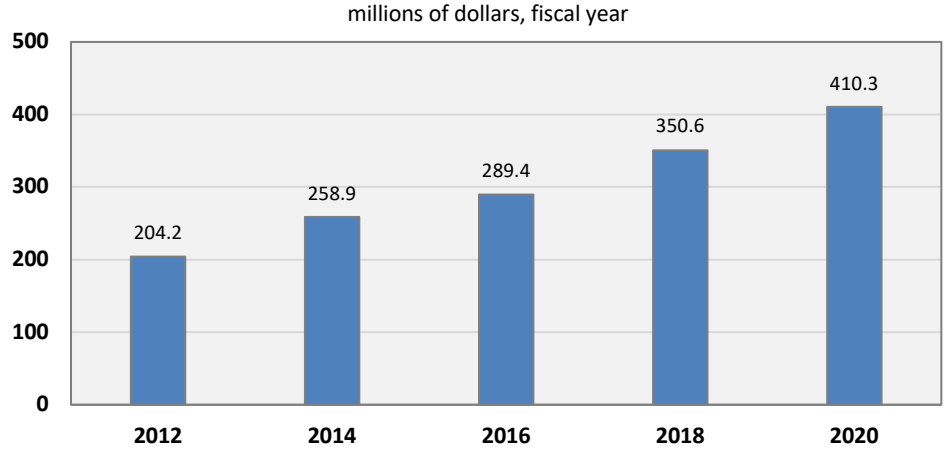
Statewide Ad Valorem Taxes. Readily available statewide data on oil and gas-related property tax payments in Oklahoma are sparse. Statewide data are available from the Oklahoma Tax Commission for 2012, 2014, 2016, 2018, and 2020 based on valuations as of November 1 for the stated calendar year.

For the state's oil and gas cluster, taxes on five categories of oil and gas-related property available that are identified in Tax Commission reports are used in the analysis. These include: 1) Refineries, Gas Plants, Gathering & Compression; 2) Other Oil, Gas & Mining Property; 3) Distribution Pipeline Companies; 4) Fluid Pipeline Companies; and 5) Gas Pipeline Companies. All pipelines represent centrally assessed property. The remaining categories are taxed as business personal property.

It is important to note that the use of these five property classes to represent the oil and gas cluster substantially understates the total property tax payments made by firms in the cluster. The total excludes buildings and other structures and all other forms of real property, as well as significant personal property used in the operations of oil and gas firms across the state.

Figure 32 illustrates local annual ad valorem tax payments made by firms in the five components of oil and gas cluster from FY2012 to FY2020. Firms in the cluster continue to contribute significant and rising amounts of ad valorem tax revenue at the local level. Payments totaled $410.3 million in FY2020, up 17% from FY2018 and double the $204.2 million paid in FY2012.

Figure 32. Oil and Gas Cluster Ad Valorem Tax Payments



Notes: Estimates for each fiscal year above are based on assessed valuations and effective millage rates for each county. Selected sectors include Refineries, Gas Plants, Gathering & Compression; Other Oil, Gas & Mining Property; Distribution Pipeline Companies; Fluid Pipeline Companies; and Gas Pipeline Companies.
Source: Oklahoma Tax Commission - Ad Valorem Stat Book (various issues)

Figure 33. OK Oil and Gas Cluster - Selected Ad Valorem Tax Payments (FY2020)

	Centrally Valued Property			Personal Property		
County	Distribution Pipeline Companies	Fluid Pipeline Companies	Gas Pipeline Companies	Refineries, Gas Plants, Gathering & Compression	Other Oil, Gas & Mining Property	Total Selected Ad Valorem Payments
Adair	0	0	0	0	0	0
Alfalfa	32,710	915,362	167,888	1,465,269	1,802,664	4,383,893
Atoka	22,837	944,738	901,018	425,142	33,976	2,327,711
Beaver	122	833,505	1,394,442	1,165,051	31,866	3,424,986
Beckham	112,883	120,879	1,670,760	869,630	0	2,774,152
Blaine	36,932	547,734	188,482	2,294,733	7,922,081	10,989,962
Bryan	121,167	3,896,878	2,343,587	124,295	1,345,360	7,831,287
Caddo	96,091	271,778	761,495	156,781	1,381,134	2,667,279
Canadian	614,719	2,123,276	537,232	25,366,133	0	28,641,360
Carter	197,178	3,811,133	643,388	7,410,113	4,711,007	16,772,819
Cherokee	127	0	0	0	0	127
Choctaw	46,564	0	7,626	0	0	54,190
Cimarron	0	738,297	415,577	200,162	7,928	1,361,964
Cleveland	1,194,528	1,318,985	288,617	2,265,768	0	5,067,898
Coal	54,748	1,746,346	1,055,914	5,706,118	275,006	8,838,132
Comanche	435,831	34,030	109,745	86,395	432	666,433
Cotton	19,541	156,450	12,813	0	0	188,804
Craig	33,243	267,105	33,757	0	0	334,105
Creek	460,610	1,823,990	2,503,652	224,543	188,830	5,201,625
Custer	134,966	79,721	1,062,890	5,683,318	407,909	7,368,804
Delaware	12,610	128,456	0	0	38	141,104
Dewey	638	450,931	268,939	1,772,499	2,605,489	5,098,496
Ellis	20,651	360,593	140,068	1,839,086	1,580,096	3,940,494
Garfield	303,518	2,250,172	444,418	17,648,977	3,847,419	24,494,504
Garvin	113,638	2,402,030	210,630	6,928,274	1,447,778	11,102,350
Grady	156,812	3,026,571	1,020,987	1,943,370	22,919,165	29,066,905
Grant	19,630	1,778,561	351,853	61,530	211,819	2,423,393
Greer	15,832	42,408	39,645	8,845	0	106,730
Harmon	30,803	149,397	235	0	0	180,435
Harper	14,731	547,920	168,133	595,615	19,706	1,346,105
Haskell	38,511	733,776	207,587	384,310	67,878	1,432,062
Hughes	51,364	1,645,961	1,193,487	2,771,630	1,454,887	7,117,329
Jackson	113,333	158,426	24,121	0	0	295,880
Jefferson	27,804	1,585,008	46,185	56,243	0	1,715,240
Johnston	16,347	1,722,383	79,098	1,158,670	65,617	3,042,115
Kay	246,804	5,028,551	687,582	4,954	804,619	6,772,510
Kingfisher	88,282	2,140,774	410,399	4,880,831	8,314,409	15,834,695
Kiowa	45,028	401,039	154,674	1,841	12,297	614,879
Latimer	47,205	0	810,298	634,896	654,346	2,146,745
LeFlore	351,184	752,854	388,904	413,196	133,952	2,040,090
Lincoln	99,680	19,840,870	219,501	935,064	5,824,185	26,919,300
Logan	254,543	2,986,000	2,039,151	2,488,730	0	7,768,424
Love	19,445	591,695	79,729	794,827	56,769	1,542,465
McClain	170,598	590,097	760,930	50,040	1,929,716	3,501,381
McCurtain	80,158	0	76,456	0	0	156,614
McIntosh	55,062	423,875	67,091	203,575	117,932	867,535
Major	32,033	2,011,711	321,923	2,891,931	446,724	5,704,322
Marshall	38,066	12,030	31,126	765,819	26,129	873,170
Mayes	49,081	440,892	19,005	0	0	508,978
Murray	44,243	606,865	9,254	5,455	52,574	718,391
Muskogee	347,987	990,240	725,061	0	58,765	2,122,053

Figure 33. (Cont.) OK Oil and Gas Cluster - Selected Ad Valorem Tax Payments (FY2020)

	Centrally Valued Property			Personal Property		
County	Distribution Pipeline Companies	Fluid Pipeline Companies	Gas Pipeline Companies	Refineries, Gas Plants, Gathering & Compression	Other Oil, Gas & Mining Property	Total Selected Ad Valorem Payments
Noble	29,326	3,596,913	172,124	197,634	405,294	4,401,291
Nowata	22,074	32,435	40,308	97,564	0	192,381
Okfuskee	38,329	860,725	316,062	823,674	189,682	2,228,472
Oklahoma	4,053,116	2,060,217	701,575	157,490	7,567,624	14,540,022
Okmulgee	163,453	1,113,316	402,546	371	527	1,680,213
Osage	175,630	6,176,116	404,256	549,314	163,464	7,468,780
Ottawa	86,098	623,007	34,664	0	0	743,769
Pawnee	35,909	1,208,827	80,153	3,398	78,773	1,407,060
Payne	304,042	8,451,945	80,251	10,504,919	29,084	19,370,241
Pittsburg	180,151	134,959	400,157	5,835,576	1,422,079	7,972,922
Pontotoc	214,470	3,765,979	704,278	4,820	359,980	5,049,527
Pottawatomie	450,284	2,498,636	225,915	90,798	36,147	3,301,780
Pushmataha	11,767	0	76,019	3,753	4,088	95,627
Roger Mills	9,012	661,886	306,581	2,680,811	0	3,658,290
Rogers	365,177	759,913	225,570	63,774	0	1,414,434
Seminole	100,545	3,783,045	337,964	331,996	64,211	4,617,761
Sequoyah	220,702	0	9,612	26,096	1	256,411
Stephens	143,999	2,329,515	499,888	4,929,338	2,640	7,905,380
Texas	67	98,329	508,396	1,850,006	291,126	2,747,924
Tillman	53,831	112,682	549	0	0	167,062
Tulsa	3,987,918	4,672,178	678,127	9,547,686	4,888,001	23,773,910
Wagoner	370,557	144,032	48,454	80,558	10	643,611
Washington	275,781	1,813,982	186,075	91,394	784	2,368,016
Washita	48,160	130,291	400,997	1,874,181	523,366	2,976,995
Woods	42,435	357,605	767,473	2,624,161	4,910,706	8,702,380
Woodward	113,010	624,122	538,839	1,932,575	930,186	4,138,732
State of Oklahoma	**18,016,259**	**119,440,948**	**33,242,180**	**146,985,547**	**92,628,272**	**410,313,206**

Source: Oklahoma Tax Commission - Ad Valorem Stat Book (2020)

Ad Valorem Taxes by Property Type. Oil and gas-related ad valorem tax payments by both asset type and county for FY2020 are detailed in Figure 33. The largest component of ad valorem payments is $147.0 million traced to refineries, gas plants, gathering, and compression. Fluid pipelines accounted for $119.4 million, followed by $92.6 million for other oil, gas, and mining property. Distribution and gas pipelines accounted for a combined $51.2 million in FY2020.

Ad Valorem Taxes by County. Ad valorem taxes were paid by firms in the oil and gas cluster in 76 of the state's 77 counties (not Adair County). Fifty-five counties received at least $1 million in ad valorem tax payments in FY2020. The largest payments totaled approximately $20 million or more in five counties – Grady, Canadian, Lincoln, Garfield, and Tulsa. Six counties received $10 million to $20 million – Payne, Carter, Kingfisher, Oklahoma, Garvin, and Blaine. Fifteen additional counties – Coal, Woods, Pittsburg, Stephens, Bryan, Logan, Osage, Custer, Hughes, Kay, Major, Creek, Dewey, Cleveland, and Pontotoc – received $5 million to $10 million in ad valorem payments.

Twenty-nine counties received $1 million to $5 million. Eight counties received $500,000 to $1 million. The remaining thirteen counties received an average of $167,000 in ad valorem tax payments in FY2020.

How are Oklahoma Oil and Gas Production Tax Revenues Used?

Over the decade ended in FY2021, the state's oil and gas sector contributed $6.6 billion in gross production tax revenue ($660.6 million annually) to the funding of Oklahoma state government (*Figure 34*).[20]

Gross production revenue is first apportioned by statute for several dedicated purposes, primarily local government and public education, with the remainder deposited in the general revenue fund.[21]

Of the $6.6 billion in gross production revenue paid the past decade, $3.2 billion (48%) went to dedicated uses, with the remaining $3.4 billion (52%) transferred to the state's general revenue fund. General revenue fund contributions from gross production taxes (after allocations to dedicated uses) averaged $342 million annually the past decade.

Current Tax Apportionment

Most recently, gross production taxes apportioned for budgetary use in FY2021 totaled $742 million. FY2021 dedicated uses of gross production tax include $62.5 million returned to counties for roads, $62.5 million to local school districts, $47.0 million to the common education technical fund, $47.0 million to the higher education capital fund, $47.0 million to the Oklahoma student aid revolving fund, and $57.4 million to other dedicated uses.

Of the total $742 million in apportioned gross production tax revenue in FY2021, $323.6 million was apportioned to off-the-top dedicated uses. The remaining $418.6 million was distributed to the general revenue fund in FY2021.

Education-Related Distributions

A total of $204 million in gross production tax was apportioned to education-related dedicated funds in FY2021. Recipients include both common and higher education. Over the past decade, $2.1 billion in gross production tax revenue was apportioned for educational purposes, an average of $209 million annually in the period.

Common education is the largest direct beneficiary of gross production tax revenue. Over the past decade, gross production revenue received by local school districts and the common education technical fund[22] totaled $1.19 billion, or $119 million annually. Common education's share of gross production taxes reached $109.6 million in FY2021.

Higher education remains a significant recipient as well, receiving $94.1 million in FY2021 through the higher education capital fund and the Oklahoma student aid revolving fund. Contributions of gross production taxes to higher education totaled $900 million the past decade, or $90.0 million annually.

Figure 34. Distribution of Oklahoma Gross Production Taxes

Fiscal Year	Total Apportion-ment	General Revenue Fund	Dedicated Uses						Total Education-Related Distributions*
			Returned to Counties for Roads	To School Districts	Common Education Technical Fund	Higher Education Capital Fund	Oklahoma Student Aid Revolving Fund	Other*	
2011	817,535,694	509,858,904	68,749,447	68,749,447	47,372,299	47,372,299	47,372,299	28,060,999	210,866,344
2012	835,987,836	430,478,292	70,326,434	70,326,434	47,372,298	47,372,298	47,372,298	122,739,753	212,443,328
2013	513,576,262	221,610,957	62,542,178	62,542,178	47,372,298	47,372,298	47,372,298	24,764,055	204,659,072
2014	665,570,660	333,239,402	80,971,420	80,971,420	47,372,295	47,372,296	47,372,295	28,271,533	223,088,306
2015	542,074,273	213,359,735	81,878,193	81,878,193	47,372,290	47,372,290	47,372,290	22,841,280	223,995,064
2016	319,784,759	95,011,360	55,965,659	55,965,659	33,890,977	33,890,977	33,890,977	11,169,150	157,638,590
2017	411,219,672	157,437,279	62,893,884	62,893,884	38,404,347	38,404,347	38,404,347	12,781,585	178,106,924
2018	682,072,596	353,386,508	83,861,652	83,861,652	47,371,864	47,371,864	47,371,864	18,847,192	225,977,244
2019	1,108,442,208	725,874,440	103,758,080	103,758,080	47,017,214	47,017,214	47,017,214	33,999,966	244,809,722
2020	785,072,369	469,825,178	71,370,647	71,370,647	46,938,567	46,938,567	46,938,567	31,690,196	212,186,348
2021	742,178,565	418,599,637	62,516,699	62,516,699	47,035,978	47,035,978	47,035,978	57,437,597	203,624,632
10-year Total	$6,605,979,200	$3,418,822,788	$736,084,846	$736,084,846	$450,148,128	$450,148,129	$450,148,128	$364,542,307	$2,086,529,230
10-year Average	$660,597,920	$341,882,279	$73,608,485	$73,608,485	$45,014,813	$45,014,813	$45,014,813	$36,454,231	$208,652,923

Source: Historical issues of *Apportionment of Statutory Revenues by the Oklahoma Tax Commission.*

* "Other" includes but is not limited to: Community Water Infrastructure Development Revolving Fund, Conservation Commission Infrastructure Revolving Fund, County Bridge and Road Fund, OK Water Resources Board, Tourism & Recreation Capital Expenditure Revolving Fund, and the Statewide Circuit Engineering District Revolving Fund. Funds not included here received only a one-time payment from Severance Taxes.

Figure 35. Gross Production Tax Revenue Returned to School Districts

County	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
ADAIR	0	993	442	0	0	4	0	0	0	43	24	151
ALFALFA	349,751	706,616	1,733,355	3,737,264	6,675,851	4,415,648	4,753,655	4,189,147	3,705,625	1,677,233	865,344	3,245,974
ATOKA	381,449	292,346	178,799	153,328	130,222	92,847	110,791	107,118	115,695	91,700	112,532	138,538
BEAVER	1,096,382	1,391,075	1,293,302	2,151,798	1,643,232	723,908	629,900	628,172	720,644	361,649	262,439	980,612
BECKHAM	1,319,599	1,443,981	1,660,075	1,781,381	2,243,343	1,505,923	1,351,987	1,171,866	1,254,748	621,607	431,055	1,346,597
BLAINE	775,485	962,220	896,125	1,785,561	1,252,261	680,358	1,311,146	4,645,585	10,772,602	8,354,138	6,303,688	3,696,368
BRYAN	96,197	70,534	80,793	95,655	78,492	42,156	33,957	48,319	60,447	31,651	52,875	59,488
CADDO	2,494,773	2,699,846	1,475,751	1,764,750	1,520,317	907,452	966,132	1,115,978	1,182,512	791,445	600,724	1,302,491
CANADIAN	2,415,220	3,229,388	2,251,677	4,155,784	4,940,761	3,649,425	4,211,583	7,258,212	10,069,211	7,559,656	5,880,189	5,320,589
CARTER	3,855,089	5,058,388	3,792,832	5,665,667	4,888,488	3,635,591	2,441,572	2,964,337	3,824,650	2,475,133	1,559,204	3,630,586
CHEROKEE	69	0	0	0	0	0	0	0	60	0	0	6
CHOCTAW	0	0	0	0	0	0	0	0	0	0	0	0
CIMARRON	77,372	83,952	55,041	59,823	74,699	65,155	70,075	74,718	76,363	47,186	21,309	62,832
CLEVELAND	279,950	276,820	250,231	259,126	205,330	121,629	121,614	139,537	144,623	101,597	56,601	167,711
COAL	1,932,895	1,702,949	1,024,043	1,280,895	1,097,825	940,992	1,092,211	1,259,411	1,172,996	609,618	814,931	1,099,587
COMANCHE	109,482	131,338	76,328	86,526	62,250	33,565	30,983	36,536	34,631	21,599	11,187	52,494
COTTON	60,152	91,007	61,966	78,413	54,373	26,751	22,434	24,276	28,127	20,848	8,872	41,707
CRAIG	5,936	3,375	2,263	2,837	2,208	1,183	1,825	1,138	672	333	743	1,658
CREEK	1,115,881	869,072	1,286,504	1,041,695	865,392	559,952	541,782	615,499	716,920	578,372	266,723	734,191
CUSTER	1,380,650	1,587,679	931,034	889,602	829,663	517,971	594,576	985,927	1,450,722	994,610	1,248,896	1,003,068
DELAWARE	0	0	0	43	173	95	0	393	0	0	0	70
DEWEY	1,025,293	1,426,228	1,316,012	1,999,118	1,773,299	930,933	1,100,734	1,684,940	2,853,213	2,356,165	1,258,745	1,669,939
ELLIS	1,939,793	2,889,377	3,276,044	3,918,098	3,579,806	1,820,449	1,941,727	2,136,857	2,578,559	2,167,248	1,426,542	2,573,471
GARFIELD	503,770	463,229	452,173	943,272	1,355,773	1,630,831	1,783,840	1,550,454	1,604,632	1,264,366	673,448	1,172,202
GARVIN	2,407,925	3,009,522	2,098,126	2,715,211	3,061,771	1,958,364	2,373,972	2,957,959	4,219,971	3,481,982	3,330,331	2,920,721
GRADY	2,961,954	2,857,572	2,381,265	3,405,966	4,384,743	3,893,360	4,911,477	8,417,367	11,126,461	8,919,201	8,874,688	5,917,210
GRANT	464,762	519,630	940,730	2,030,543	2,412,169	1,125,695	859,422	672,844	652,273	305,712	176,351	969,537
GREER	1,984	1,756	2,029	1,882	1,419	989	864	2,291	2,714	910	427	1,528
HARMON	2,610	2,970	1,603	1,517	1,329	568	483	751	823	631	299	1,097
HARPER	592,870	702,110	630,990	568,348	429,364	304,393	219,912	240,808	250,513	114,490	107,363	356,829
HASKELL	335,516	239,256	144,526	153,834	117,807	61,382	115,650	109,071	106,456	48,844	101,464	119,829
HUGHES	1,676,932	1,462,553	787,398	849,219	701,956	742,177	1,020,270	1,312,273	1,912,580	1,302,193	1,354,554	1,144,517
JACKSON	71,513	43,753	36,418	125,034	108,221	63,740	34,482	43,668	35,228	25,061	7,535	52,314
JEFFERSON	183,039	258,301	180,253	256,430	124,358	22,020	33,632	39,154	52,054	55,158	37,226	105,859
JOHNSTON	113,052	230,318	172,641	278,385	354,839	315,043	255,799	284,619	329,412	492,568	244,115	295,774
KAY	661,636	879,618	652,819	923,799	1,047,164	825,443	494,490	450,751	422,071	262,247	134,829	609,323
KINGFISHER	1,145,790	1,173,485	892,829	1,190,708	1,874,411	1,871,157	4,256,329	9,545,509	13,572,427	13,046,798	7,510,597	5,493,425
KIOWA	70,893	66,780	36,214	33,769	24,945	19,660	19,469	28,215	19,077	10,423	10,094	26,865
LATIMER	1,882,566	1,134,710	802,517	773,336	311,814	263,635	452,560	519,815	309,801	232,241	345,804	514,623

Figure 35. (Cont.) Gross Production Tax Revenue Returned to School Districts

County	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
LE FLORE	515,352	337,151	224,295	254,881	159,348	74,810	171,403	183,300	144,453	74,821	117,383	174,185
LINCOLN	1,200,952	914,626	660,523	816,076	517,498	511,173	629,477	764,139	719,233	375,734	259,216	616,770
LOGAN	506,125	445,654	515,335	834,859	1,928,341	1,468,921	748,259	1,178,218	1,100,342	844,031	473,144	953,710
LOVE	283,179	311,526	334,263	631,590	450,998	357,391	840,944	1,076,173	1,039,088	862,411	478,116	638,250
MAJOR	1,952,959	1,992,499	1,290,035	1,426,478	1,241,155	713,755	642,011	1,002,938	1,775,949	1,499,991	1,100,353	1,268,516
MARSHALL	330,351	460,979	683,666	690,129	790,834	532,368	394,431	492,489	604,118	287,422	290,219	522,665
MAYES	8,356	9,610	1,456	2,209	1,451	754	5,424	4,977	5,038	3,750	1,354	3,602
MCCLAIN	919,805	1,008,003	806,392	1,087,165	841,289	569,802	528,141	1,025,035	1,643,191	2,328,032	1,625,318	1,146,237
MCCURTAIN	0	0	0	0	0	0	0	0	0	0	0	0
MCINTOSH	120,973	84,402	42,201	37,660	28,384	15,218	26,184	23,085	21,544	16,504	165,105	46,029
MURRAY	169,237	155,750	154,251	142,269	98,378	42,630	50,320	60,887	77,977	48,599	26,623	85,768
MUSKOGEE	38,897	27,991	32,444	32,287	25,780	9,811	15,356	20,620	15,983	10,021	5,423	19,572
NOBLE	741,719	699,912	541,371	1,010,959	1,181,970	878,254	391,166	483,759	413,884	331,849	168,710	610,183
NOWATA	114,622	182,214	108,321	151,457	60,378	50,629	65,324	53,106	48,988	32,608	20,104	77,313
OKFUSKEE	276,172	178,349	267,436	293,464	288,259	181,914	174,142	181,331	175,774	130,075	128,291	199,903
OKLAHOMA	1,623,545	1,351,368	1,512,883	1,298,260	1,243,317	714,323	762,404	865,854	856,085	640,342	566,014	981,085
OKMULGEE	228,118	160,845	169,142	169,518	161,138	79,193	83,486	105,794	116,554	80,690	38,808	116,517
OSAGE	1,275,266	1,922,188	1,318,157	1,674,914	927,242	536,404	770,994	796,678	1,046,438	670,855	398,191	1,006,206
OTTAWA	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	227,863	261,078	292,457	435,824	365,755	166,718	173,099	162,630	233,784	150,967	74,353	231,666
PAYNE	417,277	347,070	436,780	749,948	1,559,140	1,203,840	770,496	1,008,185	776,276	514,868	215,244	758,185
PITTSBURG	1,890,575	1,945,531	1,645,193	2,048,865	1,610,941	1,073,776	1,435,756	1,596,083	1,336,612	917,616	1,133,205	1,474,358
PONTOTOC	1,189,213	526,000	1,780,615	1,313,868	1,378,858	698,472	509,936	660,924	723,786	600,091	270,686	846,324
POTTAWATOMIE	833,716	514,900	915,667	749,400	757,488	404,091	285,668	371,754	370,286	307,118	154,962	483,133
PUSHMATAHA	78,103	31,021	50,470	40,758	43,693	19,682	26,053	39,165	39,022	17,867	13,645	32,138
ROGER MILLS	2,314,300	2,619,050	2,778,536	4,037,314	4,650,795	2,808,447	2,295,090	2,383,313	2,472,974	1,308,947	877,871	2,623,234
ROGERS	34,812	37,215	22,480	30,632	14,264	9,318	11,371	11,004	10,724	5,465	3,798	15,627
SEMINOLE	1,453,345	1,001,150	1,565,123	1,453,713	1,171,253	779,374	705,342	797,917	788,714	617,486	351,073	923,115
SEQUOYAH	52,005	37,519	20,254	17,000	11,996	10,591	16,200	13,130	12,549	5,462	8,112	15,281
STEPHENS	3,177,345	3,595,768	2,307,879	3,508,388	4,232,663	3,806,159	3,717,711	4,749,720	5,614,464	3,236,853	2,459,712	3,722,932
TEXAS	2,733,181	2,409,774	1,903,532	1,599,903	1,069,640	669,419	1,162,719	1,153,518	1,231,840	668,255	431,511	1,230,011
TILLMAN	112,518	112,608	85,899	228,010	182,442	59,435	38,295	43,284	64,394	39,963	16,742	87,107
TULSA	777,329	964,958	851,060	944,567	408,454	241,427	359,497	373,511	488,565	305,342	173,527	511,091
WAGONER	28,579	35,216	24,293	31,088	34,271	18,109	13,953	13,142	13,588	6,871	2,352	19,288
WASHINGTON	136,336	265,647	140,185	183,097	70,409	50,804	80,899	76,587	92,671	54,971	30,765	104,604
WASHITA	4,576,312	6,269,982	2,890,848	2,730,115	2,527,183	1,266,496	1,044,176	1,063,382	857,452	473,414	517,385	1,964,043
WOODS	1,837,739	2,597,269	1,724,824	3,460,533	5,120,367	2,788,893	3,163,986	3,094,947	2,680,414	1,376,998	723,162	2,673,139
WOODWARD	911,752	886,079	545,542	460,027	491,661	297,811	264,761	412,473	609,108	391,835	191,430	455,073
All Counties	$66,876,156	$72,663,646	$60,498,956	$79,735,839	$83,877,100	$56,880,656	$60,535,813	$81,606,568	$103,601,37	$77,662,782	$57,603,655	$73,466,639

Source: Oklahoma State Department of Education – Oklahoma Cost Accounting System

Gross Production Tax Distribution by Region. A portion of the gross production tax generated from oil and gas production within each county is allocated back to independent school districts based on an average daily attendance basis. Figure 35 provides a county-level breakdown of severance taxes distributed to school districts statewide in the FY2010 to FY2020 period.

County-Level Distributions. Since some counties have large amounts of oil and gas production and others very little, there is substantial variation in the revenues received.

School districts in seven counties received distributions averaging more than $3 million annually the past decade - Grady ($5.9 million), Kingfisher ($5.5 million), Canadian ($5.3 million), Stephens ($3.7 million), Blaine ($3.7 million), Carter ($3.6 million), and Alfalfa ($3.2 million). All seven counties are traditionally large oil and gas producers.

School districts in five additional counties received distributions averaging between $2 million and $3 million annually. This group includes Garvin, Woods, Roger Mills, Ellis, and Washita, all traditional oil and gas producing counties.

Districts in 12 additional counties received distributions averaging between $1 million and $2 million annually. These counties include Dewey, Pittsburg, Beckham, Caddo, Major, Texas, Garfield, McClain, Hughes, Coal, Osage, and Custer.

In total, school districts in 24 counties received at least $1 million or more annually from oil and gas severance taxes the past decade.

School districts in 25 counties –Tillman, Murray, Nowata, Cimarron, Bryan, Comanche, Jackson, McIntosh, Cotton, Pushmataha, Kiowa, Muskogee, Wagoner, Rogers, Sequoyah, Mayes, Craig, Greer, Harmon, Adair, Delaware, Cherokee, Choctaw, McCurtain, and Ottawa – received less than $100,000 annually in gross production revenue in the ten-year period. Historically, these counties are home to very little crude oil and natural gas production.

Gross production taxes paid in FY2020 were much more concentrated outside the three largest counties in the state – Oklahoma ($981,000), Tulsa ($511,000), and Cleveland ($167,700).

School District-Level Distributions. Gross production tax receipts received by individual school district the past decade are detailed in Figure 36. Larger school districts located in traditional oil and gas producing regions of the state tend to receive the largest distributions.

Fourteen individual school districts received more than $1 million annually in gross production revenue between FY2011 and FY2020 - Kingfisher ($2.2 million), Mustang ($2.2 million), Alva ($2.0 million), Duncan ($1.7 million), Yukon ($1.7 million), Chickasha ($1.6 million), Watonga ($1.5 million), Cherokee ($1.5 million), Tuttle ($1.3 million), Hennessey ($1.3 million), Ardmore ($1.2 million), Shattuck ($1.1 million), Bridge Creek ($1.1 million), and Timberlake ($1.1 million).

Thirty-two additional districts received between $500,000 and $1 million annually in the period. Thirty-seven districts received between $250,000 and $500,000 annually.

Sixty-six districts received between $100,000 and $250,000 annually. Fifty-three districts received between $50,000 and $100,000 annually.

In total, 202 of the 561 individual school districts in Oklahoma received $50,000 or more annually in gross production revenue between FY2011 and FY2020.

The average payment across all districts receiving a payment in the ten-year period was $180,500 per year.

The state's charter schools do not share in school district distributions of gross production tax revenue.

Figure 36. Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
ADAIR	CAVE SPRINGS	0	993	19	0	0	0	0	0	0	3	1	102
ADAIR	DAHLONEGAH	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	GREASY	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	MARYETTA	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	PEAVINE	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	ROCKY MOUNTAIN	0	0	0	0	0	0	0	0	0	0	0	0
ADAIR	STILWELL	0	0	194	0	0	2	0	0	0	19	11	23
ADAIR	WATTS	0	0	56	0	0	1	0	0	0	4	2	6
ADAIR	WESTVILLE	0	0	173	0	0	2	0	0	0	17	10	20
ADAIR	ZION	0	0	0	0	0	0	0	0	0	0	0	0
ALFALFA	BURLINGTON	83,287	165,371	377,123	782,657	1,252,508	830,532	947,167	872,314	705,228	278,521	138,256	634,968
ALFALFA	CHEROKEE	141,524	294,164	779,185	1,711,859	3,134,063	2,076,783	2,302,327	1,999,822	1,774,902	825,341	435,194	1,533,364
ALFALFA	TIMBERLAKE	124,939	247,081	577,047	1,242,748	2,289,280	1,508,332	1,504,161	1,317,011	1,225,494	573,371	291,895	1,077,642
ATOKA	ATOKA	183,862	141,980	85,830	71,453	60,667	44,555	55,237	53,675	56,398	44,663	54,444	66,890
ATOKA	CANEY	50,299	39,212	26,302	21,987	18,815	12,844	15,246	13,777	15,299	12,132	15,991	19,160
ATOKA	HARMONY	0	0	0	0	0	0	0	0	0	0	0	0
ATOKA	LANE	0	0	0	0	0	0	0	0	0	0	0	0
ATOKA	STRINGTOWN	56,544	35,486	20,022	19,603	17,993	12,981	14,887	14,336	14,964	11,918	14,299	17,649
ATOKA	TUSHKA	90,744	75,669	46,646	40,285	32,747	22,468	25,421	25,329	29,035	22,988	27,798	34,839
BEAVER	BALKO	135,112	192,291	189,101	320,259	232,112	102,068	89,990	90,859	103,629	52,436	38,413	141,116
BEAVER	BEAVER	383,926	473,306	430,580	688,962	549,383	247,967	203,747	206,342	228,468	108,200	75,881	321,284
BEAVER	FORGAN	178,603	226,316	207,157	337,687	227,332	93,519	88,554	84,909	96,397	47,267	34,237	144,337
BEAVER	TURPIN	398,741	499,162	466,465	804,889	634,405	280,354	247,610	246,062	292,149	153,746	113,908	373,875
BECKHAM	ELK CITY	793,286	872,917	983,653	1,042,960	1,281,889	835,794	728,343	626,939	680,256	339,911	238,953	763,162
BECKHAM	ERICK	84,453	92,336	111,042	120,302	145,449	95,611	94,230	79,316	81,689	38,390	24,845	88,321
BECKHAM	MERRITT	191,839	211,414	266,436	295,290	397,510	288,648	272,778	242,516	259,123	128,185	89,586	245,149
BECKHAM	SAYRE	250,022	267,314	298,944	322,828	418,495	285,869	256,636	223,095	233,680	115,121	77,671	249,965
BLAINE	CANTON	155,567	201,982	183,215	355,450	250,530	141,602	269,115	959,232	2,152,545	1,674,830	1,249,341	743,784
BLAINE	GEARY	164,404	208,789	193,998	384,560	267,420	144,527	269,315	919,831	2,028,225	1,633,705	1,156,289	720,666
BLAINE	OKEENE	136,797	163,394	155,358	300,736	214,506	117,678	228,614	871,190	2,038,810	1,611,673	1,183,095	688,505
BLAINE	WATONGA	318,717	388,055	363,554	744,815	519,806	276,551	544,101	1,895,332	4,553,021	3,433,931	2,714,963	1,543,413
BRYAN	(ILC) CHOCTAW NATION	0	0	0	0	0	0	0	0	0	0	0	0
BRYAN	ACHILLE	5,352	3,666	3,733	4,097	3,250	1,699	1,412	2,132	2,744	1,330	994	2,506
BRYAN	BENNINGTON	3,480	2,569	3,115	3,471	2,909	1,631	1,338	2,042	2,686	1,353	927	2,204
BRYAN	CADDO	6,484	4,859	5,411	6,266	4,975	2,618	2,169	3,122	3,907	2,044	1,504	3,687
BRYAN	CALERA	8,342	6,106	7,031	8,336	6,976	3,871	3,128	4,683	5,909	3,106	2,320	5,147
BRYAN	COLBERT	11,406	8,495	9,536	11,452	9,319	4,648	3,653	5,147	6,175	3,089	31,752	9,327
BRYAN	DURANT	44,921	32,882	38,278	44,962	37,246	20,159	16,328	22,725	28,465	14,973	11,127	26,715
BRYAN	ROCK CREEK	6,334	4,598	5,123	6,295	5,109	2,716	2,086	2,956	3,752	2,022	1,364	3,602
BRYAN	SILO	9,877	7,359	8,568	10,776	8,707	4,813	3,844	5,512	6,809	3,734	2,887	6,301
CADDO	ANADARKO	779,054	844,981	480,247	575,733	490,078	288,794	298,251	337,765	350,281	228,042	173,042	406,721
CADDO	BINGER-ONEY	139,119	152,236	79,845	109,128	101,398	60,929	59,823	66,188	70,298	48,030	37,159	78,504
CADDO	BOONE-APACHE	252,107	266,764	142,927	165,391	150,332	90,423	94,104	108,190	122,900	82,391	61,884	128,531
CADDO	CARNEGIE	251,236	275,892	141,187	170,794	145,503	87,552	94,058	111,447	117,761	78,504	59,324	128,202
CADDO	CEMENT	114,804	116,551	62,228	76,535	62,062	35,991	41,458	45,371	50,692	33,290	23,312	54,749
CADDO	CYRIL	147,598	157,844	87,206	100,561	88,418	57,482	62,826	73,593	73,918	50,458	37,954	79,026

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
CADDO	FORT COBB-BROXTON	142,955	157,843	86,150	104,941	85,479	50,403	55,888	64,617	66,989	46,171	36,701	75,518
CADDO	GRACEMONT	72,379	73,920	40,578	44,189	38,423	22,784	24,047	31,702	34,613	21,334	13,566	34,516
CADDO	HINTON	300,516	321,721	171,911	204,242	177,059	105,687	117,632	137,499	156,431	106,266	79,921	157,837
CADDO	HYDRO-EAKLY	197,177	218,541	120,604	140,094	113,882	65,950	74,083	87,830	87,503	62,997	51,685	102,317
CADDO	LOOKEBA SICKLES	97,828	113,553	62,867	73,142	67,681	41,456	43,961	51,775	51,125	33,962	26,176	56,570
CANADIAN	BANNER	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	CALUMET	28,895	41,880	30,392	56,298	59,673	41,066	43,755	67,960	94,544	68,459	58,621	56,265
CANADIAN	DARLINGTON	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	EL RENO	275,698	362,206	246,125	439,575	494,601	370,168	430,547	729,604	1,004,746	751,300	580,458	540,933
CANADIAN	MAPLE	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	MUSTANG	971,306	1,289,535	904,331	1,676,378	2,009,382	1,505,389	1,743,160	2,992,039	4,150,637	3,145,632	2,458,401	2,187,488
CANADIAN	PIEDMONT	302,885	408,128	288,304	546,680	663,684	500,233	593,648	1,051,638	1,505,122	1,153,115	919,696	763,025
CANADIAN	RIVERSIDE	0	0	0	0	0	0	0	0	0	0	0	0
CANADIAN	UNION CITY	33,275	44,935	28,399	51,713	60,677	43,302	48,421	86,157	119,497	84,370	64,148	63,162
CANADIAN	YUKON	803,161	1,082,704	754,126	1,385,140	1,652,744	1,189,267	1,352,053	2,330,813	3,194,664	2,356,780	1,798,866	1,709,716
CARTER	(ILC) TRI-COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
CARTER	ARDMORE	1,311,835	1,719,929	1,273,849	1,937,201	1,672,348	1,248,995	817,692	973,629	1,234,276	814,619	511,408	1,220,395
CARTER	DICKSON	565,581	762,671	579,930	831,107	725,584	534,264	368,660	451,951	598,344	386,566	242,082	548,116
CARTER	FOX	145,419	172,599	127,380	190,584	170,950	128,591	83,244	103,892	134,302	80,061	44,874	123,648
CARTER	HEALDTON	237,113	295,258	216,126	337,362	300,088	212,069	141,040	178,238	224,217	141,725	92,061	213,818
CARTER	LONE GROVE	663,931	881,493	665,095	959,732	800,986	606,420	412,314	492,972	656,567	420,069	266,698	616,234
CARTER	PLAINVIEW	616,532	825,215	621,097	952,951	825,058	624,343	427,626	533,896	691,869	448,200	284,100	623,436
CARTER	SPRINGER	106,630	137,585	99,906	147,016	118,285	83,727	59,924	78,403	104,412	69,116	39,033	93,741
CARTER	WILSON	208,048	263,637	209,449	309,714	275,189	197,182	131,072	151,357	180,663	114,777	78,949	191,199
CARTER	ZANEIS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	BRIGGS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	CHEROKEE IMMERSION CHARTER SCH	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	GRAND VIEW	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	HULBERT	8	0	0	0	0	0	0	0	7	0	0	1
CHEROKEE	KEYS	13	0	0	0	0	0	0	0	10	0	0	1
CHEROKEE	LOWREY	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	NORWOOD	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	PEGGS	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	SHADY GROVE	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	TAHLEQUAH	48	0	0	0	0	0	0	0	43	0	0	4
CHEROKEE	TENKILLER	0	0	0	0	0	0	0	0	0	0	0	0
CHEROKEE	WOODALL	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	BOSWELL	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	FORT TOWSON	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	HUGO	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	SOPER	0	0	0	0	0	0	0	0	0	0	0	0
CHOCTAW	SWINK	0	0	0	0	0	0	0	0	0	0	0	0
CIMARRON	BOISE CITY	50,574	54,227	33,811	38,783	48,151	42,000	43,221	43,893	49,585	33,942	16,712	40,432
CIMARRON	FELT	12,231	14,813	11,230	11,841	14,805	12,210	14,301	17,039	16,447	9,788	4,598	12,707
CIMARRON	KEYES	14,567	14,912	10,000	9,198	11,743	10,945	12,553	13,786	10,331	3,456	0	9,692
CLEVELAND	LEXINGTON	7,365	7,068	6,224	6,559	5,331	3,179	3,008	3,334	3,273	2,372	1,221	4,157

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
CLEVELAND	LITTLE AXE	8,302	8,073	6,897	6,915	5,774	3,417	3,342	3,788	4,100	3,022	1,524	4,685
CLEVELAND	MOORE	147,740	147,126	133,426	138,113	110,612	65,379	64,250	73,753	77,643	57,567	29,572	89,744
CLEVELAND	NOBLE	19,628	18,963	16,489	16,770	13,541	7,913	7,601	8,606	8,886	6,342	3,286	10,840
CLEVELAND	NORMAN	96,915	95,590	87,196	90,768	70,072	41,741	43,413	50,056	50,722	32,294	20,999	58,285
CLEVELAND	ROBIN HILL	0	0	0	0	0	0	0	0	0	0	0	0
COAL	COALGATE	1,389,483	1,249,306	756,628	952,521	803,163	691,230	794,672	910,515	847,382	446,077	597,053	804,855
COAL	COTTONWOOD	0	0	0	0	0	0	0	0	0	0	0	0
COAL	OLNEY	0	0	0	0	0	0	0	0	0	0	0	0
COAL	TUPELO	543,412	453,643	267,415	328,374	294,662	249,762	297,539	348,895	325,615	163,542	217,879	294,733
COMANCHE	BISHOP	0	0	0	0	0	0	0	0	0	0	0	0
COMANCHE	CACHE	8,405	10,468	6,440	7,947	5,416	3,005	2,851	3,536	3,519	2,229	1,190	4,660
COMANCHE	CHATTANOOGA	1,465	1,694	1,009	1,134	700	365	343	431	409	275	138	650
COMANCHE	ELGIN	8,653	11,302	7,122	9,153	6,300	3,549	3,420	4,160	4,088	2,598	1,271	5,296
COMANCHE	FLETCHER	2,494	2,883	1,649	2,024	1,440	773	726	810	789	491	278	1,186
COMANCHE	FLOWER MOUND	0	0	0	0	0	0	0	0	0	0	0	0
COMANCHE	GERONIMO	1,714	2,208	1,220	1,499	1,071	552	495	591	600	361	188	878
COMANCHE	INDIAHOMA	1,857	1,298	835	997	645	358	330	362	352	238	117	553
COMANCHE	LAWTON	82,774	98,913	56,520	61,848	45,398	24,287	22,187	25,928	24,177	14,976	7,797	38,203
COMANCHE	STERLING	2,120	2,572	1,534	1,923	1,280	675	630	718	697	430	207	1,067
COTTON	BIG PASTURE	11,596	17,495	11,211	14,603	10,528	4,954	4,146	4,645	5,463	4,089	1,680	7,881
COTTON	TEMPLE	11,455	18,196	12,181	13,086	8,135	4,184	3,731	4,391	5,147	3,652	1,600	7,430
COTTON	WALTERS	37,101	55,316	38,574	50,723	35,711	17,614	14,557	15,241	17,517	13,107	5,592	26,395
CRAIG	BLUEJACKET	363	238	179	230	164	85	148	91	54	27	64	128
CRAIG	KETCHUM	1,136	753	503	607	500	266	405	261	160	83	183	372
CRAIG	VINITA	2,853	1,877	1,289	1,631	1,279	688	1,038	647	371	185	411	942
CRAIG	WELCH	710	430	293	368	266	145	233	139	86	38	85	208
CRAIG	WHITE OAK	874	76	0	0	0	0	0	0	0	0	0	8
CREEK	ALLEN-BOWDEN	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	BRISTOW	161,545	129,303	193,393	158,775	131,755	85,117	85,318	98,034	114,669	91,330	44,436	113,213
CREEK	DEPEW	38,044	28,463	42,373	37,494	30,821	18,945	18,135	21,643	24,781	19,840	9,454	25,195
CREEK	DRUMRIGHT	63,498	48,422	70,851	56,170	46,809	29,332	27,143	28,845	36,538	45,341	11,963	40,141
CREEK	GYPSY	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	KELLYVILLE	115,262	90,202	131,708	104,191	85,755	54,302	50,816	55,153	61,768	46,357	21,406	70,166
CREEK	KIEFER	47,256	40,039	65,601	58,594	51,814	35,296	35,661	43,393	53,948	45,672	23,400	45,342
CREEK	LONE STAR	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	MANNFORD	143,546	116,258	172,735	138,144	118,224	77,675	76,605	85,074	96,630	76,204	36,940	99,449
CREEK	MOUNDS	69,021	51,640	69,134	54,982	46,242	28,800	28,004	31,920	39,549	30,573	14,676	39,552
CREEK	OILTON	30,952	22,383	32,626	27,165	20,313	13,547	13,818	15,937	18,097	13,921	6,306	18,411
CREEK	OLIVE	40,144	30,169	45,515	35,641	29,661	18,524	17,067	19,830	22,026	14,865	6,691	23,999
CREEK	PRETTY WATER	0	0	0	0	0	0	0	0	0	0	0	0
CREEK	SAPULPA	406,614	312,191	462,567	370,540	303,998	198,415	189,215	215,670	248,914	194,268	91,449	258,723
CUSTER	ARAPAHO	0	0	0	0	0	0	0	0	0	0	0	0
CUSTER	ARAPAHO-BUTLER	94,719	115,538	66,871	64,770	61,704	38,237	47,733	83,742	126,011	85,755	109,618	79,998
CUSTER	BUTLER	0	0	0	0	0	0	0	0	0	0	0	0
CUSTER	CLINTON	616,517	697,852	419,973	389,469	358,965	219,591	248,584	401,672	583,011	392,987	486,977	419,908
CUSTER	THOMAS-FAY-CUSTER UNIFIED DIST	142,334	154,967	87,627	81,585	73,654	46,801	51,762	89,631	135,309	89,015	107,637	91,799

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
CUSTER	WEATHERFORD	527,080	619,322	356,564	353,779	335,340	213,342	246,498	410,881	606,391	426,853	544,664	411,363
DELAWARE	CLEORA	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	COLCORD	0	0	0	5	17	10	0	39	0	0	0	7
DELAWARE	GROVE	0	0	0	18	73	41	0	167	0	0	0	30
DELAWARE	JAY	0	0	0	12	50	25	0	111	0	0	0	20
DELAWARE	KANSAS	0	0	0	6	26	15	0	60	0	0	0	11
DELAWARE	KENWOOD	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	LEACH	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	MOSELEY	0	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	OAKS-MISSION	0	0	0	2	7	4	0	16	0	0	0	3
DEWEY	SEILING	512,388	723,690	667,246	1,003,402	893,240	480,027	553,990	873,555	1,459,958	1,247,596	667,479	857,018
DEWEY	TALOGA	107,813	176,044	150,076	179,398	145,694	80,455	126,016	167,048	334,359	271,387	132,139	176,262
DEWEY	VICI	405,091	526,494	498,690	816,317	734,365	370,451	420,728	644,337	1,058,896	837,183	459,127	636,659
ELLIS	ARNETT	389,700	601,280	760,588	921,882	806,414	442,310	489,587	537,569	591,471	483,131	313,266	594,750
ELLIS	FARGO	529,331	780,038	798,889	947,555	860,587	435,816	630,656	626,885	774,282	631,934	445,236	693,188
ELLIS	GAGE	258,872	379,106	366,622	422,503	374,037	150,304	0	0	0	0	0	169,257
ELLIS	SHATTUCK	761,891	1,128,952	1,349,945	1,626,158	1,538,767	792,019	821,484	972,404	1,212,806	1,052,183	668,040	1,116,276
GARFIELD	CHISHOLM	47,301	43,070	39,600	84,212	122,074	152,732	165,720	154,219	165,952	136,100	71,583	113,526
GARFIELD	COVINGTON-DOUGLAS	15,614	13,634	12,764	24,904	34,946	40,314	43,292	38,151	40,904	33,359	16,608	29,888
GARFIELD	DRUMMOND	17,327	15,378	14,640	29,427	41,562	47,157	49,577	47,890	50,527	40,201	21,687	35,805
GARFIELD	ENID	342,999	318,244	314,911	661,586	953,881	1,152,354	1,259,820	1,079,476	1,111,362	871,346	466,501	818,948
GARFIELD	GARBER	16,922	15,642	14,975	33,188	45,170	55,262	59,743	51,236	52,602	43,790	24,090	39,570
GARFIELD	KREMLIN-HILLSDALE	14,789	14,085	14,640	29,342	39,359	43,994	50,408	42,123	43,825	33,526	17,277	32,858
GARFIELD	PIONEER-PLEASANT VALE	30,823	27,137	25,505	50,269	71,785	80,493	88,362	75,817	76,614	58,215	30,954	58,515
GARFIELD	WAUKOMIS	17,996	16,039	15,138	30,344	46,995	58,525	66,917	61,543	62,846	47,829	24,749	43,093
GARVIN	ELMORE CITY-PERNELL	252,936	311,248	210,058	273,734	305,144	188,712	237,108	304,806	430,280	355,007	349,656	296,575
GARVIN	LINDSAY	566,764	708,741	510,030	646,313	738,902	481,845	579,571	719,895	1,029,406	868,629	840,398	712,373
GARVIN	MAYSVILLE	203,866	248,619	162,528	204,481	223,155	139,153	158,749	194,346	266,374	224,195	218,018	203,962
GARVIN	PAOLI	124,810	158,741	104,215	134,576	158,755	98,226	116,467	155,450	206,904	162,360	146,809	144,250
GARVIN	PAULS VALLEY	648,758	792,965	544,340	707,136	789,607	506,609	622,294	763,632	1,152,781	923,224	861,709	766,430
GARVIN	STRATFORD	298,772	381,492	280,373	364,983	418,404	273,360	331,737	410,904	552,256	456,298	439,005	390,881
GARVIN	WHITEBEAD	0	0	0	0	0	0	0	0	0	0	0	0
GARVIN	WYNNEWOOD	312,020	407,717	286,582	383,988	427,803	270,458	328,047	408,925	581,970	492,269	474,737	406,250
GRADY	ALEX	126,653	114,230	84,161	125,507	164,361	141,042	182,420	308,923	420,005	337,911	334,382	221,294
GRADY	AMBER-POCASSET	163,294	161,380	137,234	195,029	257,155	223,193	274,681	478,022	646,633	533,724	518,470	342,552
GRADY	BRIDGE CREEK	486,824	470,411	401,159	586,042	753,462	681,203	871,120	1,552,787	2,083,555	1,748,174	1,784,256	1,093,217
GRADY	CHICKASHA	885,531	835,769	686,697	990,323	1,254,293	1,109,739	1,379,966	2,302,247	2,955,046	2,283,497	2,228,880	1,602,646
GRADY	FRIEND	0	0	0	0	0	0	0	0	0	0	0	0
GRADY	MIDDLEBERG	0	0	0	0	0	0	0	0	0	0	0	0
GRADY	MINCO	197,830	194,639	165,978	231,409	307,952	268,206	328,151	577,413	773,932	600,672	580,554	402,891
GRADY	NINNEKAH	179,098	180,048	145,356	204,357	274,353	249,287	312,401	522,423	695,832	544,675	551,813	368,054
GRADY	PIONEER	0	0	0	0	0	0	0	0	0	0	0	0
GRADY	RUSH SPRINGS	211,056	205,526	171,362	241,613	308,372	259,469	329,930	530,737	690,265	538,303	528,913	380,449
GRADY	TUTTLE	616,954	601,155	509,442	723,587	932,217	840,941	1,076,910	1,882,956	2,506,779	2,031,606	2,047,452	1,315,305
GRADY	VERDEN	94,713	94,414	79,876	108,098	132,579	120,281	155,898	261,859	354,415	300,639	299,969	190,803
GRANT	DEER CREEK-LAMONT	116,277	126,184	232,550	459,856	524,299	250,133	193,062	151,186	147,701	64,371	32,867	218,221

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
GRANT	MEDFORD	134,929	199,197	340,906	763,590	885,819	391,832	293,665	239,222	230,158	108,299	64,979	351,767
GRANT	POND CREEK-HUNTER	171,330	194,248	367,273	807,097	1,002,050	483,731	372,694	282,436	274,414	133,042	78,505	399,549
GRANT	WAKITA	42,226	0	0	0	0	0	0	0	0	0	0	0
GREER	GRANITE	536	462	549	502	397	287	235	596	666	224	104	402
GREER	MANGUM	1,448	1,294	1,480	1,380	1,022	702	628	1,696	2,047	687	323	1,126
HARMON	HOLLIS	2,610	2,970	1,603	1,517	1,329	568	483	751	823	631	299	1,098
HARPER	BUFFALO	227,917	263,746	236,799	218,472	168,222	111,546	78,626	89,288	94,715	44,836	40,760	134,701
HARPER	LAVERNE	364,953	438,364	394,191	349,875	261,142	192,847	141,286	151,520	155,799	69,655	66,603	222,128
HASKELL	KEOTA	65,141	44,867	27,710	31,083	22,711	11,664	23,091	20,296	20,050	9,200	20,312	23,098
HASKELL	KINTA	30,322	23,415	13,745	14,013	10,284	5,435	10,659	9,575	10,277	4,832	9,923	11,216
HASKELL	MCCURTAIN	38,428	26,121	15,930	16,147	12,933	6,419	11,872	11,402	11,403	4,989	10,028	12,724
HASKELL	STIGLER	201,625	144,854	87,140	92,591	71,879	37,864	70,028	67,799	64,726	29,823	61,201	72,790
HASKELL	WHITEFIELD	0	0	0	0	0	0	0	0	0	0	0	0
HUGHES	CALVIN	111,081	112,195	55,983	59,590	51,500	56,255	68,879	89,685	139,655	98,542	98,132	83,041
HUGHES	DUSTIN	76,332	54,401	22,930	0	0	0	0	0	0	0	0	7,733
HUGHES	HOLDENVILLE	775,282	668,658	362,853	411,447	334,797	345,490	495,166	639,290	917,282	625,110	655,745	545,584
HUGHES	MOSS	200,485	174,118	88,231	96,582	83,802	95,286	123,466	165,728	246,609	168,369	166,101	140,829
HUGHES	STUART	191,508	158,391	93,591	100,834	81,758	92,757	125,699	155,785	238,326	159,517	165,698	137,235
HUGHES	WETUMKA	322,244	294,791	163,811	180,767	150,100	152,390	207,061	261,784	370,709	250,655	268,878	230,095
JACKSON	ALTUS	58,683	32,779	27,415	94,148	81,518	47,582	25,741	32,221	26,019	18,624	5,561	39,161
JACKSON	BLAIR	2,962	2,639	2,149	7,951	6,600	3,981	2,202	2,770	2,251	1,514	449	3,251
JACKSON	DUKE	1,951	1,599	1,447	5,090	4,193	2,655	1,376	1,717	1,368	885	295	2,063
JACKSON	ELDORADO	1,176	1,108	942	2,950	2,286	1,156	515	0	0	0	0	896
JACKSON	NAVAJO	5,046	4,215	3,334	11,030	9,968	6,308	3,563	5,073	4,086	2,998	878	5,145
JACKSON	OLUSTEE	1,694	1,412	1,132	3,866	3,656	2,059	1,085	0	0	0	0	1,321
JACKSON	OLUSTEE-ELDORADO	0	0	0	0	0	0	0	1,887	1,503	1,040	352	478
JEFFERSON	RINGLING	80,792	97,678	71,334	99,723	49,315	8,532	13,272	15,826	19,583	19,533	18,369	41,316
JEFFERSON	RYAN	36,350	60,820	41,610	59,551	30,434	5,326	7,750	8,401	11,682	12,781	6,732	24,509
JEFFERSON	TERRAL	83	0	0	0	0	0	0	0	0	0	0	0
JEFFERSON	WAURIKA	65,814	99,803	67,308	97,156	44,609	8,162	12,609	14,927	20,789	22,844	12,124	40,033
JOHNSTON	COLEMAN	13,336	28,019	22,021	33,126	38,893	35,986	26,328	27,414	32,699	47,525	24,075	31,609
JOHNSTON	MANNSVILLE	0	0	0	0	0	0	0	0	0	0	0	0
JOHNSTON	MILBURN	13,366	26,670	19,794	31,318	40,572	32,960	29,984	32,179	40,901	59,635	28,688	34,270
JOHNSTON	MILL CREEK	10,744	20,696	14,417	22,376	30,113	28,557	24,456	28,148	31,857	48,714	24,054	27,339
JOHNSTON	RAVIA	0	0	0	0	0	0	0	0	0	0	0	0
JOHNSTON	TISHOMINGO	60,102	123,776	93,984	153,210	196,523	173,114	138,244	154,309	174,769	261,663	131,288	160,088
JOHNSTON	WAPANUCKA	15,503	31,158	22,425	38,355	48,739	44,426	36,788	42,568	49,186	75,031	36,010	42,469
KAY	BLACKWELL	129,011	163,044	116,178	162,131	182,009	140,975	83,808	75,062	70,089	42,160	20,574	105,603
KAY	BRAMAN	7,130	0	0	0	0	0	0	0	0	0	0	0
KAY	BRAMAN (Consolidated)	0	934	0	0	0	0	0	0	0	0	0	93
KAY	KILDARE	0	0	0	0	0	0	0	0	0	0	0	0
KAY	NEWKIRK	49,794	83,652	66,842	95,781	110,189	88,014	52,428	48,503	45,765	27,587	13,673	63,243
KAY	PECKHAM	0	0	0	0	0	0	0	0	0	0	0	0
KAY	PONCA CITY	411,152	549,320	410,166	584,005	663,490	522,852	313,621	283,596	264,082	165,383	85,993	384,251
KAY	TONKAWA	64,548	82,668	59,634	81,882	91,477	73,602	44,633	43,591	42,135	27,118	14,589	56,133
KINGFISHER	CASHION	176,979	182,506	126,148	166,555	268,318	261,753	595,211	1,346,823	1,993,197	2,061,411	1,248,454	825,038

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
KINGFISHER	DOVER	79,991	77,474	57,611	66,091	100,722	92,382	197,970	401,227	573,785	553,458	296,680	241,740
KINGFISHER	HENNESSEY	280,808	277,043	215,733	289,496	467,583	471,463	1,059,249	2,344,552	3,256,804	3,029,089	1,740,439	1,315,145
KINGFISHER	KINGFISHER	426,815	450,769	360,307	492,967	748,585	746,100	1,692,524	3,842,242	5,515,262	5,247,993	2,999,748	2,209,650
KINGFISHER	LOMEGA	75,403	77,629	57,265	76,647	124,977	124,927	303,429	644,730	874,902	803,596	447,283	353,538
KINGFISHER	OKARCHE	105,794	108,064	75,765	98,952	164,225	174,532	407,946	965,935	1,358,477	1,351,250	777,992	548,314
KIOWA	HOBART	34,245	32,495	17,677	16,665	12,770	10,259	9,696	14,118	9,500	5,095	4,706	13,298
KIOWA	LONE WOLF	4,258	3,858	1,776	1,678	1,462	1,025	1,462	2,143	1,299	606	677	1,599
KIOWA	MOUNTAIN VIEW-GOTEBO	10,380	9,402	5,609	5,340	3,917	3,069	2,987	4,247	2,811	1,597	1,547	4,053
KIOWA	SNYDER	22,011	21,025	11,153	10,086	6,795	5,306	5,324	7,707	5,467	3,125	3,164	7,915
LATIMER	BUFFALO VALLEY	194,450	121,378	87,226	89,152	36,236	27,253	43,365	53,150	32,179	24,533	35,287	54,976
LATIMER	PANOLA	302,109	169,070	115,658	105,506	40,727	27,785	46,504	52,074	24,354	17,590	0	59,927
LATIMER	PANOLA ELEMENTARY	0	0	0	0	0	0	0	0	0	0	0	0
LATIMER	RED OAK	259,171	162,302	120,737	121,386	50,751	47,582	88,504	110,179	65,652	52,987	85,240	90,532
LATIMER	WILBURTON	1,126,836	681,959	478,896	457,291	184,100	161,015	274,187	304,412	187,616	137,130	225,277	309,188
LE FLORE	ARKOMA	19,021	13,127	9,193	11,082	6,831	3,379	7,391	8,320	6,435	3,400	5,263	7,442
LE FLORE	BOKOSHE	12,356	7,768	4,899	5,972	3,438	1,740	4,054	4,309	3,244	1,575	2,221	3,922
LE FLORE	CAMERON	20,222	12,980	7,563	8,646	5,347	2,300	5,062	6,059	4,486	2,501	3,777	5,872
LE FLORE	FANSHAWE	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	HEAVENER	59,812	40,513	25,561	30,230	18,918	8,738	19,783	20,896	15,970	7,949	12,290	20,085
LE FLORE	HODGEN	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	HOWE	24,472	18,426	12,696	13,945	8,949	4,642	11,088	11,907	9,912	5,471	8,728	10,576
LE FLORE	LE FLORE	12,125	7,880	5,256	6,303	3,816	1,737	4,283	4,501	3,686	2,116	3,563	4,314
LE FLORE	MONROE	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	PANAMA	41,412	25,762	16,450	19,280	12,690	6,034	13,940	14,580	11,733	6,185	10,054	13,671
LE FLORE	POCOLA	47,908	30,834	20,859	22,695	14,416	6,677	15,644	17,252	13,917	6,848	10,429	15,957
LE FLORE	POTEAU	129,365	84,727	57,934	64,765	40,440	19,009	44,028	46,543	37,210	19,390	30,321	44,437
LE FLORE	SHADY POINT	0	0	0	0	0	0	0	0	0	0	0	0
LE FLORE	SPIRO	68,282	43,783	29,405	33,171	19,833	9,078	20,684	21,800	17,056	8,971	14,099	21,788
LE FLORE	TALIHINA	37,312	23,680	15,796	17,636	10,882	4,973	11,338	11,801	9,181	4,560	7,433	11,728
LE FLORE	WHITESBORO	11,130	6,824	4,931	5,460	3,577	1,691	3,768	4,396	3,730	1,831	2,682	3,889
LE FLORE	WISTER	31,936	20,846	13,750	15,696	10,213	4,812	10,339	10,937	7,893	4,023	6,524	10,503
LINCOLN	AGRA	87,981	68,513	50,941	65,977	40,937	37,648	38,360	46,860	43,361	22,092	14,482	42,917
LINCOLN	CARNEY	46,129	33,629	25,171	34,082	20,223	20,310	27,103	36,131	32,854	17,469	11,619	25,859
LINCOLN	CHANDLER	246,532	185,994	131,120	163,567	106,649	109,632	137,646	165,026	157,696	81,897	57,372	129,660
LINCOLN	DAVENPORT	80,837	59,089	41,044	51,718	35,511	34,878	43,975	52,554	50,849	28,545	20,475	41,864
LINCOLN	MEEKER	184,790	143,099	103,965	128,646	79,228	77,910	97,345	120,846	113,767	56,081	37,584	95,847
LINCOLN	PRAGUE	226,658	177,557	127,733	150,845	95,360	97,067	117,277	147,636	137,464	74,025	50,809	117,577
LINCOLN	STROUD	187,229	140,608	102,203	123,814	76,792	74,634	93,978	109,829	105,292	55,680	39,130	92,196
LINCOLN	WELLSTON	140,795	106,138	78,347	97,427	62,799	59,093	73,794	85,257	77,951	39,945	27,745	70,850
LINCOLN	WHITE ROCK	0	0	0	0	0	0	0	0	0	0	0	0
LOGAN	COYLE	38,684	33,705	37,770	59,266	119,696	95,034	51,456	86,484	83,812	61,526	32,405	66,115
LOGAN	CRESCENT	73,319	61,119	72,099	114,783	273,145	205,781	100,785	155,483	138,761	105,747	57,831	128,554
LOGAN	GUTHRIE	366,495	325,805	376,658	614,402	1,435,606	1,092,243	556,215	870,018	820,419	632,553	359,018	708,294
LOGAN	MULHALL-ORLANDO	27,626	25,025	28,808	46,408	99,894	75,863	39,804	66,234	57,350	44,204	23,890	50,748
LOVE	GREENVILLE	0	0	0	0	0	0	0	0	0	0	0	0
LOVE	MARIETTA	174,216	190,173	206,630	394,549	281,646	220,844	517,902	675,088	661,090	561,455	316,472	402,585

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
LOVE	THACKERVILLE	56,462	59,015	58,431	111,673	81,298	67,638	167,833	208,471	187,077	139,217	76,936	115,759
LOVE	TURNER	52,500	62,338	69,202	125,368	88,055	68,909	155,209	192,614	190,921	161,739	84,708	119,906
MAJOR	ALINE-CLEO	224,097	216,373	135,219	134,128	120,492	70,402	64,972	97,265	160,115	127,387	92,256	121,861
MAJOR	CIMARRON	381,593	388,563	253,553	266,260	222,166	121,740	108,944	157,386	294,220	249,846	181,693	224,437
MAJOR	FAIRVIEW	836,594	861,333	565,298	658,658	573,755	334,344	298,354	483,074	887,226	757,049	560,492	597,958
MAJOR	RINGWOOD	510,675	526,230	335,964	367,432	324,741	187,268	169,741	265,214	434,390	365,710	265,912	324,260
MARSHALL	KINGSTON	123,764	176,114	263,576	273,594	317,545	218,028	160,901	200,622	248,639	118,928	120,296	209,824
MARSHALL	MADILL	206,587	284,864	420,091	416,535	473,288	314,341	233,530	291,867	355,479	168,494	169,922	312,841
MAYES	ADAIR	1,104	1,295	212	332	225	117	827	780	794	587	216	539
MAYES	CHOUTEAU-MAZIE	975	1,138	179	272	188	98	689	640	634	477	165	448
MAYES	LOCUST GROVE	1,722	1,985	317	489	311	156	1,129	1,021	1,029	752	268	746
MAYES	OSAGE	0	0	0	0	0	0	0	0	0	0	0	0
MAYES	PRYOR	2,736	3,246	565	849	554	292	2,110	1,912	1,985	1,499	546	1,356
MAYES	SALINA	1,819	1,946	184	268	173	90	670	623	596	434	159	514
MAYES	WICKLIFFE	0	0	0	0	0	0	0	0	0	0	0	0
MCCLAIN	BLANCHARD	220,784	246,777	201,168	271,705	210,786	145,282	134,101	263,518	423,520	601,353	413,504	291,171
MCCLAIN	DIBBLE	93,426	97,919	78,409	104,431	78,215	50,616	44,461	83,597	139,573	203,011	141,214	102,145
MCCLAIN	NEWCASTLE	221,244	243,371	194,501	272,906	216,787	150,447	144,360	284,772	454,634	656,084	474,756	309,262
MCCLAIN	PURCELL	192,730	208,964	165,762	217,756	163,654	107,054	98,476	187,592	291,964	411,472	286,972	213,966
MCCLAIN	WASHINGTON	123,810	136,321	108,283	144,336	111,270	75,517	70,146	136,400	222,307	313,300	212,440	153,032
MCCLAIN	WAYNE	67,811	74,650	58,270	76,030	60,577	40,886	36,597	69,157	111,194	142,813	96,431	76,661
MCCURTAIN	BATTIEST	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	BROKEN BOW	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	DENISON	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	EAGLETOWN	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	FOREST GROVE	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	GLOVER	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	HAWORTH	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	HOLLY CREEK	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	IDABEL	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	LUKFATA	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	SMITHVILLE	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	VALLIANT	0	0	0	0	0	0	0	0	0	0	0	0
MCCURTAIN	WRIGHT CITY	0	0	0	0	0	0	0	0	0	0	0	0
MCINTOSH	CHECOTAH	57,602	38,889	20,013	17,879	13,587	7,673	13,184	11,511	10,668	8,140	80,666	22,221
MCINTOSH	EUFAULA	47,598	33,095	15,663	13,885	10,526	5,940	10,036	9,049	8,501	6,628	67,323	18,065
MCINTOSH	HANNA	8,042	6,542	3,669	3,203	2,025	521	899	703	672	472	4,086	2,279
MCINTOSH	MIDWAY	7,730	5,876	2,856	2,693	2,247	1,084	2,064	1,822	1,703	1,265	13,030	3,464
MCINTOSH	RYAL	0	0	0	0	0	0	0	0	0	0	0	0
MCINTOSH	STIDHAM	0	0	0	0	0	0	0	0	0	0	0	0
MURRAY	DAVIS	70,207	65,988	65,433	59,522	40,823	17,337	20,461	26,217	31,362	19,022	10,036	35,620
MURRAY	SULPHUR	99,030	89,762	88,817	82,747	57,555	25,293	29,859	34,670	46,615	29,578	16,587	50,148
MUSKOGEE	BOYNTON-MOTON	240	0	0	0	0	0	0	0	0	0	0	0
MUSKOGEE	BRAGGS	648	438	483	457	359	137	206	293	186	134	70	276
MUSKOGEE	FORT GIBSON	5,367	3,881	4,580	4,559	3,786	1,411	2,079	2,993	2,231	1,593	783	2,790
MUSKOGEE	HASKELL	2,582	1,890	2,165	2,121	1,694	609	928	1,381	999	674	321	1,278

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
MUSKOGEE	HILLDALE	5,257	3,796	4,449	4,457	3,729	1,409	2,107	3,031	2,224	1,626	862	2,769
MUSKOGEE	MUSKOGEE	18,329	13,213	15,222	15,130	11,665	4,526	7,438	9,129	7,463	3,945	2,409	9,014
MUSKOGEE	OKTAHA	2,128	1,552	1,835	1,916	1,543	570	821	1,227	919	637	299	1,132
MUSKOGEE	PORUM	1,513	1,088	1,207	1,185	984	376	567	805	602	416	193	742
MUSKOGEE	WAINWRIGHT	0	0	0	0	0	0	0	0	0	0	0	0
MUSKOGEE	WARNER	2,059	1,539	1,801	1,768	1,483	574	890	1,321	1,005	742	355	1,148
MUSKOGEE	WEBBERS FALLS	774	593	702	694	536	199	321	441	354	254	131	422
NOBLE	BILLINGS	36,921	31,498	20,783	33,490	35,229	26,629	13,633	16,429	12,951	10,569	5,714	20,693
NOBLE	FRONTIER	113,639	107,428	85,328	167,782	200,069	154,068	68,493	82,362	69,739	56,651	29,430	102,135
NOBLE	MORRISON	192,759	181,439	144,211	262,735	304,506	219,029	102,978	133,738	119,037	93,065	47,834	160,857
NOBLE	PERRY	398,401	379,548	291,048	546,952	642,166	478,528	206,063	251,229	212,157	171,563	85,733	326,499
NOWATA	NOWATA	65,560	93,089	56,113	76,943	30,518	25,273	32,490	25,943	23,620	15,190	9,604	38,878
NOWATA	OKLAHOMA UNION	34,790	62,904	37,127	53,583	20,961	18,237	23,399	19,592	18,701	12,905	7,651	27,506
NOWATA	SOUTH COFFEYVILLE	14,272	26,222	15,080	20,930	8,899	7,119	9,434	7,570	6,667	4,513	2,849	10,928
OKFUSKEE	BEARDEN	0	0	0	0	0	0	0	0	0	0	0	0
OKFUSKEE	BOLEY	0	0	0	0	0	0	0	0	0	0	0	0
OKFUSKEE	GRAHAM	25,807	19,241	122,011	0	0	0	0	0	0	0	0	14,125
OKFUSKEE	GRAHAM-DUSTIN	0	0	0	160,465	173,153	23,241	16,410	17,096	16,686	11,839	11,694	43,058
OKFUSKEE	MASON	29,501	19,136	19,717	20,653	17,645	23,854	24,321	25,252	24,603	18,022	17,711	21,091
OKFUSKEE	OKEMAH	130,185	80,633	71,577	63,900	54,592	76,810	73,956	76,148	73,911	54,088	53,426	67,904
OKFUSKEE	PADEN	32,344	21,661	19,752	18,931	16,780	21,521	22,660	24,015	22,768	16,732	15,908	20,073
OKFUSKEE	WELEETKA	58,335	37,678	34,380	29,514	26,090	36,488	36,795	38,819	37,805	29,394	29,551	33,651
OKLAHOMA	(ILC) POOLED INVESTMENT	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	ASTEC CHARTERS	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	BETHANY	22,502	18,217	21,912	17,686	16,876	9,776	10,434	11,852	11,394	8,329	7,184	13,366
OKLAHOMA	CHOCTAW-NICOMA PARK	69,865	56,239	77,766	78,471	76,110	32,888	33,552	38,722	37,186	26,920	23,355	48,121
OKLAHOMA	CROOKED OAK	14,858	11,774	14,126	11,882	11,013	6,511	7,413	8,084	7,565	5,497	4,880	8,875
OKLAHOMA	CRUTCHO	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	DEER CREEK	50,505	41,375	55,684	48,302	50,075	30,776	34,440	40,721	40,987	31,998	28,866	40,322
OKLAHOMA	EDMOND	294,519	236,684	287,168	236,422	226,758	133,152	144,365	166,821	162,513	120,868	106,506	182,126
OKLAHOMA	EPIC BLENDED LEARNING CHARTER	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	EPIC ONE ON ONE CHARTER SCHOOL	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	HARRAH	31,645	24,628	28,218	22,504	20,712	11,815	12,773	14,976	14,811	10,785	9,355	17,058
OKLAHOMA	INSIGHT SCHOOL OF OKLAHOMA	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	JOHN W REX CHARTER ELEMENTARY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	JONES	16,276	12,898	15,248	12,025	11,218	6,285	6,789	7,773	7,280	5,275	4,648	8,944
OKLAHOMA	LUTHER	11,899	9,685	11,116	9,228	9,179	5,267	5,241	5,378	5,307	3,822	3,260	6,748
OKLAHOMA	MIDWEST CITY-DEL CITY	202,113	160,774	188,441	152,195	141,847	82,279	86,264	96,208	91,342	65,914	57,307	112,257
OKLAHOMA	MILLWOOD	13,973	11,654	13,605	9,447	10,032	5,577	5,401	5,866	5,504	4,474	3,938	7,550
OKLAHOMA	OAKDALE	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER SANTA FE SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: DOVE SCIENCE ACAD	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HARDING CHARTER	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HARDING FINE ARTS	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: HUPFELD/W VILLAGE	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: INDEPENDENCE MS	0	0	0	0	0	0	0	0	0	0	0	0

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
OKLAHOMA	OKC CHARTER: KIPP REACH COLL.	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKC CHARTER: SEEWORTH ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA CITY	589,555	521,416	505,764	461,756	444,176	260,004	278,520	314,769	325,529	250,419	223,803	358,616
OKLAHOMA	OKLAHOMA CONNECTIONS ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA VIRTUAL CHARTER ACAD	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	OKLAHOMA YOUTH ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
OKLAHOMA	PUTNAM CITY	257,800	206,784	246,295	200,119	189,167	108,953	115,377	131,286	125,261	90,827	79,711	149,378
OKLAHOMA	WESTERN HEIGHTS	48,036	39,240	47,542	38,222	36,154	21,041	21,835	23,397	21,404	15,214	13,201	27,725
OKMULGEE	BEGGS	41,733	29,609	31,398	31,682	29,962	14,655	15,049	18,932	20,880	14,512	6,749	21,343
OKMULGEE	DEWAR	16,709	10,673	11,218	11,445	10,026	5,065	5,448	7,136	7,923	5,996	2,997	7,793
OKMULGEE	HENRYETTA	43,694	31,005	32,962	32,986	32,183	15,455	16,337	20,859	23,099	16,258	7,880	22,902
OKMULGEE	MORRIS	34,553	24,263	26,660	27,266	27,237	13,273	14,063	18,270	20,727	13,749	6,630	19,214
OKMULGEE	OKMULGEE	56,466	39,636	39,922	40,350	38,795	18,937	19,754	24,568	25,737	17,289	8,054	27,304
OKMULGEE	PRESTON	20,124	14,809	15,330	14,237	13,335	7,184	7,914	9,545	10,827	7,683	3,923	10,479
OKMULGEE	SCHULTER	6,103	4,317	4,872	4,507	3,669	1,768	1,880	2,283	2,839	2,008	884	2,903
OKMULGEE	TWIN HILLS	0	0	0	0	0	0	0	0	0	0	0	0
OKMULGEE	WILSON	8,736	6,533	6,781	7,045	5,931	2,854	3,041	4,201	4,523	3,193	1,690	4,579
OSAGE	(ILC) OSAGE COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	ANDERSON	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	AVANT	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	BARNSDALL	168,461	285,783	161,104	217,162	114,767	62,908	106,329	106,448	144,329	94,865	52,956	134,665
OSAGE	BOWRING	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	HOMINY	241,767	332,405	227,620	297,738	148,645	84,802	145,934	151,644	208,081	130,551	79,122	180,654
OSAGE	MCCORD	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	OSAGE HILLS	0	0	0	0	0	0	0	0	0	0	0	0
OSAGE	PAWHUSKA	407,672	604,651	422,032	560,251	343,685	196,425	231,061	235,096	292,334	188,770	119,578	319,388
OSAGE	PRUE	145,655	201,565	151,141	189,180	127,423	75,444	90,597	98,140	129,435	78,363	47,874	118,916
OSAGE	SHIDLER	95,430	142,850	89,923	126,522	59,375	36,181	58,733	62,892	87,293	51,365	31,313	74,645
OSAGE	WOODLAND	164,084	231,918	158,850	217,252	104,489	63,576	109,423	111,215	145,568	103,444	54,876	130,061
OSAGE	WYNONA	52,197	123,018	107,486	66,810	28,858	17,069	28,917	31,243	39,398	23,497	12,472	47,877
OTTAWA	AFTON	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	COMMERCE	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	FAIRLAND	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	MIAMI	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	QUAPAW	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	TURKEY FORD	0	0	0	0	0	0	0	0	0	0	0	0
OTTAWA	WYANDOTTE	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	CLEVELAND	160,738	183,321	206,169	302,307	247,373	113,796	120,355	114,047	165,081	106,613	52,737	161,180
PAWNEE	JENNINGS	0	0	0	0	0	0	0	0	0	0	0	0
PAWNEE	PAWNEE	67,124	77,757	86,287	133,516	118,382	52,922	52,744	48,583	68,703	44,354	21,615	70,486
PAYNE	(ILC) FIVE-STAR	0	0	0	0	0	0	0	0	0	0	0	0
PAYNE	CUSHING	71,932	59,922	76,045	128,886	266,698	203,117	129,247	170,887	130,397	85,891	35,286	128,638
PAYNE	GLENCOE	13,706	11,047	13,822	24,298	50,519	38,892	25,531	31,131	24,307	17,293	6,881	24,372
PAYNE	OAK GROVE	0	0	0	0	0	0	0	0	0	0	0	0
PAYNE	PERKINS-TRYON	57,931	48,676	60,270	104,856	215,874	168,895	108,477	141,793	109,137	72,813	30,919	106,171
PAYNE	RIPLEY	19,384	16,649	20,382	33,866	68,406	51,942	33,622	43,850	33,950	22,167	8,986	33,382

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
PAYNE	STILLWATER	231,898	193,671	246,697	424,725	888,725	691,259	443,097	580,933	449,021	296,965	124,901	433,999
PAYNE	YALE	22,425	17,106	19,564	33,317	68,918	49,735	30,521	39,591	29,464	19,739	8,271	31,622
PITTSBURG	CANADIAN	126,527	128,285	104,520	140,335	116,058	73,653	100,101	126,906	109,050	67,517	84,858	105,128
PITTSBURG	CARLTON LANDING ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	CROWDER	131,633	135,231	116,794	149,626	116,098	75,741	102,740	105,633	85,885	54,845	57,552	100,015
PITTSBURG	FRINK-CHAMBERS	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	HAILEYVILLE	130,117	118,771	94,632	115,149	88,315	58,423	76,628	75,928	61,787	44,331	54,838	78,880
PITTSBURG	HARTSHORNE	229,297	234,424	204,050	231,041	183,839	127,482	168,769	191,361	159,050	108,722	133,410	174,215
PITTSBURG	HAYWOOD	0	0	0	0	0	0	0	0	0	0	0	0
PITTSBURG	INDIANOLA	75,920	73,097	57,435	70,925	56,948	35,689	48,196	55,983	49,622	38,109	47,253	53,326
PITTSBURG	KIOWA	80,557	81,603	68,421	98,078	76,307	50,106	68,195	76,899	61,235	43,174	51,445	67,546
PITTSBURG	KREBS	0	362	0	0	0	0	0	0	0	0	0	36
PITTSBURG	MCALESTER	806,830	828,020	724,479	919,802	720,558	490,927	653,650	719,190	609,607	423,476	537,557	662,726
PITTSBURG	PITTSBURG	41,823	74,182	40,581	43,704	34,753	22,856	34,208	35,370	29,849	20,436	26,395	36,233
PITTSBURG	QUINTON	154,537	157,084	140,336	170,794	122,494	77,463	103,202	115,508	89,002	60,180	73,355	110,942
PITTSBURG	SAVANNA	113,335	114,472	93,946	109,411	95,572	61,437	80,068	93,304	81,526	56,827	66,543	85,310
PITTSBURG	TANNEHILL	0	0	0	0	0	0	0	0	0	0	0	0
PONTOTOC	ADA	466,672	200,513	680,106	491,473	516,053	263,491	187,949	242,690	261,697	213,457	96,676	315,411
PONTOTOC	ALLEN	74,503	33,078	110,470	83,911	89,809	47,197	35,514	47,623	51,338	43,657	18,660	56,126
PONTOTOC	BYNG	299,161	132,142	450,435	334,591	343,957	173,070	127,207	165,924	184,169	152,751	67,136	213,138
PONTOTOC	LATTA	123,020	54,986	203,009	159,167	172,171	83,956	62,227	79,614	91,013	77,111	38,350	102,160
PONTOTOC	ROFF	59,430	25,468	83,381	63,844	69,445	33,685	23,129	30,078	32,368	27,336	12,096	40,083
PONTOTOC	STONEWALL	70,910	32,787	108,493	81,360	85,796	44,902	34,312	43,216	45,312	37,404	17,104	53,069
PONTOTOC	VANOSS	95,515	47,025	144,721	99,522	101,627	52,172	39,598	51,779	57,888	48,375	20,663	66,337
POTTAWATOMIE	ASHER	16,506	11,494	19,661	16,629	17,699	9,399	6,472	9,253	9,762	8,207	4,112	11,269
POTTAWATOMIE	BETHEL	97,948	61,658	109,336	90,423	87,672	47,316	34,342	44,562	42,275	34,950	17,686	57,022
POTTAWATOMIE	DALE	53,303	31,201	55,356	46,668	47,630	26,666	19,640	26,397	27,480	22,881	11,704	31,562
POTTAWATOMIE	EARLSBORO	16,859	11,212	18,107	15,036	15,033	8,516	6,399	8,948	9,204	7,633	4,054	10,414
POTTAWATOMIE	GROVE	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	MACOMB	27,263	17,148	29,412	21,598	21,109	10,235	7,309	9,001	9,047	7,834	3,870	13,656
POTTAWATOMIE	MAUD	24,123	13,371	25,674	21,131	21,661	11,700	8,092	10,098	10,526	7,918	3,779	13,395
POTTAWATOMIE	MCLOUD	131,761	80,386	145,774	117,946	120,106	64,963	46,597	59,310	57,709	48,594	24,545	76,593
POTTAWATOMIE	NORTH ROCK CREEK	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	PLEASANT GROVE	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	SHAWNEE	287,376	177,946	320,307	262,922	264,274	138,925	96,401	127,342	128,344	105,581	52,389	167,443
POTTAWATOMIE	SOUTH ROCK CREEK	0	0	0	0	0	0	0	0	0	0	0	0
POTTAWATOMIE	TECUMSEH	163,277	100,094	175,304	143,326	148,736	79,734	55,949	71,728	70,959	59,296	30,825	93,595
POTTAWATOMIE	WANETTE	15,302	10,390	16,735	13,719	13,566	6,638	4,468	5,115	4,981	4,224	1,997	8,183
PUSHMATAHA	ALBION	0	0	0	0	0	0	0	0	0	0	0	0
PUSHMATAHA	ANTLERS	40,250	16,121	25,173	20,366	21,851	9,948	12,923	19,573	19,444	8,969	6,934	16,130
PUSHMATAHA	CLAYTON	11,896	4,042	7,773	6,237	6,580	2,848	3,858	6,016	6,079	2,794	2,106	4,833
PUSHMATAHA	MOYERS	6,470	2,753	4,685	3,859	4,545	2,069	2,728	3,619	3,553	1,553	1,221	3,059
PUSHMATAHA	NASHOBA	0	0	0	0	0	0	0	0	0	0	0	0
PUSHMATAHA	RATTAN	19,487	8,104	12,838	10,296	10,717	4,818	6,545	9,956	9,946	4,550	3,384	8,116
PUSHMATAHA	TUSKAHOMA	0	0	0	0	0	0	0	0	0	0	0	0
ROGER MILLS	CHEYENNE	719,448	825,803	860,609	1,280,806	1,539,143	918,218	749,671	800,589	811,244	433,510	290,514	851,011

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
ROGER MILLS	HAMMON	607,084	654,410	684,145	1,005,491	1,129,816	658,432	515,712	545,010	545,848	293,238	209,400	624,150
ROGER MILLS	LEEDEY	469,196	552,997	562,917	835,085	891,961	555,625	483,859	481,175	529,353	288,663	175,916	535,755
ROGER MILLS	REYDON	311,906	361,051	403,284	511,374	540,407	352,443	258,787	255,047	295,217	145,612	96,708	321,993
ROGER MILLS	SWEETWATER	206,667	224,789	267,581	404,559	549,469	323,729	287,062	301,492	291,312	147,925	105,334	290,325
ROGERS	CATOOSA	4,891	5,861	3,669	4,876	2,233	1,455	1,770	1,719	1,660	828	567	2,464
ROGERS	CHELSEA	2,275	2,677	1,555	2,155	989	629	785	721	688	346	235	1,078
ROGERS	CLAREMORE	9,483	11,073	6,726	9,245	4,265	2,806	3,410	3,267	3,167	1,615	1,128	4,670
ROGERS	FOYIL	1,557	1,760	1,043	1,402	607	384	447	435	420	203	139	684
ROGERS	INOLA	3,288	3,662	2,171	3,021	1,480	968	1,172	1,149	1,105	548	384	1,566
ROGERS	JUSTUS-TIAWAH	2,781	0	0	0	0	0	0	0	0	0	0	0
ROGERS	OOLOGAH-TALALA	4,306	5,026	3,029	4,138	1,932	1,256	1,538	1,483	1,460	759	535	2,116
ROGERS	SEQUOYAH	3,277	3,768	2,251	3,008	1,451	950	1,164	1,143	1,114	560	390	1,580
ROGERS	VERDIGRIS	2,955	3,388	2,036	2,787	1,306	870	1,085	1,087	1,111	606	419	1,470
SEMINOLE	(ILC) SEMINOLE COUNTY	0	0	0	0	0	0	0	0	0	0	0	0
SEMINOLE	BOWLEGS	96,325	63,447	97,366	81,714	65,549	44,580	39,623	44,697	45,395	33,089	17,431	53,289
SEMINOLE	BUTNER	67,124	40,018	65,947	64,189	56,312	37,109	34,860	42,299	38,177	30,967	18,584	42,846
SEMINOLE	JUSTICE	0	0	0	0	0	0	0	0	0	0	0	0
SEMINOLE	KONAWA	217,156	155,680	220,464	207,594	167,500	110,562	102,335	113,770	111,236	84,895	47,184	132,122
SEMINOLE	NEW LIMA	85,404	56,973	87,343	78,741	66,542	45,126	43,308	50,527	50,734	40,382	20,863	54,054
SEMINOLE	SASAKWA	73,434	49,629	74,557	62,123	47,880	34,061	30,998	32,172	31,203	26,185	17,401	40,621
SEMINOLE	SEMINOLE	516,380	362,977	575,169	530,700	414,347	275,209	251,197	277,682	274,135	216,349	121,216	329,898
SEMINOLE	STROTHER	110,573	78,042	119,999	117,297	104,202	66,069	61,659	72,411	72,121	58,115	32,688	78,260
SEMINOLE	VARNUM	73,451	51,987	95,204	85,655	68,403	46,075	41,683	49,335	52,605	42,043	23,540	55,653
SEMINOLE	WEWOKA	213,497	142,395	229,073	225,701	180,517	120,583	99,678	115,025	113,107	85,462	52,165	136,371
SEQUOYAH	BELFONTE	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	BRUSHY	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	CENTRAL	3,489	4,362	1,457	1,240	904	797	1,196	985	915	411	628	1,289
SEQUOYAH	GANS	2,801	2,057	1,120	909	658	638	1,023	854	781	346	510	889
SEQUOYAH	GORE	4,152	2,370	1,455	1,236	857	718	1,063	958	972	419	652	1,070
SEQUOYAH	LIBERTY (Sequoyah)	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	MARBLE CITY	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	MOFFETT	0	0	0	0	0	0	0	0	0	0	0	0
SEQUOYAH	MULDROW	11,970	8,195	4,596	3,795	2,681	2,323	3,584	2,854	2,716	1,177	1,704	3,363
SEQUOYAH	ROLAND	8,193	5,610	3,164	2,666	1,852	1,617	2,425	1,901	1,752	767	1,155	2,291
SEQUOYAH	SALLISAW	14,350	10,026	5,665	4,750	3,386	2,956	4,644	3,783	3,648	1,593	2,365	4,282
SEQUOYAH	VIAN	7,050	4,900	2,796	2,403	1,658	1,542	2,265	1,795	1,765	750	1,099	2,097
STEPHENS	BRAY-DOYLE	175,287	183,539	119,889	156,110	213,250	176,828	173,738	216,322	240,612	131,173	101,169	171,263
STEPHENS	CENTRAL HIGH	173,639	187,620	119,674	189,461	234,842	208,931	195,648	246,245	298,627	181,139	135,906	199,809
STEPHENS	COMANCHE	442,281	496,410	315,998	485,139	564,310	507,713	490,283	638,833	719,057	407,709	304,075	492,953
STEPHENS	DUNCAN	1,503,759	1,711,106	1,093,600	1,668,919	1,985,018	1,765,284	1,715,726	2,158,124	2,544,483	1,468,484	1,141,806	1,725,255
STEPHENS	EMPIRE	204,637	223,959	141,662	213,696	262,358	229,150	238,955	331,899	404,994	227,521	175,361	244,956
STEPHENS	GRANDVIEW	0	0	0	0	0	0	0	0	0	0	0	0
STEPHENS	MARLOW	508,334	596,588	394,593	603,179	732,763	689,413	676,076	874,547	1,076,076	621,699	449,567	671,450
STEPHENS	VELMA-ALMA	169,408	196,546	122,463	191,885	240,122	228,840	227,284	283,750	330,615	199,128	151,827	217,246
TEXAS	GOODWELL	136,261	113,677	87,359	77,766	52,241	36,357	60,290	59,052	66,058	35,324	22,295	61,042
TEXAS	GUYMON	1,752,897	1,568,303	1,225,257	1,021,596	682,685	425,328	750,968	749,849	809,912	444,657	289,560	796,811

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
TEXAS	HARDESTY	62,929	47,179	34,258	29,288	22,109	14,184	22,685	23,690	25,512	11,478	7,331	23,771
TEXAS	HOOKER	361,891	318,476	252,815	225,939	152,514	96,259	172,801	167,143	177,555	94,766	60,198	171,847
TEXAS	OPTIMA	0	0	0	0	0	0	0	0	0	0	0	0
TEXAS	STRAIGHT	0	0	0	0	0	0	0	0	0	0	0	0
TEXAS	TEXHOMA	184,616	155,966	132,719	103,708	66,990	41,918	64,656	63,623	66,129	35,846	23,558	75,511
TEXAS	TYRONE	156,036	138,434	109,956	94,889	61,269	36,554	60,601	58,170	58,649	31,327	20,825	67,067
TEXAS	YARBROUGH	78,551	67,739	61,170	46,716	31,833	18,820	30,718	31,991	28,024	14,857	7,744	33,961
TILLMAN	DAVIDSON	5,900	8,063	5,396	12,774	9,344	2,797	1,676	0	0	0	0	4,005
TILLMAN	FREDERICK	79,307	60,306	46,641	126,536	102,917	34,061	22,790	27,133	41,258	25,362	10,736	49,774
TILLMAN	GRANDFIELD	12,795	18,652	14,018	37,503	30,566	9,755	6,413	7,293	9,409	6,264	2,673	14,255
TILLMAN	TIPTON	14,517	25,588	19,844	51,197	39,614	12,822	7,416	8,859	13,727	8,337	3,333	19,074
TULSA	BERRYHILL	1,702	1,463	2,002	1,583	1,333	722	711	763	924	672	339	1,051
TULSA	BIXBY	6,439	5,978	8,384	6,776	5,867	3,304	3,413	3,824	4,778	3,689	1,923	4,794
TULSA	BROKEN ARROW	22,346	20,034	27,650	21,250	18,512	10,295	10,423	11,556	14,004	10,487	5,559	14,977
TULSA	COLLINSVILLE	3,525	3,215	4,367	3,310	2,727	1,518	1,518	1,723	2,085	1,569	827	2,286
TULSA	DEBORAH BROWN (CHARTER)	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	DOVE SCHOOLS OF TULSA	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	GLENPOOL	3,243	2,855	3,912	2,996	2,602	1,464	1,514	1,670	2,047	1,539	806	2,140
TULSA	JENKS	13,850	12,152	17,429	13,534	11,451	6,391	6,500	7,345	9,158	6,900	3,597	9,446
TULSA	KEYSTONE	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	LANGSTON HUGHES ACAD ARTS-TECH	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	LIBERTY	805	720	996	725	589	317	308	340	401	291	146	483
TULSA	OWASSO	12,269	11,032	15,241	11,745	9,682	5,454	5,444	6,045	7,311	5,387	2,825	8,017
TULSA	SAND SPRINGS	7,235	6,109	8,516	6,530	5,442	2,948	2,900	3,153	3,798	2,796	1,437	4,363
TULSA	SANKOFA MIDDLE SCHL (CHARTER)	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	SKIATOOK	3,429	3,051	4,173	3,165	2,598	1,426	1,414	1,545	1,872	1,341	675	2,126
TULSA	SPERRY	627,904	831,544	667,699	803,536	289,633	175,826	293,727	301,007	400,984	240,361	139,926	414,424
TULSA	TULSA	54,347	48,929	66,321	50,539	42,071	22,990	22,747	24,866	29,485	21,672	11,005	34,062
TULSA	TULSA CHARTER: COLLEGE BOUND	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: COLLEGIATE HALL	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: HONOR ACADEMY	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: KIPP TULSA	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA CHARTER: SCHL ARTS/SCI.	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	TULSA LEGACY CHARTER SCHL INC	0	0	0	0	0	0	0	0	0	0	0	0
TULSA	UNION	20,236	17,877	24,372	18,878	15,947	8,774	8,878	9,672	11,718	8,637	4,463	12,922
WAGONER	COWETA	13,813	16,939	11,904	15,311	16,978	9,086	6,944	6,506	6,848	3,476	1,201	9,519
WAGONER	OKAY	2,012	2,369	1,667	1,953	2,057	1,121	852	842	770	381	132	1,214
WAGONER	PORTER CONSOLIDATED	2,346	2,960	2,064	2,735	2,984	1,517	1,175	1,066	1,066	563	208	1,634
WAGONER	WAGONER	10,408	12,948	8,658	11,088	12,252	6,385	4,982	4,728	4,904	2,451	811	6,921
WASHINGTON	BARTLESVILLE	99,111	192,502	101,727	125,391	47,435	36,354	58,837	55,614	66,828	39,702	22,249	74,664
WASHINGTON	CANEY VALLEY	12,264	24,877	12,998	16,333	5,983	4,635	7,582	7,431	9,241	5,500	3,112	9,769
WASHINGTON	COPAN	4,887	9,154	4,561	14,420	7,060	2,283	2,378	2,240	2,614	1,497	776	4,698
WASHINGTON	DEWEY	20,073	39,113	20,899	26,953	9,931	7,532	12,102	11,303	13,988	8,272	4,629	15,472
WASHITA	BURNS FLAT-DILL CITY	1,351,371	1,878,492	897,058	836,684	758,414	385,820	299,451	303,554	255,284	139,234	155,892	590,988
WASHITA	CANUTE	831,386	1,232,722	582,364	541,036	502,299	256,061	215,259	225,734	178,539	93,303	96,037	392,335
WASHITA	CORDELL	1,719,565	2,213,411	985,186	923,997	875,767	427,991	360,969	367,808	289,458	163,117	181,538	678,924

Figure 36. (Cont.) Gross Production Tax Distributions by County/School District

County	School District	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	10-Yr Avg
WASHITA	SENTINEL	673,990	945,357	426,241	428,398	390,703	196,625	168,497	166,286	134,170	77,760	83,918	301,796
WASHITA	WASHITA HEIGHTS	0	0	0	0	0	0	0	0	0	0	0	0
WOODS	ALVA	1,291,557	1,942,963	1,271,109	2,572,076	3,735,639	2,030,610	2,349,039	2,356,914	2,065,073	1,069,820	573,154	1,996,640
WOODS	FREEDOM	218,698	168,171	102,734	201,513	326,085	174,265	187,275	169,465	150,268	67,919	26,200	157,389
WOODS	WAYNOKA	327,483	486,134	350,980	686,945	1,058,644	584,018	627,672	568,568	465,073	239,258	123,808	519,110
WOODWARD	FORT SUPPLY	37,239	31,942	18,599	14,843	14,925	10,145	9,797	14,756	21,130	13,976	7,281	15,739
WOODWARD	MOORELAND	129,254	131,452	76,561	62,738	66,729	38,971	36,585	58,238	88,075	57,972	30,022	64,734
WOODWARD	SHARON-MUTUAL	71,827	71,687	44,423	37,872	37,847	22,544	20,810	31,754	43,953	28,895	12,374	35,216
WOODWARD	WOODWARD	673,432	650,998	405,959	344,573	372,161	226,150	197,570	307,725	455,950	290,992	141,753	339,383
	ALL DISTRICTS	66,876,156	72,663,646	60,498,956	79,735,839	83,877,100	56,880,656	60,535,813	81,606,568	103,601,375	77,662,782	57,603,655	73,466,639

Source: Oklahoma State Department of Education – Oklahoma Cost Accounting System

Total Business Tax Burden

In addition to large severance tax payments, the state's oil and gas cluster is well known for paying significant amounts of state and local taxes across all major tax streams. This section of the report examines the Bureau of Economic Analysis (BEA) dataset on state-level tax payments by industry to evaluate the total tax contribution of firms operating within Oklahoma's oil and gas cluster.

BEA Database on Business Taxes. The BEA data collection program for Gross Domestic Product (GDP)[23] at the state level provides the most widely used comparative measure of federal, state, and local business taxes paid by industry sector within each state.[24] The dataset provides a comprehensive and consistent tabulation of business taxes paid on goods and services produced or imported by firms in 81 NAICS industry sectors at the state level. While data is not available at highly disaggregated industry levels, the dataset captures the tax payments of the major components of the state's oil and gas cluster – primarily the mining, pipeline, and refinery sectors.

The BEA dataset is especially useful for the purposes of this report in calculating the 'business' tax contribution of firms within an industry because it captures all federal, state, and local taxes paid by firms that are deductible for tax purposes. As a result, the dataset captures nearly all taxes paid except corporate income taxes and employer social security contributions.[25]

It is important to note that the BEA dataset excludes tax payments by households on the compensation of wage and salary workers. Taxes paid on self-employment or proprietors' earnings are likewise excluded.[26]

Although not broken down into detail by individual type of tax, the dataset is unique in that it divides total statewide tax payments into the industry sectors making the payments. A comprehensive set of state and local taxes are covered including sales and use taxes, motor fuel, property, severance, motor vehicle, state payroll, and others.[27] The data is of further value for assessing tax burden in this report because approximately 90% of the taxes are paid to state and local governments, with only about 10% going to federal government (primarily excise taxes and custom duties).

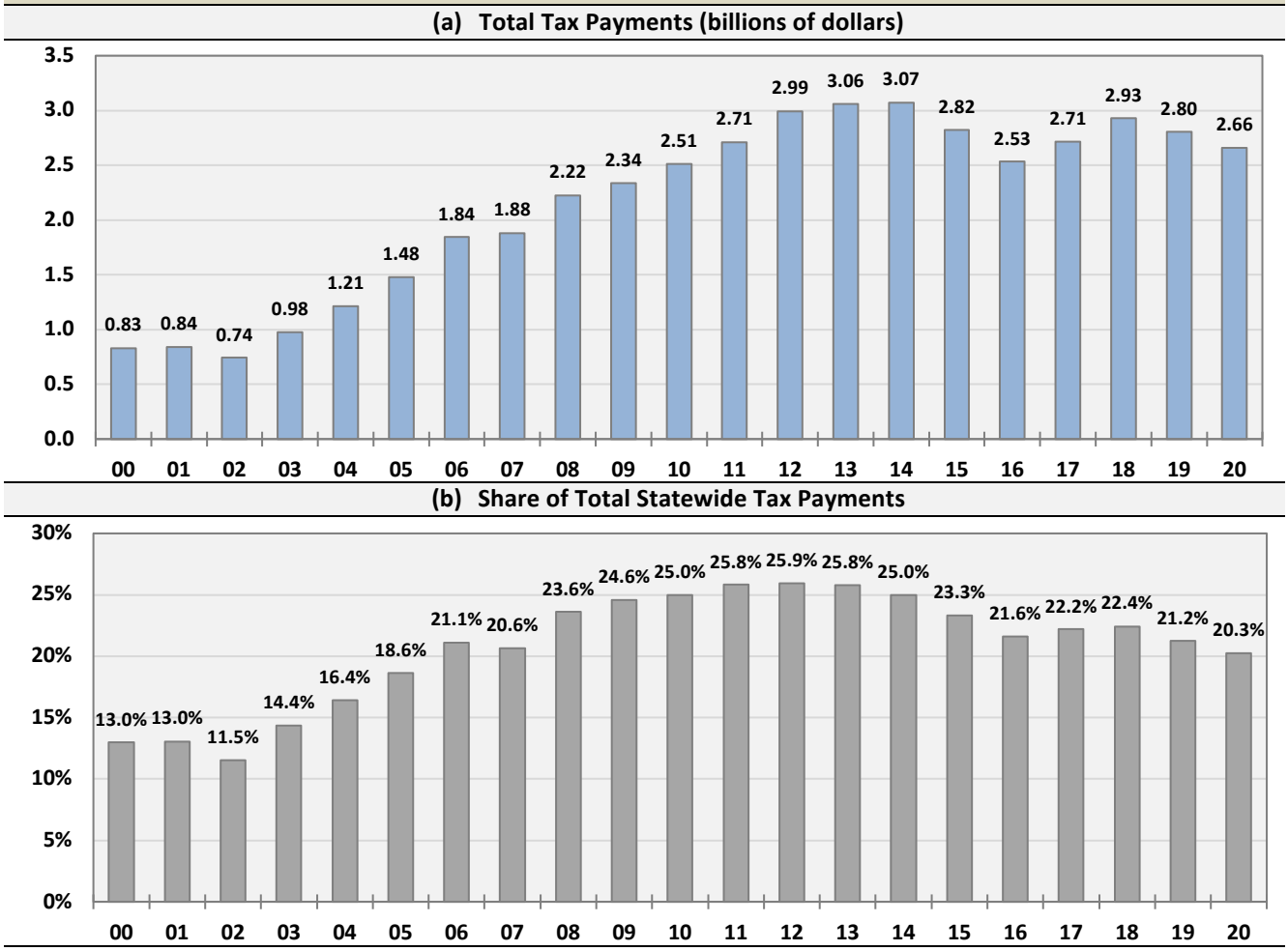
Payments by the Oil and Gas Cluster. BEA tax estimates for the mining sector are combined with the taxes paid by refineries and pipelines operating in the state. This captures a high percentage of all business taxes paid by firms operating in the state's oil and gas cluster.

Based on the BEA dataset, Oklahoma establishments in the oil and gas cluster paid a total of $2.66 billion in business taxes in 2020 (*Figure 37a*). Again, state and local taxes comprise most of the payments with federal payments only a small share. The $2.66 billion in taxes paid in 2020 is 10-15% below the recent peak of more than $3 billion in 2013 and 2014 but is roughly equal to the $2.75 billion average across the recent 2015 to 2019 period. Total tax payments by the oil and gas cluster in 2020 were down 5% from $2.8 billion in 2019.

Oil and Gas Cluster Pays a High Share of Total Oklahoma Business Taxes

Firms in the state's oil and gas cluster account for a large share of total business taxes paid by all firms in the state (*Figure 37b*). BEA reports a total of $13.13 billion in total business taxes paid by firms across all industries in Oklahoma in 2020. This suggests that tax payments by the major components of the state's oil and gas cluster accounted for 20.3% of total business taxes paid statewide in 2020. The share has stabilized just above 20% but is down more than five percentage points from the recent high of 25.9% in 2012 during a period of elevated energy prices. Again, the cluster comprises only 3.6% of state business establishments and 3.8% of total state employment but accounts for more than 20% of total taxes paid by Oklahoma firms.

Figure 37. Federal, State, & Local Tax Payments – Oil and Gas Cluster



Notes: Tax payments include federal, state, and local tax payments on production and imports. Payments are in calendar years.
Source: Bureau of Economic Analysis and RegionTrack calculations

Oil and Gas Cluster vs. Other Major Industries in Oklahoma

The share of total state business taxes paid by firms in the oil and gas cluster is far higher than all other major industry sectors in the state. Figure 38 provides estimates of total tax payments for most major industry sectors in Oklahoma for 2020. The oil and gas drilling, production, and support sector accounted for 18.9% of total statewide taxes; the refinery sector accounted for 0.4%; and pipelines paid 0.9% of total statewide taxes in 2020.

Combined, these three components of the state's oil and gas cluster accounted for 20.3% of all federal, state, and local taxes paid statewide. The drilling, production, and support sector alone accounted for 94% of total cluster tax payments, with pipelines and refineries paying a combined 6% of total cluster taxes. Gross production taxes comprise a large portion of the tax payments derived from the state's oil and gas cluster.

The oil and gas cluster pays a higher share of total taxes than the state's two key sales tax conduit sectors, Wholesale Trade (17.1%) and Retail Trade (18.2%), both of which collect and forward significant taxes but produce relatively little GDP (their combined GDP is less than the mining sector).

The share of total statewide business taxes paid is far lower in the state's other key high-tax-share sectors including Finance and Insurance ($739 million, 5.6% share), Accommodations and Food Service ($683 million, 5.2% share), Utilities ($430 million, 3.3% share), Arts, Entertainment, and Recreation ($245 million, 1.9% share), and Transportation and Warehousing ($277 million, 2.1% share). Combined, these five high-tax industries paid only $2.4 billion in total taxes in 2020, or 18.1% of total statewide business taxes paid, just less than the 20.3% share of total state taxes paid by the major components of the oil and gas cluster.

Figure 38. Federal, State, & Local Tax Payments by Major Sector – Oklahoma (2020)

Industry Sector	($millions) Total Taxes	Share of Total
Agriculture, forestry, fishing and hunting	$189.9	1.4%
Mining, quarrying, and oil and gas extraction	2,525.3	19.2%
Oil and gas drilling, production, and support	**2,491.3**	**18.9%**
Utilities	429.7	3.3%
Construction	86.6	0.7%
Manufacturing	407.1	3.1%
Durable goods manufacturing	164.8	1.3%
Nondurable goods manufacturing	242.3	1.8%
Petroleum and coal products manufacturing	50.6	**0.4%**
Wholesale trade	2,241.5	17.1%
Retail trade	2,387.4	18.2%
Transportation and warehousing	276.5	2.1%
Pipeline transportation	**117.9**	**0.9%**
Information	312.3	2.4%
Finance and insurance	738.6	5.6%
Real estate and rental and leasing	1,402.5	10.7%
Professional, scientific, and technical services	273.9	2.1%
Management of companies and enterprises	154.7	1.2%
Administrative and support and waste management	213.5	1.6%
Educational services	39.1	0.3%
Health care and social assistance	313.3	2.4%
Arts, entertainment, and recreation	244.6	1.9%
Accommodation and food services	683.2	5.2%
Other services	180.0	1.4%
All industry total	$13,130.8	100.0%

Notes: Major component sectors of the state's oil and gas cluster are highlighted.
Source: Bureau of Economic Analysis and RegionTrack calculations

VIII. Endnotes

[1] For current U.S. Strategic Petroleum Reserve storage data, see: https://www.spr.doe.gov/dir/dir.html

[2] Bureau of Labor Statistics produces state-level industry measures by employment size only at the 2-digit NAICS level. The Mining sector (NAICS 21) is used as a proxy for the oil and gas cluster. The Mining sector (NAICS 21) captures slightly more of the industry than the three core sectors (NAICS 211, 213111, and 213112).

[3] EIA Short Term Energy Outlook. Release Date: November 9, 2021. https://www.eia.gov/outlooks/steo/

[4] Natural gas is converted to barrels-of-oil-equivalent (BOE) using a ratio of 6 mcf of natural gas per barrel of oil.

[5] Both royalty percentages and the share of royalties paid to nonresidents are calculated using historical royalty payment rosters provided by several oil and gas operators in Oklahoma. Royalties are deemed paid to a resident if the receiving postal address is in Oklahoma.

[6] Net exports are measured as state production minus state consumption as defined by EIA in the State Energy Data System (SEDS). Available online at: http://www.eia.gov/state/seds/

[7] Much of the increased earnings are traced to the conversion of corporate pipeline operating entities to various types of partnerships in recent years. This has shifted income from corporate taxation to treatment as income for individuals.

[8] Data on fixed private investment are generally not available at the state level and must be estimated from national data. We follow the common approach of apportioning national data on private fixed investment to the states using industry level data on a region's share of national earnings. A similar approach is used by the Bureau of Economic Analysis in deriving gross domestic product estimates at the state and metro area levels. State-level capital at the industry level is estimated using the approach of Garofalo and Yamarik as described in: Yamarik, Steven, 2013. "State-Level Capital and Investment: Updates and Implications." Contemporary Economic Policy, Vol. 31, Issue 1, pp. 62-72; and in Garofalo, Gasper A. and Steven Yamarik. 2002. "Regional Convergence: Evidence from a New State-by-State Capital Stock Series." Review of Economics and Statistics, 84:2, pp.316-323. The approach apportions state-level estimates from national investment data using state level earnings by industry. The regional earnings data at the industry level used to partition the national data contain missing and suppressed values. We estimate the missing values using a large-scale RAS approach. Priors for the estimation process are determined using either disclosed values across the full period or national industry ratios.

[9] For additional information on U.S. fixed investment by industry, see the National Income and Product Accounts (NIPA) available online at Bureau of Economic Analysis (www.bea.gov), Table 5.3.5 Private Fixed Investment by Type.

[10] By individual commodity, total spending on construction in Oklahoma is roughly equal in size to capital spending by the oil and gas industry. However, construction expenditures are traced to a variety of industries, as well as the household sector, rather than to just a single industry. Manufacturing is the most capital-intensive industry nationally, with oil and gas second. However, the high concentration of oil and gas in the state tips the balance well in favor of oil and gas in Oklahoma.

[11] RIMS (Regional Input-Output Modeling System) II multipliers are discussed in detail at: https://apps.bea.gov/regional/rims/rimsii/. Multipliers used in the report are based on the 2017 regional update of the 2012 U.S. input-output model underlying the RIMS II estimates.

[12] Caution must always be used when using input-output multipliers to assess the total 'contribution' or total economic activity 'supported' by an existing industry or firm. Input-output multipliers are intended to predict the change in economic activity that results from an incremental change in the current state of a regional economy. More specifically, the estimates provided for the oil and gas cluster reflect predictions from the RIMS II input-output model of the incremental impact that would result if cluster GDP expanded incrementally. The actual realized impact is determined by the unique adjustment process that would take place in the state as oil and gas activity changed.

[13] While the input-output approach provides a useful way to measure the extent of the economic interlinkages within a regional economy, the approach is not without shortcomings. The primary criticisms of the approach are misapplication of the models and the failure of the largely static approach to account for changes in other areas of the economy such as prices, wages, and traded activity. Despite these criticisms, careful application of the models can provide useful estimates of the total gross economic activity attributable to an individual industry, firm, or institution within a region. Input-output analysis is most appropriate when the policy change or stimulus does not alter production patterns, product prices, input prices, wage rates, or cost of capital. It is generally most useful when there are no capital or labor constraints.

[14] The three-step process of matching the components of the cluster to sectors, modeling the individual effects, and then aggregating the individual contributions of the components is often termed analysis-by-parts. It is technically equivalent to

modeling the activity as a single entity, but the process can produce more appropriate impact estimates when the activities being modeled do not fit precisely within a single RIMS II industry sector.

[15] We do not attempt to formulate a comprehensive net cost-benefit analysis of the state's oil and gas cluster. There are many relevant components to a net analysis that extend well beyond the direct economic role of the cluster. These include social costs and benefits, alternative uses of state and local funding, alternative options for providing energy in the state, and the deadweight economic loss that can occur in the private sector because of taxpayer funding of services.

[16] Caution must be exercised when using input-output analysis to estimate the total economic activity 'supported' by an existing industry or firm. Input-output multipliers are designed to predict the gross changes in a regional economy resulting from a small, incremental change in its current structure. For an accessible discussion of how multiplier-based estimates of spillover effects are frequently misused and often overstate resulting spillover effects, see Hughes (2018) https://extension.tennessee.edu/publications/Documents/W644.pdf and Olfert and Stabler (1994) https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2257.1994.tb00155.x.

[17] We do not construct a counterfactual scenario that represents an alternative comparative view of the state economy that removes the oil and gas cluster and its various interrelationships from the structure of the model. Devising a sound counterfactual analysis that represents a reasonable alternative use to oil and gas presents a considerable modeling challenge. It is not at all clear what the proper counterfactual should be in assessing the economic role of oil and gas production.

[18] Production quantities for both crude oil and natural gas are based on Energy Information Administration (EIA) estimates. The price of crude oil is based on the state level series of first purchaser prices produced by EIA. The price of natural gas is based on EIA prices through 2011 and Oklahoma Tax Commission prices from 2012 to 2021. All effective rate calculations are based on the state's fiscal year beginning July 1 of each year. The value of production is similarly tabulated on a matching fiscal year basis in calculating the effective rate.

[19] The state's Constitutional Reserve Fund (CRF) is more commonly known as the Rainy Day Fund. The state legislature recently created the new Revenue Stabilization Fund (RSF) in 2018. A portion of collections from gross production and corporate income above a threshold five-year average may be directed to the RSF. For more details, see: https://oklahoma.gov/content/dam/ok/en/omes/documents/bud22.pdf

[20] For detailed revenue and expenditure reports, see: https://sdeweb01.sde.ok.gov/OCAS_Reporting/StateReports.aspx. For a summary of current and historical apportionment, see: https://www.ok.gov/tax/Forms_&_Publications/Reports_&_Statistics/Apportionment_Charts_&_Formulas/index.html

[21] For the full apportionment rules for gross production tax in Oklahoma, see: http://www.oscn.net/applications/oscn/deliverdocument.asp?cite=68+O.S.+1004

[22] For a description of the Common Education Technology Revolving Fund, see: http://www.oscn.net/applications/oscn/DeliverDocument.asp?citeid=456863

[23] For access to the BEA data, see: https://www.bea.gov/data/gdp/gdp-state

[24] For details on the BEA methodology, see: https://www.bea.gov/sites/default/files/methodologies/0417_GDP_by_State_Methodology.pdf. For detailed coverage of taxes, see: https://apps.bea.gov/scb/2018/04-april/0418-preview-2018-comprehensive-nipa-update.htm

[25] BEA tracks employer contributions as a component of employee compensation.

[26] Taxes paid by wage and salary workers and self-employed proprietors working in the industry are significant as well. See for example: Snead, Mark C. and Amy A. Jones. 2019. "Oklahoma Oil and Gas Activity and Tax Contribution." RegionTrack Inc. for the Oklahoma State Chamber Research Foundation. Available online at: https://www.regiontrack.com/www/wp-content/uploads/Oklahoma-Oil-Gas-Impact-Taxes-2019-RegionTrack.pdf

[27] Most of the underlying tax estimates are built 'bottom-up' using either special tabulations at the state level, government finance data from the Census Bureau, or IRS tax receipts. The series also nets out any subsidies received by the industry. Totals are controlled to Census Bureau estimates for state and local tax payments received within each state to adjust for payments made within each state.

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