Kansas Oil & Gas Industry Strategic Analysis

PREPARED BY:

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Kansas Independent Oil & Gas Association
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Introduction

After many decades of productive stewardship, oil and natural gas resources continue to play an important part of the livelihoods of Kansans. In 2023, the Kansas oil and gas industry generated over $2.3 billion in output, put tens of thousands of people across Kansas to work, and pumped hundreds of millions of dollars into the state's economy. The industry supports 100,000 jobs, $3 billion in family income, and $1.4 billion in state/local tax revenue. The industry is an important element of the Kansas economy today and will be a critical part of the economy going forward.

The United States is the leading oil producing nation in the world - accounting for 15% of the world's total oil production. Thirty-two U.S. states produce oil and natural gas. Kansas ranks as the 11th largest oil producing state and 14th largest natural gas producing state. Over 2,200 licensed oil/gas operators produced nearly 28 million barrels of oil and 143 billion cubic feet of natural gas in Kansas in 2023.

Kansas Oil & Natural Gas Energy for the Future!

Oil and natural gas are an integral part of our society making our high standard of living possible. Today, an estimated 6,000 products are produced from petroleum. The Kansas oil and gas industry helps the Kansas economy and makes significant positive contributions to our way of life!

Special points of interest:

- *Oil and gas industry critical part of Kansas economy.*
- *Fundamental challenges face policymakers and industry.*
- *Oil and gas producers need policies that enhance access to capital.*
- *Opportunities arise from addressing critical issues.*

Inside this Report:

Challenges Face Policymakers and the Kansas Oil & Gas Industry

The latest (2023) world energy outlooks from the EIA and others project total global energy demand expanding by 23% by 2045. All forms of energy will be needed to support energy demand growth. Renewable energy sources will see the largest growth leading to a share of over 11.7% of the energy mix by 2045. Oil and natural gas are expected to retain the largest share accounting for roughly 54% of the energy mix in 2045.

Lawmakers should avoid energy policies driven by a zero-sum game philosophy for energy that says we must have less fossil fuels so we can have more of something else. All too often, proposals to establish some kind of green standard really have much more to do with raising revenue than helping the environment. Rational, data-driven, common-sense energy policy is what our state and nation needs. We should abandon the stale mindset of last century's thinking that increased oil and gas production and achieving climate goals are not compatible.

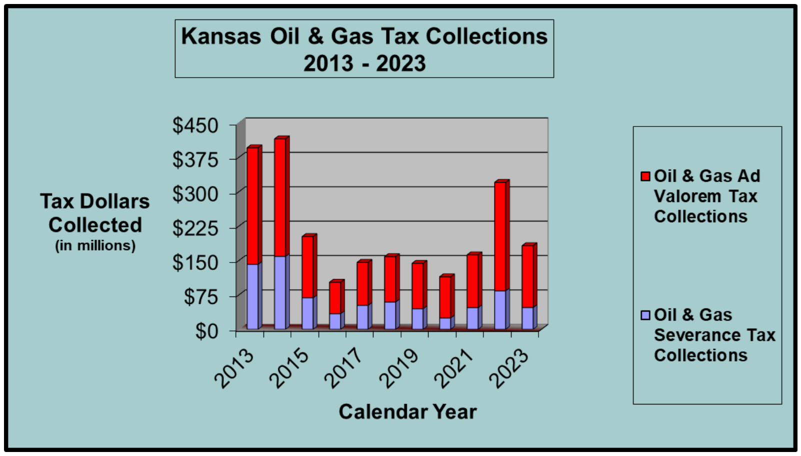
The American people want, expect, and deserve elected leaders who will place what's best for our state and nation's economy and energy future above partisan ideology and political posturing. We need real energy solutions!

Kansas Oil & Gas Industry Taxation Analysis

The Kansas oil and gas industry contributed over $186 million to the State of Kansas in taxes in 2023. In addition, $7.5 million in fees were collected from the industry. These tax dollars and fee collections come from oil and gas producers and royalty owners. We are happy to pay our fair share but also believe we are a highly taxed industry. Calendar year 2023 saw the oil and gas industry pay nearly $48 million in severance taxes and over $137 million in ad valorem taxes.

According to production data provided by the Kansas Department of Revenue, oil production in Kansas has fallen 8 of the last 10 years. Natural gas production in Kansas declined by a Compound Annual Decline Rate (CADR) of 6.8% over the last 10 years. Oil production in Kansas has decreased by a CADR of 4.8% over the same period.

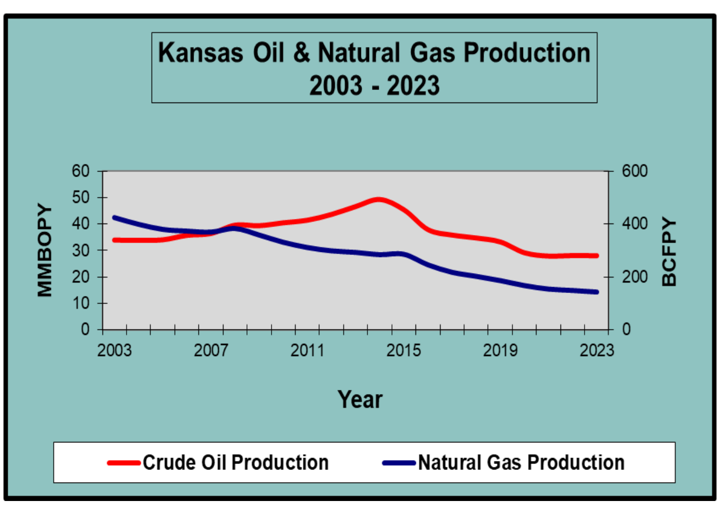
Kansas production held steady in 2023 despite lower prices. The strong U.S. dollar, China lockdowns, continued *Strategic Petroleum Reserve* in the U.S., and high interest rates in 2023 curbed oil demand and kept oil prices lower than 2022. As a result, the Kansas Department of Revenue reports that Kansas collected nearly 43% less oil and gas severance tax receipts and oil and gas ad valorem tax receipts in calendar year (CY) 2023 than CY 2022. Market conditions in 2023 resulted in Kansas collecting about $36.3 million less in oil and gas severance tax receipts and $140 million less ad valorem tax receipts in CY 2023 than CY 2022. CY 2023 severance tax receipts remain nearly 70% below CY 2014 collections and ad valorem tax receipts remain nearly 48% below CY 2014 ad valorem tax collections.



The relative tax burden on the Kansas oil and gas industry can be illustrated in three ways: marginal tax rate, discounted cash flow analysis, and average effective tax rate.

Marginal Tax Rate

The marginal tax rate for the Kansas oil and gas industry is a measure of the taxes paid on an increase/decrease in the marginal price of oil and natural gas expressed as a percentage of revenues. The marginal tax rate includes the combined effect of severance and ad valorem taxes on primary production. Kansas' marginal tax rate on primary oil and natural gas production was 12.3% in 2023, higher than surrounding states (CO, OK, TX, ND, NM).



Discounted Cash Flow Analysis

The discounted cash flow analysis evaluates the impact of taxes on the economics of specific investments. For oil and gas, the analysis is helpful in gauging the effect of taxes on new exploration and production investments. Discounted cash flow analyses on several Kansas exploration and development projects using current economic characteristics indicate the impact of Kansas severance and ad valorem taxes alone is to generally reduce rates of returns by 25%-35%.

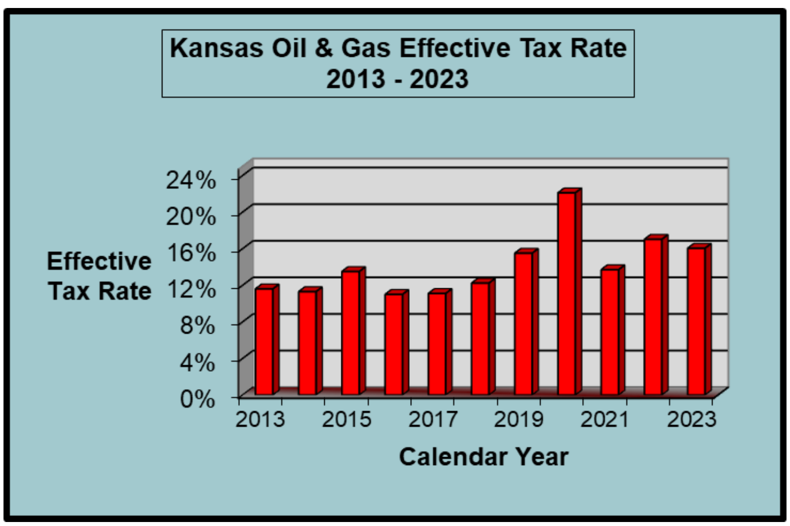
Impact of Oil Price on Tax Collections

Oil prices recovered significantly from the extreme depressed levels in 2020 as the world reopened after the pandemic. The dollar also strengthened as inflation rose, forcing the Federal Reserve to raise interest rates rapidly. Subsequently, oil prices declined in 2023, despite a weakening U.S. dollar. In 2020, Kansas crude oil prices averaged $29.79/bbl. In 2021 and 2022, Kansas crude oil prices averaged $57.77/bbl. and $84.63/bbl. respectively, In 2023, Kansas crude oil prices averaged $67.85/bbl. History has shown that significant and sustained drops in oil prices significantly reduces oil and gas severance and ad valorem tax collections.

Taxation Analysis (continued)

Average Effective Tax Rate

The average effective tax rate focuses on the total taxes paid in relation to total taxable value. The Kansas oil and gas industry's 2023 effective tax rate was 16%. Different state tax systems greatly impact the average tax rate for the oil and gas industry. For example, the Oklahoma oil and gas industry pays a 7% severance tax and ad valorem taxes on equipment only, not reserves. In contrast, the Kansas oil and gas industry pays a 4.33% severance tax as well as ad valorem taxes on equipment **AND** reserves resulting in double-taxation of oil and gas reserves that leads to a higher average tax rate than Oklahoma.



Oil & Natural Gas Prices

The crude oil market is a global oligopolistic market. Kansas oil and gas producers are price takers, not price makers, in this oligopolistic market.

Crude oil prices received by Kansas oil producers are a result of several factors. The New York Mercantile Exchange (NYMEX) price is set daily by an open auction. The price is based on global supply/demand factors. West Texas Intermediate (WTI) is the benchmark price for crude oil produced in the U.S. A barrel of WTI crude oil generates more products, like gasoline, than other crude oils. Kansas common crude oil is a lesser quality oil generating less products per barrel than WTI and, as a result, is priced about $10-$11/bbl. less than WTI.

The U.S. Energy Information Administration (EIA) reports that in 2023 wind provided 10.3% of U.S. electricity generation, solar provided 3.4%, natural gas provided 40%, and coal provided 20%.

While the U.S. and Kansas economies continue to recover, significant concerns exist including high inflation, U.S. monetary policy, volatility in energy markets, U.S. trade and foreign policies, demand, and more. Uncertainty remains as elevated levels of inflation are forecast to largely offset relatively strong nominal growth over the next year. U.S. GDP increased by 6.3% in 2023. Kansas Gross State Product (GSP) increased by 6.4% in 2023. Both U.S. GDP and Kansas GSP is projected to grow by 4.7% in 2024.

Ongoing concerns about global economic conditions and geopolitical conflicts increase uncertainty in oil markets. In 2024, global oil production is expected to be lower than global oil demand putting upward pressure on oil prices. EIA projects Kansas crude oil prices to average about $78/bbl in 2024.

Conclusions

Tax analyses indicate that Kansas taxes on oil and gas production are high relative to other states examined, and are especially high considering the characteristics of the Kansas resource relative to most other states evaluated. Kansas oil and gas producers are taxed five times on each barrel of oil or Mcf of natural gas produced (severance tax, property tax on equipment, property tax on reserves, state income tax, and federal income tax). Kansas oil and gas producers pay considerably higher taxes as a percentage of revenue than most other oil and natural gas producing states.

While the oil and gas severance tax provides an important source of revenue for the State of Kansas, the volatile nature of markets makes it risky to depend on the revenue from year to year.

The ad valorem tax structure has several features which are detrimental to the state's oil and gas industry and hinders economic growth in the State of Kansas. Ad valorem taxes are levied based on ability to produce rather than actual production, resulting in very high taxes relative to revenues for some wells. In addition, ad valorem taxes vary county by county based on variations in local mill levies. The current tax policy of levying ad valorem taxes on reserves contradicts good engineering practices. Good engineering practices suggest slow development of oil and gas reserves to more thoroughly drain oil and gas reservoirs. Ad valorem tax policy encourages producers to produce oil and gas reserves as quickly as possible to avoid double-taxation. Finally, ad valorem taxes encourage premature abandonment of oil and gas wells by applying a minimum tax to non-producing marginal wells, thus creating an incentive to plug and abandon such wells. Perhaps tax structure revisions are needed.

Taxation Analysis (continued)

Policy Recommendations

Kansas oil and gas producers need policies that enhance access to capital to develop and maintain production. These small businesses do not have the substantial additional resources possessed by many major integrated and/or public traded companies. Independent oil and gas producers generate capital through their production, not by tapping equity markets or other corporate measures. Consequently, tax reforms that allow oil and gas producers to retain more of their revenues to reinvest directly translates into new resources and economic development for Kansas. Historically, independent oil and gas producers reinvest more than 100% of their cash flow into new projects. Every new oil and gas project is like a new small business start-up. Perhaps restructuring severance and ad valorem tax structures would promote more economic growth for Kansas and more energy for our nation.

Every new oil and gas project is like a new small business start-up.

The Kansas oil and gas industry contributed nearly $190 million to the State of Kansas in taxes and fees in 2023, over $327 million in 2022, and nearly $170 million in 2021. We are happy to contribute our fair share but we are a highly taxed industry. Perhaps restructuring the current severance tax structure could preserve the absolute tax dollars received by the State of Kansas while providing the incentives needed by oil and gas producers to expand oil and gas development and create significant economic growth for Kansas. The current severance tax structure as defined in K.S.A. 79-4217 imposes an 8% tax rate on the gross value of all oil and gas severed from the earth or water. K.S.A. 79-4219 provides for a property tax credit in the amount of 3.67% for ad valorem taxes paid. Therefore, the effective severance tax on oil and gas severed from the earth or water in Kansas is 4.33%.

Kansas oil production has declined 8 of the last 10 years and has fallen by more than 43% since 2014. For 2024, uncertainty in macroeconomic conditions could significantly affect energy markets.

Now is the time to consider restructuring the severance and ad valorem tax system to maintain absolute tax dollars received by the State while providing producers incentives to expand economic growth. Perhaps amending K.S.A. 79-4219 to increase the property tax credit from 3.67% to 4.5% is in line. A property tax credit of 4.5% would make the effective severance tax rate 3.5% and allow producers to retain more of their revenues to reinvest into projects that generate economic growth for Kansas. Any decrease in absolute tax revenues to the State of Kansas would be mitigated by increased economic growth.

A different approach might consider addressing the ad valorem tax structure directly. Kansas is one of the few states that assess ad valorem taxes on reserves. Other states assess ad valorem taxes on equipment only. Empirical evidence suggests assessing ad valorem taxes on reserves causes outside oil and gas investors to devalue Kansas properties by 25%-30% greatly reducing outside investment capital.

Perhaps Kansas could restructure ad valorem taxes to eliminate the double-taxation of reserves. By assessing ad valorem taxes on equipment only, reserves would be taxed only once through the severance tax structure. A small increase in the severance tax rate from the effective 4.33% could make up the difference between total taxes collected under the current ad valorem tax system of assessing equipment and reserves and the proposed ad valorem system of assessing only equipment. By eliminating ad valorem taxes on reserves, counties and companies will be able to greatly reduce administrative costs. The severance tax receipts to the State's general revenue fund could then be allocated as seen fit back to the counties. Such a design would eliminate the need for counties to perform oil and gas property appraisals and greatly reduce complaints, all of which saves the State, counties, and companies time, money, and resources.

Kansas Energy Outlook & Key Energy Issues

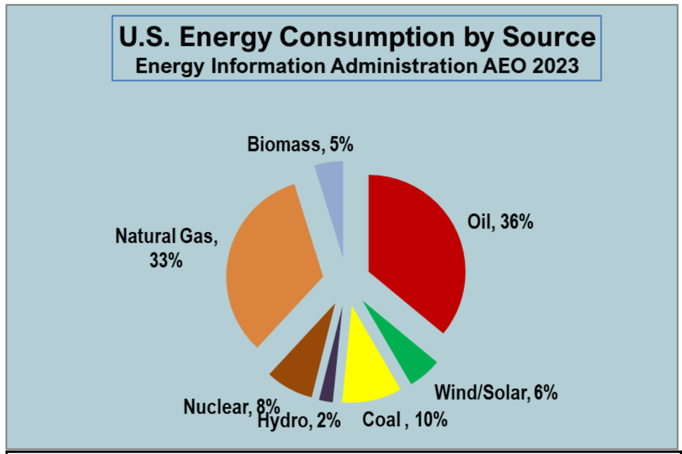
Small independent oil and gas producers account for 92% of the oil and 63% of the natural gas produced in Kansas. Nationally, small independent producers drill 95% of domestic wells. Nationally, small independent producers' employees paid $30.7 billion in income taxes (federal and state), sales tax, and excise tax last year. The entire direct/indirect/induced economics of small independent producers generated $131 billion of federal and state taxes last year, a figure that will increase to $189 billion by 2025. Every $1 million of capital expenditures (capex) for independents result in $1.1 million of total taxes generated along with the creation of 39 total jobs. Every $1 million of capex for independents result in $2.4 million of direct and $5.1 million of overall contribution to GDP.

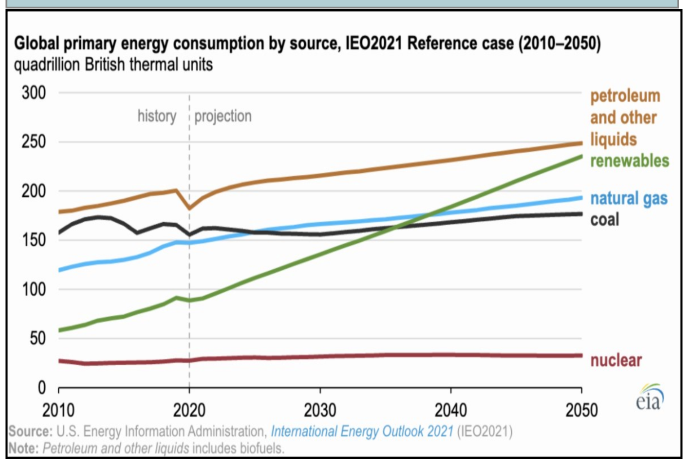
The average Kansas oil well produces 2 barrels of oil per day and the average Kansas natural gas well produces 23 Mcf of natural gas per day. Marginal wells account for nearly 80% of the total wells in the U.S. and are responsible for about 20% of total oil and gas production domestically. Every $1 million generated by marginal well production generates $2 million in economic activity elsewhere in the economy.

Studies show that the impact of losing marginal well production would cost the U.S. economy $184.5 billion, 178,000 jobs, and $115 billion in earned labor income per year. The livelihood of the small business sector of the oil and gas industry and that of nearly 10 million royalty owners nationwide is based on marginal well production.

The studies show the economic cost of losing marginal well production to the U.S. and Kansas economy is large and grows over time. The direct and indirect costs to other industries are larger than the direct costs to oil and gas producers. The U.S. oil and gas industry generates an economic stimulus of nearly $1.7 trillion each year and supports more than 11.3 million jobs nationwide. In Kansas, the oil and gas industry supports over 100,000 jobs and $3 billion in family income.

As the public debate focuses on how to move to a vibrant energy future, we must recognize that oil and gas will continue to serve as the principal component of our economy for many years to come. The Energy Information Administration (EIA) reports that oil and gas supplied 69% of our nation's energy in 2023. By 2050, the U.S. Department of Energy (DOE) estimates that fossil fuels will supply 66% of U.S. energy needs with oil and gas accounting for roughly 50% of U.S. energy needs.





By 2045, world energy demand is projected to increase by 23%, and 54% of that demand will be supplied by oil and natural gas. Oil and natural gas are expected to remain the primary energy sources through 2045. Coal is expected to see global market share shrink. Solar/wind are expected to grow briskly in the coming decades reaching nearly 12% of the global energy mix by 2045. Most wind and solar installations are not cost-effective on the open market, necessitating subsidies. As long as subsidies exist, taxpayers have to support industries that are not economically viable on their own. Funding underperforming assets often comes at the cost of starving productive assets.

Energy Issues (continued)

As the U.S. continues to grapple with high inflation, market volatility, and economic pessimism, American families continue to see costs of important goods and services rise.

AMERICA LEADS THE WORLD IN ENVIRONMENTAL QUALITY

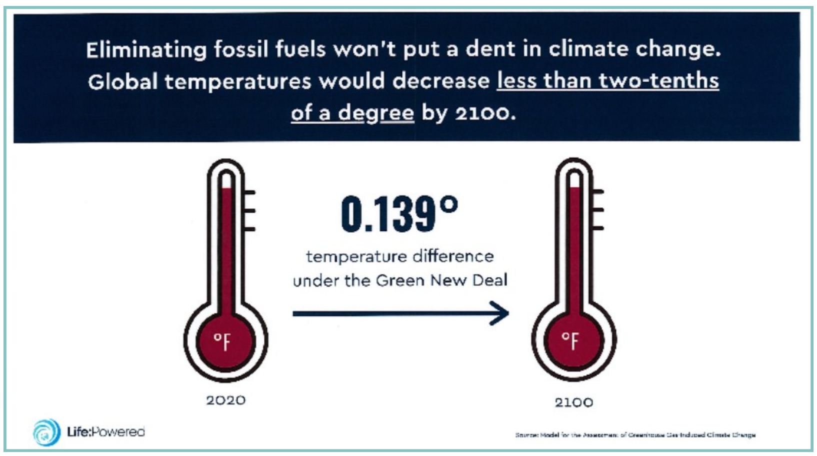
This means a family budget that needs to account for keeping the lights on, the family fed, keeping the family healthy, and providing for their children's future has only seen price relief from lowered energy costs while critical needs in other areas have risen dramatically. We understand the need to provide reliable, affordable energy to consumers to ensure economic stability. We have also heard the concerns of Americans related to ensuring we protect the environment and mitigate environmental impact as we produce energy in the U.S.

Emissions - Over the last 50 years, the six major pollutants regulated by the EPA have fallen 77% while the U.S. economy grew 285% and its population grew by 60%.

From 2005 to 2019, total U.S. energy-related CO_2 emissions fell 14% while global energy-related emissions increased nearly 24%.

Additionally, according to EPA, American oil and natural gas producers have reduced methane emissions (1990-2017) by 14% while increasing natural gas production by 51% and oil production 80% over that same time frame.

The latest Energy Information Administration (EIA) data (2021) show natural gas is responsible for 2.8 billion metric tons of CO_2 emission reductions since 2005. That represents 61% of overall power sector reductions during that time frame and 57% more than reductions attributable to renewable energy sources. **America is a world leader in clean air and water.**



When looking at environmental policies needed going forward, we highlight the following:

- Assuring adequate access to capital by having sound tax and banking practices rather than using tax and financial policies to cripple American oil and natural gas production
- Assuring a predictable and cost effective regulatory system that recognizes the diversity of oil and natural gas production, including large versus small wells and large versus small businesses.
- Recognize in energy and economic policy that oil and natural gas will be essential energy sources for the foreseeable future, that American oil and natural gas production is more environmentally sound than most foreign sources, that reliance of foreign sources of energy will undermine the American economy and any agenda to improve its environment, and that oil and natural gas provide a more realistic option than overreliance on perceived clean energy sources.
- Technology within industry often moves faster than the regulatory systems within government. Providing regulatory agencies with tools to allow for more rapid deployment of new technologies which are more accurate and cost-effective is an important policy change to consider.

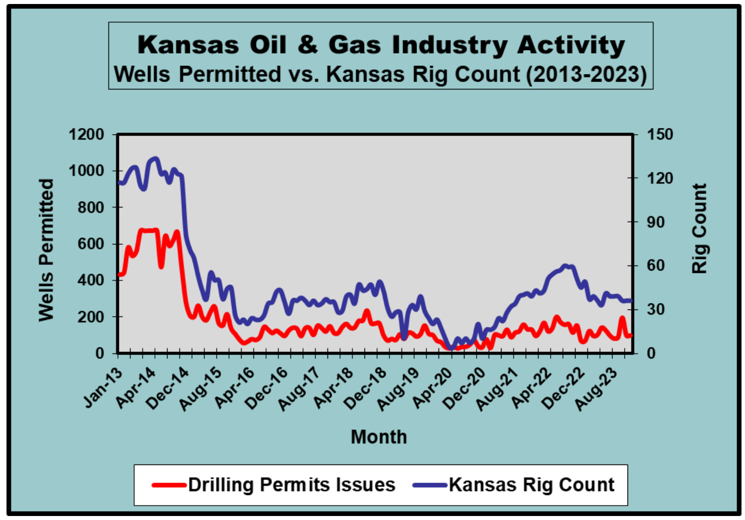
State and federal policymakers should advance a pro-American energy agenda that embraces American energy independence so we don't beg untrustworthy foreign governments for energy that we could easily produce ourselves.

Energy Issues (continued)

The Kansas oil and gas industry is a $2.4 billion industry that that supports more than 100,000 jobs, over $3 billion in family income, and over $1.4 billion is state and local taxes.

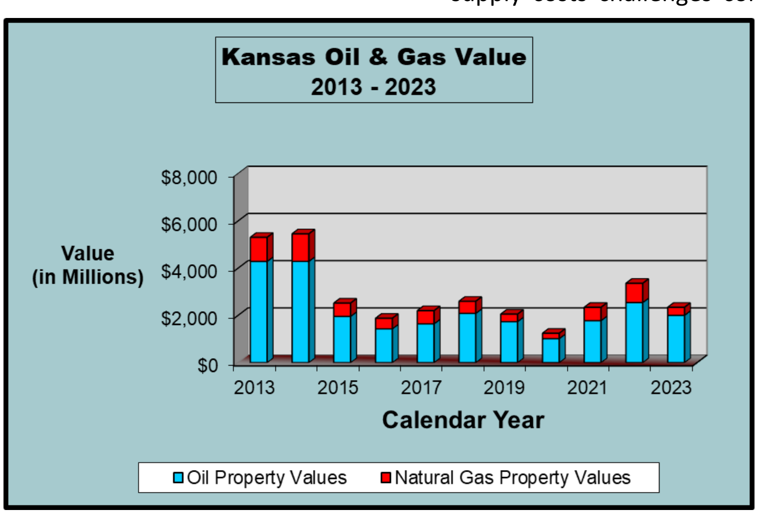
Over 1,330 permits to drill oil/ gas wells were issued by the Kansas Corporation Commission (KCC) in 2023. The industry produced nearly 28 million barrels of oil and 143 billion cubic feet of natural gas in 2023. Nearly 84% of the value of the Kansas oil and gas industry came from oil production and 16% came from natural gas production.

The Kansas oil and gas industry directly employs an average of 13,800 people paid $940 million per year - an average salary of nearly $60,000 per year. In areas where oil and gas are found, the industry represents a quarter of the jobs in some counties and 60%-70% of the property tax. Add in every Kansas job touched by the oil and gas industry, and the number of employees swell to over 100,000, payroll to $3 billion and taxes to $1.4 billion.



Over 75 different companies could be involved in the exploration and development of one Kansas oil well. A 2022 analysis indicated 100 people are employed by varying businesses in the drilling and completion of one oil well in Ness County, Kansas.

The Kansas oil and gas industry used 2023 as a recovery year. Many Kansas producers refocused capex high-grading and drilling only the best prospects. Companies have optimized operating cost structures to achieve efficiency gains and becoming more specialized regarding their core producing assets focusing on the most resilient short-cycle projects.



Labor market and service/ supply costs challenges continue to plague producers. Like many industries, labor is a critical issue for the Kansas oil and gas industry. In addition, input costs, inflation, and other factors have significantly increased supply and service costs.

Oil and gas activity in Kansas during 2023 was robust. The industry saw 33-49 drilling rigs running each month.

As market conditions improved in 2022 and 2023, oil and gas exploration/production activity increased. As a result, Kansas crude oil production stayed flat in 2023 and natural gas production declined by 9.2%.

For Kansas producers, improved productivity and efficiency is less about improved technology and more about better application of existing technology.

The oil and gas industry has lived through several downturns before, and we know that patience, persistence, insight, and innovation payoff. We move forward together in 2024 to focus on value reconstruction and prepare for brighter days ahead.

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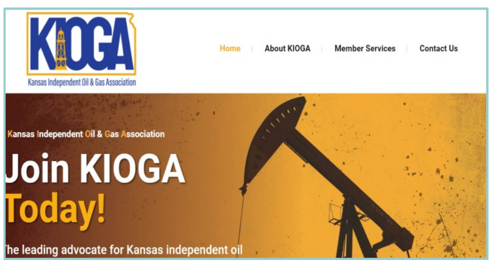

The challenges facing the oil and gas industry have grown both in number and complexity. KIOGA continues to leverage our core competencies, namely intellectual capital, volunteerism, and leadership. These competencies set KIOGA apart from other oil and gas advocacy groups and makes us the lead state and national advocate for the Kansas oil and gas industry. Because of the efforts of KIOGA members, voters and policymakers in Kansas are learning that the oil and gas industry is working for them, the economy, and the environment.

Kansas Independent Oil & Gas Association

Founded in 1937, the Kansas Independent Oil & Gas Association (KIOGA) is a non-profit member organization representing oil and gas producers in Kansas, as well as allied service/supply companies. The purpose of KIOGA is to serve as an advocate to promote the exploration, development, and production of oil and natural gas in Kansas at all local, state, and federal levels through non-partisan, common-sense solutions to challenges facing the oil and gas industry.

Through rigorous engagement at the state and federal level, KIOGA works to create a more stable and predictable political and regulatory environment for our members. KIOGA is committed to being a positive, credible, and proactive voice for industry, promoting respectful dialogue and education to advance oil and gas interests at the state and federal level.

KIOGA's vision is simple - to promote the development of Kansas's oil and natural gas resources for the betterment of society. We believe in seeking common ground, through common sense solutions, to the challenges facing the Kansas oil and gas industry. Our non-partisan approach provides a uniquely powerful voice for our members at the state and national level.

Today, KIOGA is nearly 3,000 members strong - making KIOGA the lead state and national advocate for the Kansas oil and gas industry. Please feel free to contact KIOGA with any questions or comments at 800 SW Jackson Street, Suite 1400, Topeka, Kansas 66612, phone 785-232-7772, or visit our website at www.kioga.org.