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2014: The Surge in Tight Oil Continues – but Triggers the Onset of the "Great Deflation" in Oil Prices

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Introduction: Even though U.S. crude oil production increased by a record 1.2 million barrels per day (MMb/d), 2014 will be best remembered for the onset of the "Great Deflation" in oil prices. The year commenced with high expectations. January 2014 West Texas Intermediate (WTI) crude oil averaged $91.69 per barrel, marking the start of the fourth year with oil prices averaging more than $90 per barrel and January 2014 spot natural gas price averaged $4.53 per thousand cubic ft. (Mcf), up 34 percent from January 2013. The 2013-2014 winter was the coldest in 13 years with a resulting draw on gas storage to below 900 billion cubic ft. (Bcf) at the end of March, some 50 percent below the five year average. But even with natural gas prices above $4.50 per Mcf during March and April and the prospect of robust demand to refill gas storage, natural gas drilling activity continued a slow decline into mid-year 2014. Thereafter, natural gas drilling only registered a modest increase into November as it became clear that U.S. natural gas supplies had the muscle to refill storage for the 2014–2015 winter heating season. Moreover, according to the U.S. Energy Information Administration (EIA), U.S. lower 48 states natural gas production increased by almost 5.3 billion cubic ft. per day (Bcf/d) to 77.5 Bcf/d. This was the largest annual increase in natural gas production since 2011. Two primary sources of new natural gas supplies – gas produced in association with surging oil production in the tight oil plays such as the Eagle Ford and Permian Basin and the Appalachian Basin with huge Marcellus and Utica dry gas resources were the driving forces behind U.S. natural gas production.

With concerns about ISIS threats to Iraq oil fields and military skirmishes in the Ukraine, WTI peaked above $101 per barrel during June 2014. But by then it was clear that non-OPEC oil supplies, led by the U.S., would once again exceed global demand. Two tipping points set the "Great Deflation" in motion. The first was an unexpected surge in Libyan oil production during third quarter 2014. In response, crude oil dropped to $76.50 by the end of October. The second tipping point was during November, when Saudi Aramco stepped back from being the market balancer in order to defend its market share. This was the final straw and WTI closed the year at $50.25. In spite of the collapse of oil prices, momentum propelled U.S. drilling activity gains into December. The Baker Hughes rig count only dropped about four percent during December but by the end of January 2015 the rig count had slipped by 374 rigs or almost 20 percent since the end of November 2014. A new "Great Deflation" era was under way.

Six years after soaring North American shale gas production was a key force behind a structural reset of lower global natural gas prices, the unprecedented surge of U.S. tight oil production was the driver behind decisions that led to a structural lowering of world oil prices. The U.S. led annual world oil production growth since 2008, adding 4.3 MMb/d of new production – most from tight oil plays – in only six years. U.S. crude production added a record 1.2 MMb/d during 2014. Recovering offshore Gulf of Mexico operations contributed 276 Mb/d to the record increase in crude oil production. The combination of lower oil demand and surging U.S. oil production resulted in an oversupply of one million barrels per day through most of 2014 while OPEC spare capacity reached almost 3.0 MMb/d. Fear of another potential significant loss of market share triggered Saudi Arabia's decision to grow its production in order to maintain its share of the world oil market. Saudi Arabia and OPEC reasoned that oil prices below $60 barrel would severely cripple U.S. tight oil producers – perhaps even dooming their survival – while OPEC members could survive and recover from an extended period of low prices. This was a significant competitive challenge to the U.S. as a major oil and natural gas superpower.

High oil and natural gas prices and enthusiastic producers drove increases in U.S. upstream activities through most of the year but changing market factors influenced industry's focus. During the year, producers increasingly focused on optimizing performance. Many operators implemented continuous improvement programs. Multi-well pads with multiple reservoir targets and increased lateral lengths with more fracturing stages and higher proppant loads boosted performance while increasing efficiencies and reducing costs. Operators also evaluated the potential of secondary reservoirs as a means to enhance recoveries from each drill pad. Optimizing water handling, the supply chain and the environmental footprint – such as replacing water hauling by trucks with pipelines and by reducing emissions from drilling and production operations also were addressed by leading operators. All of these actions were coupled with cost reduction goals. This discipline would serve the industry well after oil prices began to collapse during the fourth quarter of the year.

With production exceeding 1.0 MMb/d the Bakken and Eagle Ford plays arm wrestled for leadership in the tight oil domain. Drillers concentrated on developing their core acreage in major established tight oil plays like the Eagle Ford, Bakken and Niobrara and in the Marcellus and Utica for natural gas. Recognition that technologies could be leveraged to efficiently tap multiple stacked pays was a major breakthrough. In this regard, a shift from historic focus on single play or zone concepts to development with multiple stacked horizontal boreholes transformed the Permian Basin. It didn't take long for Permian operators to change the game. During 2013, more than half the rigs in the Permian Basin were targeted to vertical wells. By the end of 2014, two-thirds of the rigs were drilling horizontal wells. Wolfcamp and Bone Spring reservoirs were the primary targets. Spraberry, Delaware Sand and San Andres reservoirs were important secondary targets. Permian investments also soared as operators recognized the huge horizontal stacked pay potential in the Midland and Delaware Basins. By third quarter 2014 Midland Basin transactions had risen to $30,000 per acre and to more than $20,000 per acre in parts of the Delaware Basin. In spite of inflated acreage prices in hot plays, both the number and value of upstream deals increased during 2014. Deal values, led by a near doubling of corporate acquisitions, increased by 29 percent to about $186 billion while the number of transactions increased by almost 15 percent to 405. Much of the increase was directed to deals in the Permian Basin.

Apart from the major established basins and plays, horizontal tests already were widespread. According to IHS Markit data, more than 100 different U.S. formations already had been tested with ten or more horizontal wells as operators tried to find the next Bakken or Eagle Ford play. During this expansive testing with horizontal wells, drillers sought to establish commerciality in emerging shale oil plays such as the Tuscaloosa Marine, Caney, Cline and Utica shales but mixed results dampened interest in most of these shales. Activity increased, on the other hand, in tight continuous reservoirs such as Cretaceous sands in the Powder River Basin, Gallup Sands in the San Juan Basin and Codell in the Denver Basin, which delivered improving liquids productivity. The emerging STACK play on the northeast flank of the Anadarko Basin, though, appeared to be a winner among promising new oil developments. As many as ten stacked pays were identified in this play featuring the Woodford Shale and Meramec carbonates along with reservoirs in the Hunton, Oswego, Osage Group and Chester Group. Meanwhile, the mighty Marcellus already had become the super-giant shale gas producer. Operators also confirmed upside potential of the Utica Shale with several high volume producers in Ohio and northwest Pennsylvania. The Haynesville, Huron Shale and Cotton Valley were among the few natural gas plays in which drilling increased during the year. Natural gas drilling slipped in the Barnett, Eagle Ford, Granite Wash, Fayetteville, Woodford and Olmos plays.

Faced with growing production, excess capacity, increased regulations and lower prices, oil and natural gas producers looked for new markets. For more than a decade, demand for power generation had consumed most of the growth in natural gas supplies. But renewable wind and power generation were increasing their shares of the annual power market. Availability of low cost natural gas and natural gas liquids (NGL) attracted substantial new investments in chemical processing but these projects take time to materialize. Thankfully, the transformation of U.S. from an importer of liquefied natural gas (LNG) to an LNG exporter was well underway. Four liquefaction facilities with capacity of 7.88 Bcf/d were under construction during 2014 and a fifth was scheduled to start construction during first quarter 2015. LNG exports would add welcome new markets for U.S. natural gas but these new supplies were expected to enter a global market during early 2016 that was expected to be significantly oversupplied beyond 2020. Pipeline exports to Mexico also were ramping up - averaging almost 2 Bcf/d during 2014 with projected potential to exceed 6 Bcf/d by 2023. There was substantial interest in boosting natural gas as a transportation fuel but 2014 consumption was small – less than 100 million cubic feet per day (MMcf/d) – and there were many hurdles to accelerate natural gas utilization beyond local fleet use.

Regulations and environmental concerns were roadblocks to oil producers who also were pressed to find new markets as a means to ease midstream and downstream bottlenecks for light oil production from tight oil plays. The surge in light oil production stressed refinery capacity that was largely tuned to process heavier oil. Regional bottlenecks already imparted lower price differentials on light oil production from the Bakken play and other distal producing areas. Reversing the 1975 rule that prohibited the export of crude oil from the U.S. was identified as one means to ease the bottlenecks and provide an outlet for light oil at international prices. The rule was not reversed during 2014 but industry organizations such as IPAA presented case studies that supported changing the rule for consideration by Congress and the Administration. The Keystone Pipeline was the poster child for the struggle between environmental advocates and the need for new transportation to move growing oil and natural gas supplies to market. The Keystone project was not approved during 2014. Keystone was symptomatic of regulatory processes that delayed many U.S. oil and natural gas pipeline projects. Oil shipments by rail provided a higher cost and less safe alternative to Keystone and delays in natural gas pipelines led to bottlenecks that decreased regional prices and disrupted timely delivery of natural gas to consumers. In Colorado, heightened concerns over drilling in and near communities led to ballot initiatives to ban hydraulic fracturing. These initiatives were thwarted but Colorado tightened its oil and natural gas regulations and implemented the first regulations to detect and reduce methane emissions associated with oil and natural gas drilling.

E&P Trends

Drilling Activity: Faced with a six percent increase in upstream costs and eroding crude prices during the last five months of the year, operators became increasingly concerned about how to sustain the unconventional revolution. Nevertheless, higher crude prices during the first half of 2014 helped to sustain drilling activity through most of the year. During the year, the Baker Hughes active rig count increased almost six percent to an average of 1,861 rigs but total well completions were up less than two percent to 44,728 wells. Even though natural gas prices increased more than 15 percent, the shift in emphasis toward oil continued. For 2014, the number of oil well completions increased by about 1.5 percent but the number of natural gas well completions dropped by about 15 percent. As industry focused on improving performance in tight oil plays, the shift away from vertical wells to horizontal wells also continued. During 2014, vertical well completions dropped by almost six percent while horizontal well completions increased by 12 percent to 20,526. Drilling in dry gas plays continued to be soft and even the Marcellus suffered a decrease in upstream spending as operators drilled fewer but more productive wells in sweet spots. On the other hand, higher performing wells drove increased spending and drilling in the Utica in Ohio and Pennsylvania. Upstream spending increased in each the big three tight oil plays – Bakken, Eagle Ford and Permian. This translated to increased drilling in the Bakken and Permian but drilling activity slipped a bit in the Eagle Ford as operators reduced drilling in gas prone parts of the play and some even shifted rigs to the Permian. Offshore U.S. drilling continued to recover with an eight percent increase to 279 wells during 2014. Similar to the onshore, oil completions dominated with 128 completions compared to 47 natural gas completions.

Exploration: Exploratory drilling continued to slide during 2014 and dropped by 11 percent to 1,972 wells. New field wildcat drilling slipped even more, dropping almost 17 percent to 1,116 wells. With the dominance of huge unconventional or continuous onshore reservoirs, exploration statistics changed substantially from the benchmarks established for conventional drilling prior to the emergence of the continuous reservoirs. During 2014, overall success for exploratory drilling was 49.7 percent with oil discoveries accounting for 80 percent of the success. Subdividing exploration activity into three categories helps to improve understanding of overall exploration activity.

1. Offshore exploration best fits the traditional exploratory well definitions. Offshore exploratory drilling increased by 6.5 percent to 49 wells during 2014. Importantly, ten off-

shore Gulf of Mexico discoveries with estimated 1.1 million barrels of oil equivalent (MMboe) of recoverable resource – primarily oil – were reported during the year. Chevron made the two largest discoveries at its deepwater Guadalupe (291 MMboe) and Anchor prospects (281 MMboe).

2. Most onshore E&P budgets were directed to defining ultimate potential for established plays or to confirming commerciality of emerging plays. Almost 80 percent of the horizontal oil and natural gas discoveries were made in efforts to extend established producing areas or to identify new reservoirs expanding resource plays such as the Bone Spring, Niobrara, Powder River Basin Cretaceous sands, Mississippian aged reservoirs or the Marcellus. Positive results in the expanding STACK play on the northeast margin of the Anadarko Basin in Oklahoma indicated that this play may have the potential to contribute significant new reserves from horizontal exploration. The STACK play identified as many as ten possible stacked reservoirs in the updip oil window adjacent to the Woodford Cana play.

3. Nevertheless, a few operators pursued frontier exploration with the objective to discover significant new plays in basins or areas with little or no prior production. Noble Energy's project to establish commerciality of Mississippian shales in northeast Nevada was the most prominent frontier project. Other more limited frontier projects were targeted to the Percha Shale in the Pedregosa Basin, Wolfcamp in the Orogrande Basin and the Moenkopi in the Uinta Basin. Vertical wells were used for most of the traditional new field wildcat drilling. Vertical wildcats tested wildcat prospects in 62 different formations and resulted in 190 oil and 16 natural gas discoveries. A closer look revealed that 93 of the discoveries were made in only six formations, mostly long producing Pennsylvanian and Mississippian formations in the Mid-Continent region. These discoveries accounted for only modest reserve additions. A similar pattern also was noted for horizontal wildcat wells which reported 153 oil discoveries and 46 natural gas discoveries in 78 different formations.

Production: IHS Markit production data used in the preparation of this report indicate that U.S. crude and condensate production averaged 8.723 MMb/d (the best since 1984) and lower 48 states' natural gas (gas well gas and casinghead) production set a new record, averaging 77.03 Bcf/d.

Oil: Crude oil production gains during 2014 were driven by onshore tight oil plays with a welcome boost from offshore Gulf of Mexico. In the onshore, Texas with two of the "Big 3" tight oil plays led with an increase of 213.9 MM barrels and was followed by North Dakota and the Bakken-Three Forks play with an increase of 82.6 MM barrels, Colorado (Niobrara play) with an increase of 26.2 MM barrels, New Mexico (Delaware Basin tight oil) with an increase of 22.2 MM barrels, Oklahoma (Anadarko Basin tight oil) with an increase of 17.3 MM barrels and Wyoming with an increase of 13.1 MM barrels. Percentage gains in these leading oil producing states ranged from a high of 62 percent in Colorado to a low of 18 percent in Oklahoma. Ohio with emerging Utica shale production recorded the highest percentage gain of 89 percent while adding 5.3 MM barrels of oil production. Alaska and Louisiana were the largest losers in oil production, dropping 6.4 MM and 1.6 MM barrels, respectively. Offshore U.S. oil production increased by 48.5 MM barrels, an 11 percent gain. The number of producing oil wells increased by 2.1 percent to 478,513.

Marginal oil production, from wells producing 15 barrels per day or less, also increased during 2014. Marginal well production increased by 2.1 percent to 408.5 MM barrels (1.12 MMb/d) even though the number of marginal producers dropped by 783 to 397,920 wells. Marginal wells were the backbone for many small independent producers and delivered an important 17 percent of U.S. annual crude oil production during 2014.

Heavy oil production, which is only reported for eight states plus Federal Offshore areas, contributed 430.3 MM barrels of oil, an average of 1.18 MMb/d from 69,896 wells during 2014. California was the leader in this category with 199.2 MM barrels and was followed by the Federal Offshore with 162.7 MM barrels. Heavier California oil produced mostly by thermal recovery methods averaged only 10.7 b/d per well compared with offshore heavy oil which averaged 234 b/d per well. Oil with gravity of 20 degrees API or less is tabulated in the heavy oil category.

Natural Gas: Total 2014 natural gas production as reported by IHS Markit was 31.5 trillion cubic feet (Tcf), an increase of 1.6 Tcf over 2013. This total includes Alaska where 97 percent of the gas is associated with oil production and is mostly reinjected to maintain reservoir pressure in North Slope oil fields. Limiting this summary to natural gas production in the lower 48 states is more relevant to important shale gas production and to natural gas volumes that are produced and marketed. Lower 48 states natural gas production was 28.3 Tcf during 2014, an increase of 1.6 Tcf or almost six percent from 2013. Casinghead, or associated gas, contributed 5.2 Tcf or 18 percent of the total. Importantly, casinghead gas production jumped by 1.14 Tcf, a 28 percent increase over that of 2013. This was due to increased emphasis on developing wet gas and volatile oil windows in tight oil and shale gas plays. Leading associated gas producers included Texas, Oklahoma, Federal Offshore, North Dakota and New Mexico with combined 4.1 Tcf production during 2014. Appalachian Basin gas, primarily from the Marcellus and Utica formations in Pennsylvania, West Virginia and Ohio was the major contributor to increases in natural gas well production – adding 1.55 Tcf during 2015. Gains in the Appalachian Basin more than offset decreases of 935 Bcf from the other top 14 natural gas producing states - all reporting decreases in production during 2014. Major losers included Louisiana (-387 Bcf), Texas (-123 Bcf), Federal Offshore (-105 Bcf), Wyoming (-100 Bcf) and Colorado (-71 Bcf). Growth in U.S. natural gas production was becoming more concentrated from two sources – the Appalachian Basin and from gas associated with increasing tight oil production.

Marginal natural gas wells contributed almost 2.88 Tcf, an average of 7.9 Bcf/d and about 10.2 percent of U.S. natural gas production. This represented a decrease of 324 MMcf/d – almost four percent less than in 2013. The 388,859 marginal natural gas wells represented 77 percent of the total reported producing natural gas wells.

Coalbed methane continued to make an important, but decreasing, contribution to U.S. natural gas production even though development drilling was dormant in several of the prominent western coalbed methane plays. Coalbed methane wells contributed 1.14 Tcf, an average of about 3.1 Bcf/d and about four percent of U.S. natural gas production. This represented a decrease of 373 MMcf/d - about 10.4 percent less than in 2013. Colorado (1,133 MMcf/d), New Mexico (816 MMcf/d) and Wyoming (707 MMcf/d) were the leading coalbed methane producers. The 34,192 coalbed methane wells represented 6.8 percent of the total reported producing natural gas wells.

2014 – Growing U.S. Production, Reserves and Energy Trade Collide with Weakening Supply and Demand Fundamentals and Mounting Regulatory Challenges

Frederick J. Lawrence - Editor

2014 represented a powerful juxtaposition for American oil and natural gas producers. On one hand, rapidly growing production efficiencies for shale formations created unprecedented increases in U.S. production of oil, natural gas and associated liquids. The continued maturity of development in key shale basins such as the Bakken, Eagle Ford and the late blooming Permian set several new records for shale hydrocarbons. In addition to production highs and global records, the U.S. also saw dramatic growth in reserves for crude oil and natural gas. This constituted a multi-year trend which firmly reversed the several decades long story of declining conventional reserves. Many economic benefits derived from the continuation of the shale renaissance including impressive job gains all along the energy supply chain and increased exports into the global markets. National security benefits followed economic and trade achievements as the U.S. saw continued decline in energy imports and rapid growth of oil and natural gas exports along a broadened product range.

However, by late summer and early fall, it was becoming clear that a storm was brewing on the horizon as the global market revealed weakening demand in the face of ever-rising supply and inventories. Shale and other non-OPEC production had solidly edged into OPEC's market share and the producing group favored market forces in its new strategy to compete as the world's low-cost producer. Domestic production successes would run headlong into global forces that were well beyond control of more efficient and creative independent producers. Moreover, in addition to rising global challenges, they had their own mounting domestic political and regulatory challenges to tackle.

The U.S. regulatory environment continued to become more obstructive to those endeavoring to provide more home-grown energy to fuel the world's largest economy. The trend towards 'federalization' of U.S. regulations by the Obama Administration continued to threaten American producers on various horizons including land, sea and air. In proportional fashion to U.S. production and technological efficiency, the obstacles presented by the Administration and various regulatory bodies grew exponentially despite the fact that the U.S. had become much more self-sufficient in producing its own resources. The new arenas of regulatory conflict included Federal Lands – onshore and offshore; new source performance and emissions standards for air; changes to the definition of 'waters of the U.S.' along with effluent limitation guidelines and many more. Additionally, the U.S. was still unable to export crude oil and unprocessed condensate, effectively limiting the ability of American producers to fully market the high-quality crude oil that emanated from tight shale formations. Global market access for the light, sweet crude (a grade that was in less demand by U.S. refineries) was now needed more than ever before but other market participants were less favorable, both at home and abroad. At the same time shale was coming into its own as a competitive production supply source both nationally and globally, domestic regulations and international market forces were preparing to mount the biggest collective challenge yet to shale's evolution.

Regulatory and Legislative Front – Regulation Challenges on Multiple Fronts as Oil and Natural Gas Becomes More Politicized

While 2013 presented a tough political landscape to U.S. producers, 2014 raised the bar in regard to the comprehensive nature of industry challenges from the Administration and its regulatory bodies, most notably the Bureau of Land Management (BLM) and the Environmental Protection Agency (EPA). A few of the many issues impacting development are worth noting to illustrate the breadth and severity of the institutional and regulatory threat to U.S. producers – 1. Federal lands (Onshore), 2. Air and 3. Water. Federal onshore challenges impacted the regulation of hydraulic fracturing and well stimulation on public lands, BLM efforts to regulate venting and flaring of methane on federal lands, efforts to update Onshore Orders 1, 3, 4 and 5, and finally a BLM royalty rate increase for new federal onshore oil and gas leases and the ONRR civil penalty assessment.

Many of these challenges would span years in formation and procedure. The BLM rule to regulate drilling and hydraulic fracturing on federal and Indian lands was proposed in 2012 and over one million comments were received on the supplemental draft rule. IPAA completed a review of the comments submitted from states, environmental groups and tribes and was successful in requesting an extension of the initial comment period in order to have Members of Congress weigh in. IPAA ultimately challenged the final rulemaking in courts as it believed the rule was unnecessary and infringed on the current and effective system of state regulation of hydraulic fracturing and other exploration and production activities.

Similarly, in regard to the Clean Air Act, the EPA finalized in 2012 the New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for the oil and natural gas sector. Despite arguments from industry, including extensive comments filed by IPAA which argued that EPA must undertake an actual data collection and rewrite the NSPS rule with a more realistic emissions estimate, EPA finalized its rule. IPAA filed a petition for review of EPA's NSPS rulemaking in D.C. Circuit Court and petitioned EPA for voluntary reconsideration of the rule. Beyond this, a second set of NSPS amendments involved the Administration's Climate Action Plan (CAP). The list grew in both scope and intensity. Additional regulatory issues included 1. Methane regulation from existing sources, 2. National ambient air quality standards, 3. Regulation of hazardous air pollutants and 4. Air aggregation. The industry secured a significant victory in May 2014 when the D.C. Circuit Court of Appeals struck down EPA's selective adherence to the Summit decision in the case of National Environmental Development Association's Clean Air Project v. EPA.

Finally, regarding the Clean Water Act (CWA), the EPA and U.S. Army Corps of Engineers created a draft guidance document to identify waters protected by the Clean Water Act and implement the Supreme Court's decisions concerning the extent of waters covered by the CWA. The EPA sent a draft proposed rule to clarify federal CWA jurisdiction – shifting from 'navigable waters' to 'waters of the United States' – to the Office of Management and Budget for review. The EPA pushed rulemaking that would connect streams and wetlands to downstream waters, thus broadly expanding their authority in regard to the new definition defined as 'waters of the United States.' On every horizon, the political and economic costs of producing in the U.S. rose at the same time that America and the world were increasing their demand of oil and natural gas.

Supply & Demand – From Scarcity to Surplus

In 2014, both oil and natural gas production added growth on top of a relatively strong performance in 2013. U.S. oil production was up over 17 percent year-over-year and with natural gas plant liquids (NGPLs) added to the mix, the growth was a similar 16.9 percent. The lower-48 onshore led the charge with almost 19 percent growth (which beat the impressive 17 percent growth achieved in 2013). Domestic crude production grew by almost 1.3 million barrels per day (Mmb/d) which was a record gain for any year (since recordkeeping began in 1900) as well as an amount greater than the combined supply increase in the rest of the world. Crude production had grown for six consecutive years, a trend which reversed the decline that took place from 1985 to 2008 (every year except one). Marketed natural gas production grew by 7.6 percent with the help of associated gas production that was commingled with tight oil production growth. Overall, total U.S. oil and natural gas production grew by almost 5.2 Quad British Thermal Units (BTUs) in 2014 or almost 12 percent compared to 2013. Meanwhile, petroleum demand (product supplied) grew by almost 0.8 percent and natural gas consumption grew by almost 1.7 percent in 2014 according to the Energy Information Administration (EIA). Domestic production of fossil fuels (oil, natural gas, NGPLs and coal) supplied almost 82 percent of U.S. total energy demand in 2014. Oil and natural gas together constituted over 63.3 percent of total U.S. energy demand (which compared to just over 62 percent in 1985).

Shale enabled the U.S. to overtake Saudi Arabia as the world's biggest oil producer and Russia as the largest natural gas producer. However, despite continued thirst for energy by the developing countries, China's rapid growth and the overall global consumption rate was slowing with total energy demand growth of just 0.9 percent (well below the ten-year average of 2.1 percent). China's growth was 2.6 percent and the emerging economies grew by 2.4 percent – both well below their ten-year averages. As demand was slowing, supply was headed strongly in the opposite direction. The combination of shale's rampant growth alongside other key non-OPEC producers (such as Brazil and Canada) and OPEC's (plus Russia) maintenance of high output levels began to depress prices in the second half of the year. Shale was a key factor that enabled non-OPEC oil market share to reach 43 percent compared to 41 percent for OPEC (with the remainder supplied by the Former Soviet Union). According to BP Statistics, the U.S. was the first country ever to increase average annual production by at least one million barrels per day for three consecutive years. The U.S. energy renaissance was becoming more interconnected with the global market but unlike the previous year, demand growth and geopolitics did not provide the same supporting role. In addition, the U.S. was still unable to export its crude oil, an issue that had become a top political priority for IPAA and others. Groups such as IHS, Brookings, ICF, the Aspen Institute and many others conducted studies that pointed out the many economic benefits that would result if the crude oil export ban was ended. (http://www.ipaa.org/oil-exports/).

Technology and Efficiency Gains Continue to Reduce Breakeven Costs and Increase Productivity

Advances in technology and efficiency continued to accrue for oil and natural gas drilling and completion. The independent producers continued to spearhead these improvements in shale plays throughout the country. Gains were especially impressive on the liquids side and new techniques and data helped some plays such as the Permian begin to catch up to earlier resource plays such as the Bakken. These efficiencies included the continued transition to horizontal drilling as well as increased focus on optimizations and completions with hydraulic fracturing and better use of proppants. Using technology to help in identifying and obtaining approvals for new wells along with better seismic technology, companies were able to reduce the time to drill a well by 33 percent. Efficiencies reduced the time to start production from weeks or even months to only a few days. The technology improvements also led to project cost savings approximating 35 percent through myriad efficiencies. Companies were becoming more adept at more precisely placing well laterals in targeted zones. In addition, they began to develop and test tighter spacing patterns. These advanced completions led one company to a) reduce drilling times in the Bakken from 22.7 days in 2012 to 10.4 in 4Q14, b) improve their 90-day oil production in the Leonard shale by 17 percent between 2013 and 2014 and c) bring about 39 percent improved well productivity in the Eagle Ford.

The breakeven price continued to come down (achieving profitability in the $50-$60 range according to a 2014 IHS Study) and the wells continued to increase their estimated ultimate recoveries (EURs). For example, the EIA noted in March 2014 that five of the six shale plays tracked had seen increases in oil and natural gas production per rig. Each drilling rig in the Eagle Ford contributed over 400 more barrels of oil per day in April 2014 than it would have in the same formation in January 2007. A Marcellus well completed by a rig in April 2014 would yield over six million cubic feet of natural gas per day more than a well completed by that rig in that same formation in 2007. This was great news regarding the more competitive break-evens achieved by shale but the timing regarding increased production was less opportune as commodity prices began to plummet in October-November 2014 due to the mounting supply and stocks imbalance and the strategic market shift of OPEC.

Reserves Continue to Grow with Shale as Key Driver

In addition to strong production growth, U.S. crude oil and natural gas reserves both increased between nine and ten percent respectively as reported annually by the EIA. U.S. oil reserves rose for the sixth consecutive year in 2014, growing yet again over nine percent (9.3 percent) from 2013 and exceeding 39 billion barrels for the first time since 1972. Whereas North Dakota was the main story in 2013, Texas took the headlines in 2014, adding 2.1 billion barrels of crude oil and lease condensate proved reserves (the largest increase of any state in 2014). The Texas portion of the Permian Basin (Wolfcamp and Bone Spring) and the Eagle Ford shale play were the two regions primarily responsible for this massive growth. North Dakota continued to grow as well, adding 0.4 billion barrels of crude oil and lease condensate as a result of continued activity in the Bakken shale play. In addition to Texas and North Dakota, New Mexico, Colorado and Oklahoma also saw large petroleum reserve increases (of greater than 250 million barrels per state).

U.S. natural gas reserves grew by ten percent yet again (34.8 Tcf) in 2014 and reached a record 388 trillion cubic feet (Tcf). The reserve growth was unsurprisingly driven by the Marcellus shale gas play in the Appalachian Basin with Pennsylvania adding 10.4 Tcf (21 percent), West Virginia adding 7.9 Tcf (34 percent) and Ohio adding almost 4.0 Tcf (125 percent). These three states collectively constituted almost two-thirds of the net increase in total U.S. natural gas proved reserves. In 2014, West Virginia surpassed Wyoming and Colorado to become the fourth-largest state for natural gas proved reserves (behind Texas, Pennsylvania and Oklahoma). Proved natural gas reserves in Ohio more than doubled as a result of development of the Utica shale play.

The Barnett and Eagle Ford helped contribute an eight Tcf gain to Texas (eight percent gain) and other states with large gains (of over one Tcf) included Oklahoma, Louisiana and New Mexico. Shale gas represented over 51 percent of all U.S. natural gas reserves in 2014. Seven shale plays contained 90 percent of U.S. shale gas proved reserves by the end of 2014 according to the EIA. The Marcellus shale play remained the largest, adding 22.1 Tcf in 2014, followed by the Barnett shale (which started the shale renaissance). The Eagle Ford was a mixed liquids and gas play but added 6.3 Tcf of natural gas reserves and remained the third largest shale gas play in the U.S. The Utica shale play in Ohio helped the state more than double its reserves.

Associated-dissolved natural gas (also called casinghead gas) reserves rose by an impressive 18 percent as associated production increased by 28 percent. This natural gas occurs in crude oil reservoirs as either free gas (associated) or as gas in solution with crude oil (dissolved) and grew correspondingly with the marked increases in oil production in mixed plays such as the Eagle Ford and Permian Basin. Non-associated natural gas (gas well gas) rose eight percent from 2013 and the largest increase could be found in the Marcellus shale in Pennsylvania.

Job Creation Follows Supply and Demand Trends

Oil and gas employment reached a highwater mark in 2013 and then began to slowly recede along with the fade of commodity prices in the late second half of the year. According to the Bureau of Labor Statistics state-level data, jobs in the upstream sector fell over 13 percent, from 604,800 in 2013 to 523,300 in 2014. The upstream sector represented approximately 25 percent of the entire energy jobs complex and was the first segment impacted by the commodity downturn, with service companies at the tip of the spear. By January 2015, according to Challenger, Gray and Christmas, job cut announcements surged to their highest level in nearly two years due to falling oil prices and cost-cutting. Of the 53,041 job cuts in early 2015, 40 percent were directly related to oil prices. The energy industry announced a total of 20,193 layoffs in January which was 42 percent higher than the 14,262 job cuts announced by the energy industry in all of 2014. It became clear how many supply chain jobs were directly related to energy as the industrial goods manufacturing sector announced 4,859 job cuts in January with 33 percent due to oil prices.

Given the ability of the industry to sustain the shale renaissance and challenges looming on the supply front, the potential impact of removing the U.S. oil export ban and affording U.S. producers a global market for their products became more critical than ever. An IHS study in 2014 noted that "the 'unconventional' revolution in oil and gas has been one of the major contributors to the U.S. economic recovery, estimated by IHS to have added nearly one percent to our GDP in each of the past two years." The recommended removal of the export ban would "reduce the gasoline price eight cents a gallon (helping consumers and motorists) and result in one million new jobs, increase GDP by $135 billion and increase per household income by $391. Also, the nation's oil import bill would be reduced by $67 billion per year, a 30 percent reduction from the 2013 level. This removal of the ban would support economic activity across all states and a quarter of the new jobs would be in states that essentially produce no crude oil." As the political stage had become more adversarial than ever before regarding oil and natural gas development, the potential job and revenue benefits both domestically and globally had never been greater.

Trade – Shale Spurs the Continued Rise of Exports and Fall of Imports

Exports of petroleum products from the U.S. averaged almost 4.2 Mmb/d in 2014, over 15 percent more than in 2013. The U.S. trade deficit continued to narrow and by value, crude imports were down 10 percent year-on-year in 2014. Meanwhile energy exports grew in value by over four percent compared to 2013, constituting 9.5 percent of overall U.S. goods exports (up from seven percent in 2013). U.S exports of petroleum products grew for the 13th consecutive year, averaging a record 3.8 Mmb/d in 2014, an increase of 347,000 Bbl/d from 2013. In particular, exports of motor gasoline, propane and butane increased, offsetting a decrease in distillate exports.

Increased domestic production positively impacted the U.S. energy trade deficit. Oil imports continued to drop – from 7.7 Mmb/d in 2013 to 7.3 Mmb/d in 2014 – even as domestic demand rose from 19.1 Mmb/d to 19.5 Mmb/d. Imports as a percentage of demand dropped from 52 percent in 2013 to 48.4 percent in 2014. Imports from OPEC dropped from 3.7 Mmb/d to 3.2 Mmb/d. Even as consumption rose, natural gas imports also continued to fall - from 2.88 Tcf in 2013 to 2.70 Tcf in 2014. U.S. net imports of natural gas decreased by nine percent in 2014, continuing an eight-year decline. The EIA noted that it expected the U.S. to become a net natural gas exporter in three years (2017). It was undeniable that shale had played the major role in reversing America's import dependency and over time it was transforming the U.S. into a more robust global energy exporter.

Transformation was in the air and perhaps even a larger energy sea change was represented in shale that would markedly alter the global energy landscape. The light tight oil revolution provided a unique competitive advantage to the U.S. producers in the shape of a more resilient production method with shorter lead times and reduced upfront capital costs. However, the U.S. was still unable to export its bountiful light, sweet crude, a market dysfunction that allowed a $3-4 imbalance between the price of West Texas Intermediate vs. the global benchmark, Brent crude. Rising up to meet this threat from a new and competitive supply modality, OPEC maximized production and called for market forces to restore order to the imbalance and perceived threat that prevailed. Non-OPEC production had risen a record 1.9 Mmb/d in 2014 thanks largely to U.S. tight oil and OPEC likewise reacted by ramping up production by 765,000 Bbl/d. The flood of rising supply inevitably collided headlong into overweight inventories and weak demand growth around the world. China's transition toward a less energy intensive economy fomented structural shifts in global demand which only increased by a modest 0.9 percent in 2014. Key changes were taking place in energy mix throughout the world but without a doubt the only known sense was that volatility and unpredictability had entered the scene and would play significant roles in the market for years to come.

Through the Oil and Gas Producing Industry in Your State, IPAA and IHS seek to provide an in-depth perspective of the U.S. upstream sector of an industry that plays such a vital role in powering America's economy and national interest.

IPAA would like to thank the IHS team which includes Dr. Pete Stark, Dean Williams, Steve Trammel and John Wakefield for their continued efforts in making this publication both comprehensive and unique. IPAA would also like to thank William Brandorff for all of his contributions to the publication.

If you have ideas or feedback for future publications, please send your comments to Frederick Lawrence at IPAA (flawrence@ipaa.org). Thank you for your continued support and readership of one of the industry's longest running sources of upstream state data.

IHS Markit uses multiple sources of data such as test files (Texas and Louisiana test information is used to allocate production volumes on a well completion level), injection files and plugging reports that is integrated with basic production volume data that is submitted by individual states. As a result, production totals may differ from the Energy Information Administration (EIA) data.

IHS Markit production data used on state pages includes peak oil production, total (dry) production, average production, average output per well, coalbed methane, heavy oil and marginal wells. IHS Markit data is used for summary production data and wells drilled rankings. EIA data is used on state pages for natural gas marketed production and peak natural gas production.

EIA production data is used for determining the value of production, cumulative crude oil wellhead value, state production rankings, state consumption figures, natural gas marketed production and shale gas production. For this issue, the CityGate natural gas price is used to determine value of production instead of wellhead price which is no longer available. State reserve data is from EIA. All price data comes from EIA or individual states.

NGLs and Natural Gas Reserves Reporting: NGL data is no longer provided for the following sections: Cumulative production & new reserves and Petroleum Reserves. Wet natural gas includes natural gas plant liquids and the reporting category of Dry Gas has been replaced with natural gas, wet after lease separation (Total Gas). For more information regarding reserves methodology, please refer to the following EIA report: U.S. Crude Oil and Natural Gas Proved Reserves (April, 10, 2015).

The mineral lease royalties, bonuses and rent data comes from the Office of Natural Resources Revenue. Additional lines items have been added for the rents, bonuses and other revenues that pertain to oil and natural gas in addition to a new Total that includes all oil and gas revenues in addition to rents and bonuses related to oil and gas. We also include a percentage that relates to oil and gas total to the entire mineral total. Federal production shares figured using data from the Office of Natural Resources Revenue (ONRR - Federal Volumes) and production data from the EIA or ONRR.

All Federal Offshore statistics include only those wells in Federal waters. All state well statistics include inland/non-Federal offshore wells for each state.

Deepest well statistics are based on total depth recorded from state completion reports. The only exceptions are minor occurrences where projected depth from permits has been used as a proxy for deepest well statistics. Cumulative number of total wells drilled data comes from IHS Markit.

Well statistics for oil, gas and dry wells are all classes that were drilled with the intent to find hydrocarbons. Historical well counts do not include any miscellaneous wells, i.e. injection, storage, service, etc.

Drilled footage is the actual drilled footage as reported. For sidetracks it is the footage from the whipstock or kickoff point to total depth. For wells deepened it is the footage from the original total depth to the new total depth.

Marginal wells are defined as oil wells producing 15 or less barrels of oil and 90 or less thousand cubic feet of gas per day (previous editions used stripper wells producing less than 10 bbls of oil and 60 Mcf of gas per day).

The Cost of Drilling and Equipping Wells data are no longer available (post-2010).

State Energy Contacts and Federal Organizations

Alabama

Alabama State Oil & Gas Board
420 HACKBERRY LN
PO BOX 869999
TUSCALOOSA, AL 35486-6999
(205) 349-2852
www. gsa.state.al.us/ogb/

Alaska

AK Dept. of Natural Resources
Division of Oil & Gas
550 W 7th AVE STE 1100
ANCHORAGE, AK 99501-3560
(907) 269-8800
www.dog.dnr.alaska.gov

Alaska Oil & Gas Conservation Commission
333 W 7th AVE STE 100
ANCHORAGE, AK 99501-3192
(907) 279-1433
www.doa.alaska.gov/ogc/

Arizona

Arizona O & G Conservation Comm.
1110 WEST WASHINGTON ST
PHOENIX, AZ 85007
(602) 771-4501
www.azogcc.az.gov

Arizona Geological Society
PO BOX 40952
TUCSON, AZ 85717
(520) 663-5295
www.arizonageologicalsoc.org

Arkansas

Arkansas Oil & Gas Commission
301 NATURAL RESOURCES DR STE 102
LITTLE ROCK, AR 72205
(501) 683-5814
www.aogc.state.ar.us

California

California Dept. of Conservation
801 K ST MS 24-01
SACRAMENTO, CA 95814
(916) 322-1080
www.conservation.ca.gov

Colorado

Colorado Oil & Gas Conservation Commission
1120 LINCOLN ST STE 801
DENVER, CO 80203
(303) 894-2100
cogcc.state.co.us

Florida

FL Dept. of Env. Protection
Oil & Gas Section
2600 BLAIR STONE RD MS 3500
TALLAHASSEE, FL 32399
(850) 245-8336
www.dep.state.fl.us/water/mines/oil_gas/

Florida Geological Survey
3000 COMMONWEALTH BLVD STE 1
TALLAHASSEE, FL 32303
(850) 617-0300
www.dep.state.fl.us/geology

Illinois

Illinois Department of Natural Resources
Oil and Gas Division
1 NATURAL RESOURCES WAY
SPRINGFIELD, IL 62702-1271
(217) 782-7756
www.dnr.illinois.gov/oilandgas

Indiana

Indiana Department of Natural Resources
Oil and Gas Division
402 W WASHINGTON ST
ROOM 293
INDIANAPOLIS, IN 46204
(317) 232-4055
www.in.gov/dnr/dnroil

Kansas

Kansas Corporation Commission
266 N MAIN ST STE 220
WICHITA, KS 67202-1513
(316) 337-6200
www.kcc.state.ks.us

Kentucky

Energy and Environment Cabinet
Division of Fossil Energy Development
300 SOWER BLVD., 3rd FLOOR
FRANKFORT, KY 40601
(502) 564-7192
energy.ky.gov/fossil/Pages/default.aspx

Louisiana

Louisiana Department of Natural Resources
617 N THIRD ST - LA SALLE BLDG
BATON ROUGE, LA 70802
(225) 342-4500
dnr.louisiana.gov

Maryland

Maryland Geological Survey
2300 ST PAUL ST
BALTIMORE, MD 21218
(410) 554-5500
www.mgs.md.gov

Michigan

Department of Natural Resources
PO BOX 30028
LANSING, MI 48909
(517) 284-6367
www.michigan.gov/dnr

Michigan Geological Survey
Department of Geosciences
WESTERN MICHIGAN UNVERSITY
1903 W MICHIGAN AVE
KALAMAZOO, MI 49008-5241
(269) 387-5840
wmich.edu/geologysurvey

Mississippi

MS State Oil and Gas Board
500 GREYMONT AVE STE E
JACKSON, MS 39202-3446
(601) 576-4900
www.ogb.state.ms.us

Missouri

MO Dept. of Natural Resources Geological Survey Program
111 FAIRGROUNDS RD
PO BOX 250
ROLLA, MO 65402-0250
(800) 361-4827
dnr.mo.gov/geology

Montana

MT Board of O & G Conservation
2535 ST JOHNS AVE
BILLINGS, MT 59102
(406) 656-0040
bogc.dnrc.mt.gov

Nebraska

NE O & G Cons. Commission
922 ILLINOIS
PO BOX 399
SIDNEY, NE 69162
(308) 254-6919
www.nogcc.ne.gov

Nevada

Nevada Division of Minerals
400 WEST KING ST STE 106
CARSON CITY, NV 89703
(775) 684-7040
minerals.nv.gov

New Mexico

New Mexico Energy, Minerals and Natural Resources Department
1220 S ST FRANCIS DR
SANTA FE, NM 87505
(505) 476-3200
www.emnrd.state.nm.us

New York

NY State Dept. of Env. Cons.
Division of Mineral Resources
625 BROADWAY, 3rd FLOOR
ALBANY, NY 12230
(518) 402-8056
www.dec.ny.gov/energy/205.html

State Energy Contacts and Federal Organizations

NY State Geological Survey
NY State Museum Cultural Education Center
222 MADISON AVE
ALBANY, NY 12230
(518) 474-5812
www.nysm.nysed.gov/research-collections/geol-ogy

NYS Energy Res. and Dev. Auth.
17 COLUMBIA CIR
ALBANY, NY 12203-6399
(518) 862-1090 / (866) NYSERDA
www.nyserda.ny.gov

North Dakota

ND Industrial Commission
Oil and Gas Division
600 E BOULEVARD AVE DEPT 405
BISMARCK, ND 58505-0840
(701) 328-8020
www.dmr.nd.gov/oilgas

Ohio

OH Dept. of Natural Resources
Division of Oil and Gas
2045 MORSE RD
BLDG F-2
COLUMBUS, OH 43229-6693
(614) 265-6922
oilandgas.ohiodnr.gov

Oklahoma

Interstate O & G Compact Comm.
PO BOX 53127
OKLAHOMA CITY, OK 73152
(405) 525-3556
www.iogcc.state.ok.us

OK Corporation Commission
Oil and Gas Division
2101 N LINCOLN BLVD
OKLAHOMA CITY, OK 73105
(405) 521-2211
www.occ.state.ok.us

Oregon

Oregon Department of Geology and Mineral Industries
800 NE OREGON ST STE 965
PORTLAND, OR 97232-2162
(971) 673-1555
www.oregongeology.org

Pennsylvania

PA Dept. of Env. Protection
Office of Oil and Gas Management
Bureau of Oil & Gas Management
PO BOX 8765
HARRISBURG, PA 17105-8765
(717) 772-2199
www.dep.pa.gov/Business/Energy/OilandGasPro-grams/OilandGasMgmt

South Dakota

SD Dept. of Environment and Natural Resources
Mineral and Mining Program
2050 W MAIN ST STE 1
RAPID CITY, SD 57702-2493
(605) 394-5317
www.denr.sd.gov

Tennessee

TN Dept. of Env. and Cons. Board of Water Quality, Oil and Gas
312 ROSA L PARKS AVE
3RD FLOOR NASHVILLE ROOM TN TOWER
NASHVILLE, TN 37243
(615) 532-0109
www.tennessee.gov/environment/

Texas

Texas Railroad Commission
Oil & Gas Division
PO BOX 12967
AUSTIN, TX 78711-2967
(512) 463-6838
www.rrc.state.tx.us

Utah

UT Dept. of Natural Resources
Division of Oil, Gas and Mining
1594 WEST NORTH TEMPLE
SALT LAKE CITY, UT 84116
(801) 538-5340
www.oilgas.ogm.utah.gov

Virginia

Virginia Department of Mines, Minerals and Energy
Division of Gas and Oil
135 HIGHLAND DR
LEBANON, VA 24266
(276) 415-9700
www.dmme.virginia.gov

West Virginia

WV Dept. of Env. Protection
Office of Oil & Gas
601 57th ST SE
CHARLESTON, WV 25304
(304) 926-0499
www.dep.wv.gov/oil-and-gas

Wyoming

WY Dept. of Env. Quality
122 WEST 25th ST
HERSCHLER BLDG
CHEYENNE, WY 82002
(307) 777-7937
deq.wyoming.gov

WY O & G Cons. Commission
2211 KING BLVD
PO BOX 2640
CASPER, WY 82602
(307) 234-7147
http://wogcc.wyo.gov/

Federal Organizations

Bureau of Ocean Energy Management
1849 C STREET NW
WASHINGTON, D.C. 20240
(202) 208-6474
http://www.boem.gov

Bureau of Safety and Environmental Enforcement
1849 C STREET NW
WASHINGTON, D.C. 20240
(202) 208-6184
www.bsee.gov

Environmental Protection Agency
ARIEL RIOS BLDG
1200 PENNSYLVANIA AVE NW
WASHINGTON, DC 20460
(202) 272-0167
www.epa.gov

Federal Energy Regulatory Commission
888 FIRST ST NE
WASHINGTON, DC 20426
(866) 208-3372
www.ferc.gov

Nat'l Energy Tech. Laboratory
626 COCHRANS MILL RD
PO BOX 10940
PITTSBURGH, PA 15236-0940
(412) 386-4984
www.netl.doe.gov/research/oil-and-gas

U.S. Department of Energy
Fossil Energy
1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585
(202) 586-6660
www.energy.gov/fe/

U.S. Department of Energy
Office of Scientific and Technical Information
PO BOX 62
OAX RIDGE, TN 37831
(865) 576-1188
www.osti.gov

U.S. Department of the Interior
1849 C ST NW
WASHINGTON, DC 20240
(202) 208-3100
www.doi.gov

U.S. Energy Information Administration
1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585
(202) 586-8800
www.eia.gov

U.S. Geological Survey
USGS National Center
12201 SUNRISE VALLEY DR
RESTON, VA 20192
(888) 275-8747
www.usgs.gov

Cooperating Oil & Gas Associations

Alabama

Coalbed Methane Assoc. of Alabama
3829 LORNA RD STE 306
BIRMINGHAM, AL 35244
(205) 733-8087
www.coalbed.com

Arkansas

Arkansas Ind Producers & Royalty Owners
1401 W CAPITOL AVE STE 440
LITTLE ROCK, AR 72201
(501) 975-0565
www.aipro.org

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CA Independent Petroleum Assoc.
1001 K ST 6th FLOOR
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www.cipa.org

Independent Oil Producers' Agency
4520 CALIFORNIA AVE #230
BAKERSFIELD, CA 93309
(661) 377-0411

Western States Petroleum Assoc.
1415 L ST STE 600
SACRAMENTO, CA 95814
(916) 498-7750
www.wspa.org

Colorado

Colorado Oil & Gas Assoc.
1800 GLENARM PLACE STE 1100
DENVER, COLORADO 80202
(303) 861-0362
www.coga.org

Western Energy Alliance
1775 SHERMAN ST STE 2700
DENVER, CO 80203
(303) 623-0987
www.westernenergyalliance.org

Florida

Florida Independent Petroleum Producers
PO BOX 230
PENSACOLA, FL 32591
(850) 434-6830
www.flippaoil.org

Idaho

Idaho Petroleum Council
PO BOX 984
BOISE, ID 83701
www.idahopetroleumcouncil.com

Illinois

Illinois O&G Assoc.
PO BOX 788
MOUNT VERNON, IL 62864
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www.ioga.com

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Indiana O&G Assoc.
1200 REFINERY RD
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Eastern Kansas O & G Assoc.
17 S EVERGREEN AVE
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www.ekoga.org

Kansas Independent O & G Assoc.
229 E WILLIAM STE 211
WICHITA, KS 67202-4027
(316) 263-7297
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800 SW JACKSON ST STE 1400
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SW Kansas Royalty Owners Assoc.
209 EAST 6th ST
HUGOTON, KS 67951
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www.swkroa.com

Kentucky

Kentucky O & G Assoc.
306 W MAIN ST STE 404
FRANKFORT, KY 40601
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www.kyoilgas.org

Louisiana

Louisiana Landowners Assoc.
10705 SHORELINE DR
BATON ROUGE, LA 70809
(225) 802-7017
lalandowners.org

Louisiana O & G Assoc.
PO BOX 4069
BATON ROUGE, LA 70821-4069
(800) 443-1433
www.loga.la

Michigan

Michigan Oil & Gas Assoc.
124 W ALLEGAN ST STE 1610
LANSING, MI 48933
(517) 487-1092
www.michiganoilandgas.org

Mississippi

MS Ind. Producers & Royalty Owners
PO BOX 187
JACKSON, MS 39205-0187
(601) 353-8349 x23
www.mipro.ms

Montana

Montana Petroleum Association
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HELENA, MT 59624
(406) 442-7582
www.montanapetroleum.org

Northern Montana O & G Assoc.
PO BOX 488
CUT BANK, MT 59427
(406) 873-9000

New Mexico

Ind. Petroleum Assoc. of NM
PO BOX 6101
ROSWELL, NM 88202
(575) 622-2566
www.ipanm.org

New Mexico Oil & Gas Assoc.
PO BOX 1864
SANTA FE, NM 87504
(505) 982-2568
www.nmoga.org

New York

Independent O & G Assoc. of New York
38 LAKE ST
HAMBURG, NY 14075
(716) 202-4688
www.iogany.org

New York State Oil Producers Assoc.
PO BOX 292
BOLIVAR, NY 14715
(814) 697-6330
www.newyorkstateoilproducersassociation.com

North Dakota

North Dakota Petroleum Council
100 WEST BROADWAY STE 200
PO BOX 1395
BISMARCK, ND 58501
(701) 223-6380
www.ndoil.org

Northern Alliance of Independent Producers
PO BOX 2422
BISMARCK, ND 58502
(701) 224-5037
www.ndoil.org

Ohio

Ohio O & G Assoc.
88 E BROAD ST STE 1400
COLUMBUS, OH 43215
(614) 824-3901
www.ooga.org

Southeastern Ohio O & G Assoc.
214 1/2 WARNER ST
MARIETTA, OH 45750
(740) 374-3203
www.sooga.org

Oklahoma

Domestic Energy Producers Alliance
2313 NORTH BROADWAY
ADA, OK 74820
(405) 424-1699
www.depausa.org

National Assoc. of Royalty Owners
15 W 6th ST STE 2626
TULSA, OK 74119
(800) 558-0557
www.naro-us.org

National Stripper Well Assoc.
PO BOX 18336
OKLAHOMA CITY, OK 73154
(405) 228-4112
www.nswa.us

OK Independent Petroleum Assoc.
500 NE 4th ST STE 200
OKLAHOMA CITY, OK 73104
(405) 942-2334
www.oipa.com

Petroleum Technology Transfer Council
PO BOX 710942
OAK HILL, VA 20171
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www.pttc.org

Pennsylvania

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115 VIP DR STE 210
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Tennessee Oil & Gas Assoc.
750 OLD HICKORY BLVD STE 150-2
BRENTWOOD, TN 37027
(615) 371-6137
www.tennoil.com

Texas

American Assoc. of Prof. Landmen
800 FOURNIER ST
FORT WORTH, TX 76102
(817) 847-7700
www.landman.org

Assoc. of Energy Service Companies
121 E. MAGNOLIA ST STE 103
FRIENDSWOOD, TX 77546
(713) 781-0758
www.aesc.net

East Texas Producers and Royalty Owners Assoc.
301 E. MAIN ST
KILGORE, TX 75662-5921
(903) 984-8676

Int'l Assoc. of Geophysical Contractors
1225 NORTH LOOP WEST STE 220
HOUSTON, TX 77008
(866) 558-1756
www.iagc.org

Panhandle Producers and Royalty Owners Assoc.
3131 BELL STE 209
AMARILLO, TX 79106
(806) 352-5637
www.pproa.org

Permian Basin Petroleum Assoc.
PO BOX 132
MIDLAND, TX 79702
(432) 684-6345
www.pbpa.info

Petroleum Equipment & Services Assoc.
2500 CITYWEST BLVD STE 1110
HOUSTON, TX 77042-3049
(713) 932-0168
www.pesa.org

Society of Independent Professional Earth Scientists
4925 GREENVILLE AVE STE 1106
DALLAS, TX 75206
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www.sipes.org

Texas Alliance of Energy Producers
900 8th ST STE 400
WICHITA FALLS, TX 76301
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(940) 723-4131
www.texasalliance.org

Texas Independent Producers and Royalty Owners Assoc.
919 CONGRESS AVE STE 1000
AUSTIN, TX 78701
(512) 477-4452
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10714 S JORDAN GATEWAY STE 160
SOUTH JORDAN, UT 84095
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www.iogawv.com

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www.wvonga.com

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www.pawyo.org

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(907) 272-1481
www.aoga.org

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TULSA, OK 74119
(800) 364-2274
www.aapg.org

American Exploration and Production Council
1001 PENNSYLVANIA AVE NW STE 7205
WASHINGTON, DC 20004
(202) 347-7578
www.axpc.us

American Petroleum Institute
1220 L ST NW
WASHINGTON, DC 20005-4070
(202) 682-8000
www.api.org

Canadian Assoc. of Petroleum Producers
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www.capp.ca

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(308) 235-2906

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OKLAHOMA CITY, OK 73118
(405) 843-5741
www.okoga.com

Society of Petroleum Engineers
222 PALISADES CREEK DR
RICHARDSON, TX 75080
(800) 456-6863
www.spe.org

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The Pennsylvania State University
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UNIVERSITY PARK, PA 16802
(814) 865-4802
www.energy.psu.edu/swc/

Texas Oil and Gas Assoc.
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AUSTIN, TX 78701
(512) 478-6631
www.txoga.org

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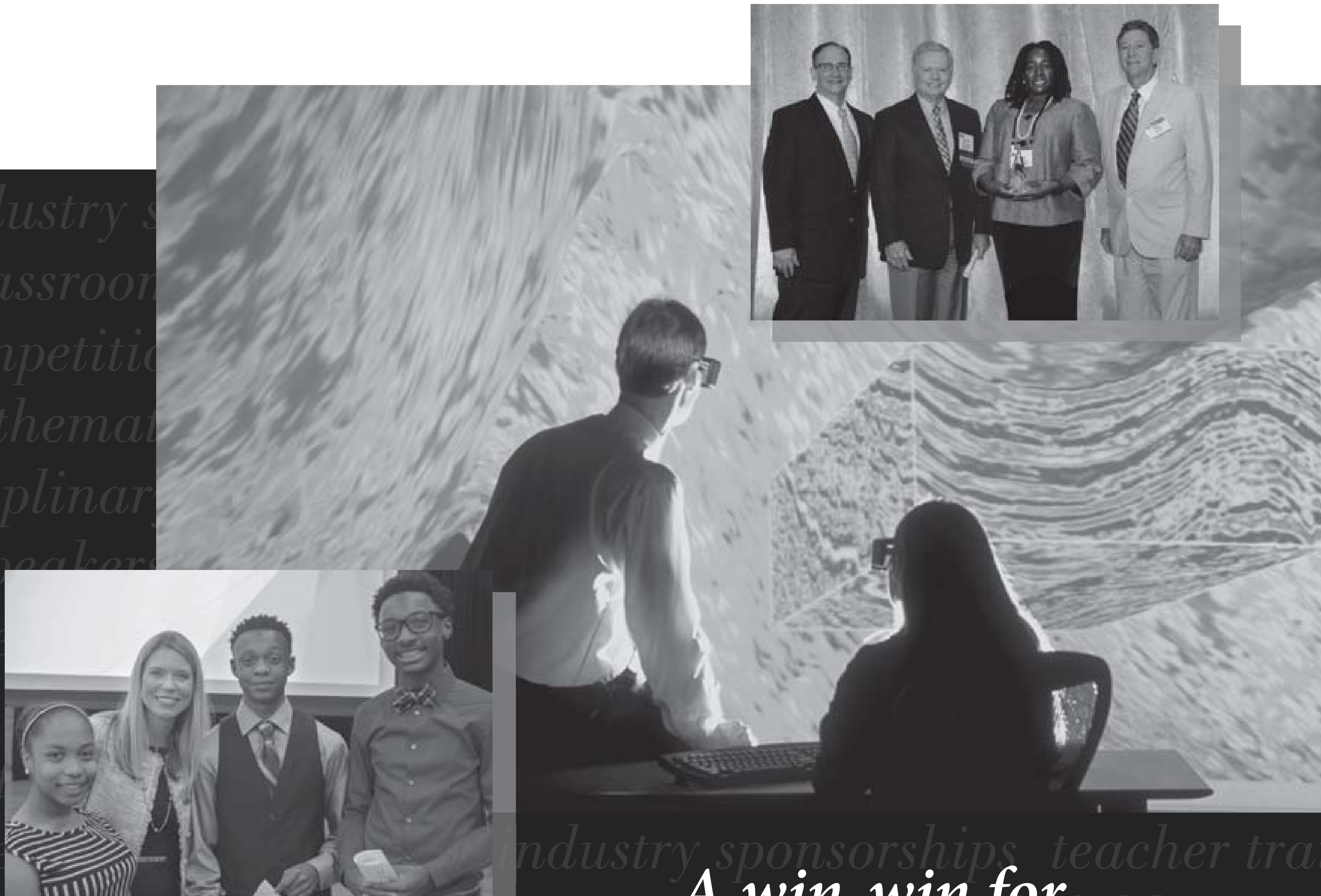
WASHINGTON, DC 20005
(202) 638-4400
www.usoga.org

IPAA/PESA

Energy Education Center



A win-win for schools and industry

IPAA
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

PESA
PETROLEUM EQUIPMENT & SERVICES ASSOCIATION

The IPAA Energy Education Center started with a simple idea a decade ago. That idea was to establish a program with public schools that would make mathematics and science more meaningful and relevant and to address the projected loss of 50 percent of engineering and geosciences professionals due to an aging workforce.

In 2012, **IPAA** announced a new partnership with the **Petroleum Equipment & Services Association (PESA)**, a vigorous supporter of the academies since their inception, to continue to expand upon our commitment to **education outreach** through the Houston-based **IPAA/PESA Energy Education Center** with current Executive Director, Anne Ford.

Together with the support of the **Petroleum Academy Education Advisory Board** and critical corporate and individual sponsorships, the center is achieving an unprecedented level of success preparing the ***next generation*** of talented professionals who will lead the oil and gas industry forward.

The center's mission is to provide students with a multidisciplinary advanced academic learning experience in science, mathematics and the emerging technology concepts they require to pursue professional training/degrees in engineering, geology, geophysics and global energy management. The five established IPAA/PESA Petroleum Academies in the Houston and Fort Worth Independent School Districts prepare students to become effective leaders and global ambassadors by introducing them to the importance of teamwork in business dynamics.

FOR MORE INFORMATION OR TO CONTRIBUTE TO OUR EDUCATIONAL PROGRAMS

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VISIT: www.ipaa.org/education

Please join us in our continuing efforts to support this industry-changing partnership with education.

Barry

Barry Russell
IPAA President & CEO

INDUSTRY SUPPORT FOR THE PETROLEUM ACADEMIES' KEY PROGRAM COMPONENTS

- **Guest Speaker Lecture Series** Students learn from industry professionals about technical and career insight topics.
- **Industry and College Site Visits** Students discover how engineering, geosciences and technology work together in the energy industry through site visits to energy companies, museums and colleges.
- **Industry-related Competitions** Community-based competitions provide students an opportunity to demonstrate their industry knowledge with other high-achieving high schools and college-age students.

  PetroChallenge Competition Students learn to run their own oil and gas company in this interactive computer simulation competition.

  Bureau of Safety and Environmental Enforcement Offshore and Technology Challenge Competition to design an energy circuit, modify a remote controlled helicopter and develop a flight plan using cutting edge electrical circuits to harvest energy from an offshore platform.

ON THE COVER

Top Right: Astra Zeno, IPAA/PESA Energy Education Center 2016 Teacher of the Year, with Barry Russell, IPAA President and CEO, Galen Cobb, IPAA/PESA Petroleum Academy Education Advisory Board Chairman, and Mark Miller, IPAA Chairman at the IPAA 2016 Midyear Meeting.

Bottom Left: Leslie Beyer, PESA President, with students from the Energy Institute High School.

Shell STEM Showdown Competition
An engineering program that introduces underclassmen and their parents to engineering concepts and careers in an interactive way.

Public Speaking Competition
Students research and debate energy industry technical and current affairs topics.

- **Student Camps** Financial support for STEM camps.
- **Externship Program** The capstone component of students' academy participation where students experience a professional workplace setting in an energy company. The program also includes interview preparation, resume writing, professional workplace conduct training and Dale Carnegie training.
- **Especially for Teachers**

Teacher Training Various opportunities for teachers to enhance their industry knowledge.

Lead Teacher Stipends
Stipends recognizing each Academy Lead Teacher.

IPAA/PESA Teacher of the Year Award
Annually recognizes outstanding Academy campus personnel.

- **Curriculum Support** Industry software and textbooks; STEM curriculum; journals; and industry on-line materials.
- **Especially for Students**

Community Service Opportunities provided for students to become actively involved in their community.

Energy Clubs Student formed and led.

Scholarships for College Qualified students apply for scholarships.

Alumni Group Graduates are invited to join the group.

IPAA Emerging Leaders Group Academy graduates are invited to join this IPAA networking group.

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EIHS Principal Lori Bruns, Houston ISD Superintendent Richard Carranza, and IPAA/PESA Energy Education Center Director Sarah Hewitt.

Energy Institute High School | Houston ISD | The first energy high school in the nation where the entire school is devoted to energy studies.

Petroleum Academy at Charles H. Milby High School | Houston ISD | The first of the five high school petroleum academies established by IPAA and PESA.

Petroleum Academy at Southwest High School | Fort Worth ISD | The only high school-based petroleum academy in the Dallas/Fort Worth metroplex.

Petroleum Academy at Westside High School | Houston ISD
The first high-school petroleum academy based in Houston's Energy Corridor.

Petroleum Academy at Young Women's College Preparatory Academy | Houston ISD
The first all girls' engineering/geoscience academy at the high school level in the United States.

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- Women's Global Leadership Conference in Energy & Technology
- World Affairs Council

FOR MORE INFORMATION, PLEASE CONTACT: Barry Russell, President & CEO, IPAA | brussell@ipaa.org | 202.857.4735

State Education Programs

Participating IPAA/PESA High School Energy Magnet Schools:

Texas

Energy Institute High School
1808 SAMPSON ST
HOUSTON, TX 77003-5434
(713) 802-4620
www.houstonisd.org/energy

Charles H. Milby High School
7414 ST LO RD
HOUSTON, TX 77033
(713) 928-7401
www.milby.org

Southwest High School
4100 ALTAMESA BLVD
FORT WORTH, TX 76133
(817) 874-8000
http://www.fwisd.org/Southwest

Westside High School
14201 BRIAR FOREST DR
HOUSTON, TX 77077-1806
(281) 920-8000
http://www.houstonisd.org/westsidehs

Young Women's College Preparatory Academy
1906 CLEBURNE ST
HOUSTON, TX 77004-4131
(713) 942-1441
http://houstonisd.org/YWCPA

University Energy and Geology Programs (Non-affiliated):

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The University of Alabama
Department of Geological Sciences
(205) 348-5095
geology@geo.ua.edu
www.geo.ua.edu

Alaska

University of Alaska - Fairbanks
Mining & Geological Engineering
(907) 474-7388
uaf-cemmingeo-dept@alaska.edu
cem.uaf.edu/mingeo

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dbaron@csub.edu
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CA State University, Long Beach
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(562) 985-4809
www.csulb.edu/depts/geology

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Anthony Kovscek, Department Chair
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kovscek@stanford.edu
https://earth.stanford.edu/ere

University of Southern California
Viterbi School of Engineering
(213) 740-4488
viterbi.admission@usc.edu
viterbi.usc.edu/academics/programs/

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Colorado Mountain College
Energy Industry Training
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rhaney@coloradomtn.edu
coloradomtn.edu/business_industry/energy_industry_training

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Department of Petroleum Engineering
(303) 273-3740
rmcdonald@mines.edu
petroleum.mines.edu

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Geoscience and Resource Engineering
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jsimbai@mines.edu
www.mines.edu/GeoscienceandResourceEngineering_GS

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admissions@coloradomesa.edu
www.coloradomesa.edu/business/degrees/index.html

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Kevin Alexander, Department Chair
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www.western.edu/academics/undergraduate/geology

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www.fhsu.edu/geo

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School of Mines and Engineering
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enrollment@mtech.edu
www.mtech.edu/mines/pet_eng

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NM Institute of Mining & Technology
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petro@nmt.edu
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und.info@und.edu
engineering.und.edu/geology-and-geological-engineering/

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www.marietta.edu/program/petroleum-engineering

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geology@ou.edu
www.ou.edu/mcee/geology.html

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mpge@ou.edu
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http://www.ou.edu/content/price/management_ib/energy_management.html

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Tim Coburn, Director
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http://business.utulsa.edu/department-schools/energy-economics/

Pennsylvania

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eme@ems.psu.edu
www.eme.psu.edu/ebf/

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che@engr.pitt.edu
www.engineering.pitt.edu/Departments/Chemical-Petroleum/

South Dakota

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(202) 502-6338
work@ferc.gov
www.ferc.gov/careers/student-rel.asp

Louisiana

LSU Center for Energy Studies

ENERGY COAST AND ENVIRONMENT BUILDING
NICHOLSON DRIVE EXTENSION
BATON ROUGE, LA 70803
(225) 578-4400
www.enrg.lsu.edu

Ohio

Environmental Education Council of Ohio

PO BOX 1004
LANCASTER, OH 43130-1004
(740) 653-2649 Office
(740) 215-3376 Cell
eeco.wildapricot.org

Ohio Energy Project (OEP)

200 E WILSON BRIDGE RD STE 320
WORTHINGTON, OH 43085
(614) 785-1717
www.ohioenergy.org

Ohio O & G Energy Education Program (OOGEEP)

1718 COLUMBUS RD SW
PO BOX 187
GRANVILLE, OH 43023-0535
(740) 587-0410
www.oogeep.org

Oklahoma

Assoc. of Desk and Derrick Clubs

PO BOX 847
BETHANY, OK 74145
(405) 543-3464
www.addc.org

Committee for Sustaining Oklahoma's Energy Resources

500 NE 4th ST STE 100
OKLAHOMA CITY, OK 73104
(405) 601-2098
soerok.com

Oklahoma Energy Resources Board (OERB)

500 NE 4th ST STE 100
OKLAHOMA CITY, OK 73104
(405) 942-5323
www.oerb.com

University of Oklahoma

Mewbourne College of Earth & Energy
100 E BOYD ST ROOM 1510
NORMAN, OK 73019
(405) 325-3821
www.ou.edu/mcee.html

Pennsylvania

Marcellus Shale Coalition

24 SUMMIT PARK DR
PITTSBURGH, PA 15275
(412) 706-5160
marcelluscoalition.org

Texas

East Texas Historical Assoc.

PO BOX 6223 SFA STATION
NACOGDOCHES, TX 75962
(936) 468-2407
www.easttexashistorical.org

Offshore Energy Center

150 N. DAIRY ASHFORD STE E0314
HOUSTON, TX 77079
(281) 679-8040
oec@oceanstaroec.com
www.oceanstaroec.com

Virginia

National Energy Education Development Project (NEED)

8408 KAO CIRCLE
MANASSAS, VA 20110
(703) 257-1117
www.need.org

Wisconsin

Wisconsin K-12 Energy Education Program (KEEP)

1108 FREMONT ST 201 SSC
UW-STEVENS POINT, WI 54481-3897
(715) 346-4770
KEEP@uwsp.edu
www.uwsp.edu/cnr-ap/KEEP/Pages/default.aspx

Wyoming

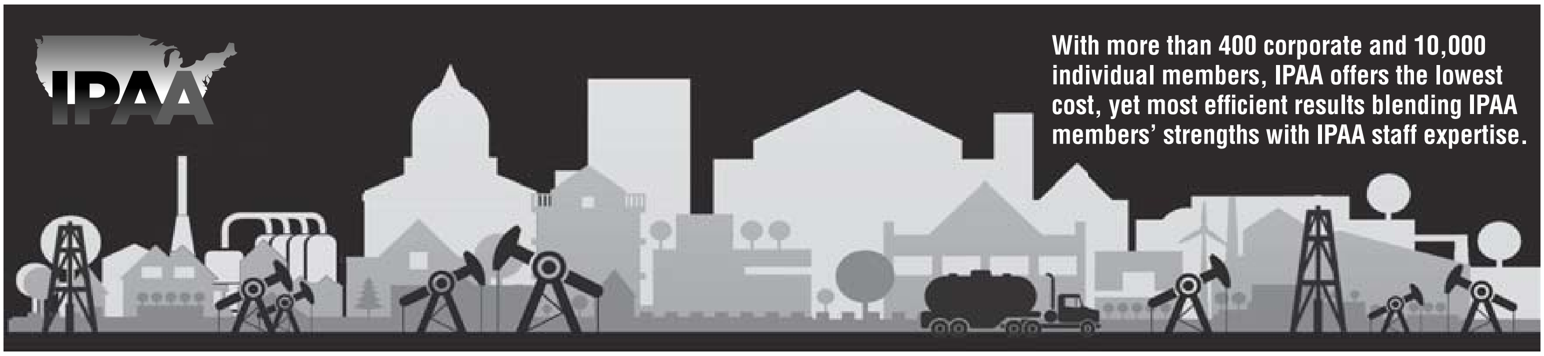
Wyoming State Historical Society

PO BOX 247
WHEATLAND, WY 82201
(307) 322-3014
www.wyshs.org

CANADA

BP - A+ for Energy

240 4th AVE SW
CALGARY AB T2P 2H8 CANADA
(403) 233-1359
www.bp.com/en/global/aplus-for-energy.html



INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

connection 2017

KEY ISSUES

HYDRAULIC FRACTURING

The Bureau of Land Management (BLM) in 2015 finalized its drilling regulations on federal lands that IPAA immediately challenged through litigation in federal court. In June 2016, a U.S. District Court Judge ruled in IPAA's favor, stating that the federal government was not granted the authority by Congress to promulgate such a regulation. Since then, the government and environmental groups and an appellate court hearing is scheduled for later this year. IPAA has long argued the rule is unnecessary, duplicative, and will drive independent producers from federal lands. We anticipate environmental activists will use this rule to attack state regulations as inadequate, thus making this rule a national baseline for all oil and natural gas operations on public lands.

METHANE

The Environmental Protection Agency (EPA) advanced a number of regulations on the oil and natural gas sector in 2016. Among the rules of greatest concern to the industry, EPA's methane regulations would establish a blanket, national standard for methane emissions, affecting all new and existing operations for both oil and natural gas. The Department of the Interior (DOI) also finalized Onshore Order Number 9, which requires companies operating on federal lands to reduce the flaring of natural gas from wells that have been fractured. IPAA and Energy in Depth (EnergyinDepth.org) have stressed that methane emissions have declined dramatically in recent years, thanks to the industry's commitment to adopting new technologies to clean the air. These overly burdensome rules are unnecessary in light of state regulators' and the industry's achievements in this area. Both rules are currently being challenged through litigation.

TAXES

With a new Republican-controlled White House and Congress, discussions on the need for tax reform have increased. IPAA continues to educate Congress on the importance of key tax provisions. Intangible drilling costs (IDC), percentage depletion, and the passive loss exclusion are vital to independent producers and energy production in this country, particularly when cash flow is tight due to low oil and natural gas prices. In 2014, IPAA was successful in educating the House Ways and Means Committee leadership and preventing the repeal of the current tax treatment of IDC, which would be counterproductive to tax reform. With the new Congress showing an appetite to embrace tax reforms, our efforts will be devoted to retaining IDCs, the percentage depletion deduction, and the passive loss exclusion. IPAA's Energy Tax Facts (EnergyTaxFacts.com) campaign has served the industry well as these issues arise and IPAA will continue to utilize this advocacy tool in 2017.

ENHANCING LIFE

Energy Makes Modern Life Possible. Every day, all over the world, American oil and natural gas continues to power and improve modern, 21st Century life. In fact, our safe and well-regulated industry is leading the world in making our daily lives better and healthier for the entire global population. By responsibly producing abundant, affordable fossil fuels, the U.S. oil and natural gas industry has long-provided some of the most essential elements of modern life-improving – and even life-saving – products. Our industry has become a major force in improving the quality of life and human progress for millions of people around the world, even in the most impoverished places on Earth.

WORKPLACE SAFETY

Employee safety is our industry's number one priority. The Occupational Safety and Health Administration (OSHA) is in the process of updating numerous workplace safety regulations and policies. IPAA continues to track, monitor, *continued on back cover*

Thank you for your ongoing support of

IPAA and our Industry

We are proud to note that IPAA membership now exceeds a record 10,000 members, just as the association's activities have reached impressive new levels. Thanks to the dedicated staff and volunteer leadership, IPAA has been able to significantly enhance existing programs and launch new efforts. Following is a look at some of these programs and recent accomplishments.

Energy In Depth

Since 2009, our rapid-response coalition has fact-checked the claims made against hydraulic fracturing and other industry practices, both at the grassroots level and throughout the national media circuit. EID now has staff on the ground in Michigan, Pennsylvania, Ohio, Colorado, California, Illinois, and Texas. EID provides counterbalance to misleading critics—be it legislators, filmmakers, celebrities, academics, the media or professional protesters. Visit EnergyInDepth.org.

Defense of Industry's Tax Provisions/ Energy Tax Facts

IPAA leadership and lobbyists regularly meet with top congressional leaders and tax-writers regarding the industry's tax provisions. IPAA has authored extensive comments and coordinated advocacy efforts with other trade associations on industry tax provisions. More information on IPAA's efforts is available through its online educational campaign at EnergyTaxFacts.com.

Endangered Species Act Task Force

Working on Endangered Species Act reform has been and will continue to be a dominant priority for IPAA. Our ESA Task Force is a group of allies and company representatives that IPAA keeps up to date on wildlife listings and regulatory developments. And IPAA's Endangered Species Watch project monitors and responds to news and information about federal species protection. Please visit ESAwatch.org for the latest.

Divestment Facts

The costs associated with fossil fuel divestment are likely to be enormous, resulting in the displacement of billions annually from school endowments, hundreds of millions in new compliance and management fees, and new threats to the financial well-being of institutions and future generations of students. Visit our campaign at DivestmentFacts.com.

ENERGYINDEPTH® Energy Tax Facts Endangered Species Watch DIVESTMENTFACTS.COM





IPAA leaders, including Chairman Mark Miller and Vice Chairman Stephen Jones, discuss the important role independent oil and natural gas producers play in the U.S. economy.

CONNECT WITH IPAA

With much being said about the American energy industry across the Internet, it is now more important than ever to monitor social trends and stay ahead on messaging to the American consumer. We encourage you to **CONNECT WITH IPAA** on social media and help us **SHARE THE NEWS** about the benefits of American energy:

www.ipaa.org
IPAA's website offers an easy-to-navigate, mobile-friendly design, with our most pressing news and key issues front and center.

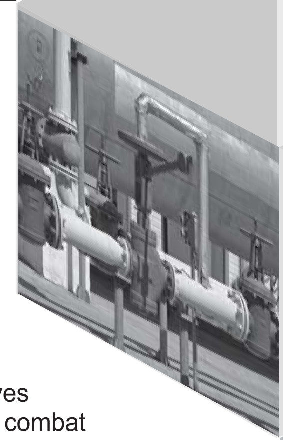
Facebook.com/IPAAaccess
Like IPAA's Facebook page to receive the latest industry news and announcements.

Twitter.com/IPAAaccess
IPAA's Twitter presence is growing daily with over 9,800 followers.

LinkedIn.com/company/IPAAaccess
We encourage our more than 1,400 LinkedIn followers to engage with us in an open and lively conversation about our industry.

Instagram.com/IPAAaccess
The newest venture in IPAA's social media strategy, we are telling the story of independent producers and the critical role they play through energy-rich photography.

PROGRAMS AND ACTIVITIES



Wildcatters Fund Political Action Committee

Our PAC, the largest of any oil and natural gas industry trade group, donated almost $300,000 to well over 100 House and Senate races. The 2018 election cycle will provide another opportunity for the industry to elect Members of Congress who understand and value the importance of the oil and natural gas industry. The Wildcatters Fund gives IPAA the ability to develop relationships with future legislators from the beginning and educate them on issues important to independent producers.

Regulatory and Litigation Efforts

Congressional gridlock has resulted in an unprecedented number of regulatory initiatives targeting the oil and natural gas industry. To combat unwarranted regulatory activity, IPAA has enhanced its regulatory response and litigation efforts. IPAA has focused its attention on the Bureau of Land Management's hydraulic fracturing rulemaking, Endangered Species Act abuses, air emissions rules (NSPS Subpart OOOO), expansion of federal jurisdiction through the Clean Water Act, Federal Energy Regulatory Commission initiatives and others.

Congressional Call-Up

Nearly 100 representatives from IPAA member companies and cooperating state trade associations storm Capitol Hill in Washington, D.C. each year to meet with nearly 120 Congressional offices each year. These important meetings allow our companies to explain directly to Members of Congress how the industry's tax provisions are vital to new investment, how regulatory overreach is hurting their operations, and the positive impact the U.S. oil and natural gas industry has in job creation within their states and districts.

GRIT & GASG

Focusing on industry-wide collaboration and intelligence gathering, Government Relations Industry Team (GRIT) is a meeting of our member companies' government relations representatives. IPAA's Government Affairs Strategy Group (GASG), is a meeting group that includes our member companies' government relations teams and government relations representatives from the national industry trade associations. This type of collaboration is vital to our success in Washington.

Declaration of Independents

Focusing on oil issues, our economic team now produces roughly two dozen reports each year—tracking the global trends in petroleum production, analyzing the geopolitical and economic implications of the shale oil boom, and profiling major U.S. shale plays—just to name a few of the topics. This campaign provides the analytical backbone to IPAA's policy positions that are communicated to the media, policymakers and key coalition allies. For the latest, visit online at OilIndependents.org.

Association Council

IPAA's government relations team is coordinating with 25 state trade groups—called the IPAA Association Council—to put together political toolkits, coordinate messages and increase community engagement.

Oil & Gas Investment Symposia (OGIS)

For over 20 years, OGIS New York has served as the flagship annual energy investors' conference featuring hundreds of IPAA's member company CEOs who explain the trajectory of their businesses in the year ahead to the thousands of financial investors in attendance. Information on sponsoring and attending is available at www.ipaa.org/meetings.

OGIS®
OIL & GAS INVESTMENT SYMPOSIA

NAPE

This industry expo, produced by IPAA, AAPL, AAPG and SEG, is the oil and gas industry's marketplace for the buying, selling and trading of prospects. Held twice a year in Houston, NAPE expanded to include NAPE Denver in the fall.

NAPE

Supply & Demand and International Markets

IPAA hosts biannual speaker events featuring experts who analyze the latest market trends and key supply and demand factors for oil and natural gas. Additionally, IPAA's international-focused speaker receptions held at our Midyear and Annual meetings continue to be must-attend events. IPAA has also updated the annual publications *Oil and Gas Producing Industry In Your State* and *U.S. Petroleum Statistics*—available at www.ipaa.org.

Environment and Land Access

IPAA hosts a number of meetings each year to update its members and plan industry strategy on environmental and land access issues. In addition to holding IPAA Committee meetings at the IPAA Midyear and Annual Meetings, IPAA hosts a Strategic Planning Conference on Land Access and Environmental Issues as well other in-person Environment and Safety Committee Meeting in DC, the bi-annual Offshore Committee Meeting in Houston and other meetings focused at in-depth policy discussions around impending regulatory hurdles.

WORKPLACE SAFETY *continued*

and provide comments on these rules and policies as they arise. IPAA is also working with a broad coalition of industry stakeholders and safety experts, as well as OSHA, to continually improve safety standards to ensure all who work in the industry are kept as safe as possible.

ENDANGERED SPECIES

The Endangered Species Act (ESA) continues to be a top priority, with hundreds of animal and plant species listings, both onshore and offshore, threatening development. There are a number of species that IPAA is currently combatting listing, including but not limited to the Greater Sage-Grouse, the Lesser Prairie Chicken, and the Northern Long-Eared Bat. IPAA filed comments on these and a number of other species and continues to track listing developments, the opposition's actions, and the industry's efforts to conserve species through its Endangered Species Watch (ESAwatch.org) campaign. IPAA's ESA Watch website, daily news clips, and weekly newsletters are now widely used tools by Capitol Hill and allied organizations.

OZONE

The EPA revised its National Ambient Air Quality Standard (NAAQS) for Ozone in October 2015. The revised NAAQS expands areas subject to new regulations to areas where substantial oil and natural gas production is underway, significantly beyond the urban areas that have historically been regulated. Ozone compliance regulations can adversely affect both existing and new operations by not only requiring existing operations to meet regulations that are not cost effective but also requiring emissions from new wells to be offset by reducing unregulated emissions elsewhere. As part of its 2016 methane regulatory actions, EPA created an existing facilities Control Technique Guideline that applies in ozone nonattainment areas. IPAA is working with other oil trade associations and with other industries to challenge the revised NAAQS.

OFFSHORE

The Interior Department in 2016 finalized more stringent air standards for offshore development. Additionally, DOI issued updated final guidance for assuring that companies have additional bonds and insurance to remove offshore production facilities. This issue has been problematic for independent producers in the past who do not have the cash flow to meet the enormous requirements. Lastly, the 2017-2022 five-year plan for offshore oil and gas lease sales was finalized in late 2016. The Administration ignored IPAA's and other trade associations' calls for greater offshore access, as nearly 85 percent of our federal offshore acreage is off limits for development.

CRUDE BY RAIL

The Department of Transportation (DOT) finalized the rule requiring updates to the U.S. tanker car fleet in 2016. The rule slowly phases in various safety standards for tank cars, ultimately replacing all non-compliant tank cars within five years.

IPAA/PESA Energy Education Center

IPAA firmly believes that **EDUCATION** is important in **EVERY** stage of life, whether you are new to the industry or have had a successful career and just need a refresher.

IPAA/PESA ENERGY EDUCATION CENTER

IPAA and the Petroleum Equipment & Services Association (PESA) are committed to educational outreach through the Houston-based IPAA/PESA Energy Education Center. For over a decade, the IPAA/PESA Energy Education Center has inspired students in enhanced STEM curriculum and has **prepared the *next generation*** for successful careers in our industry. The Center supports five engineering, geoscience, and leadership academies at high schools in the Houston and Fort Worth Independent School Districts. Today, **more than 2,200 students** have graduated in a Petroleum Academy through the IPAA/PESA Energy Education Center.

EMERGING LEADERS IN ENERGY

We now offer exclusive memberships and career development opportunities for students and young professionals under the age of 35. Introduced in 2012, **IPAA's Emerging Leaders** program has more than 1,500 members enrolled and has hosted networking events around the country.

INDUSTRY TRAINING

IPAA offers an in-person **Industry Overview** course several times throughout the year and has partnered with Energy Training Resources, LLC to launch a series of industry-focused **eLearning** courses that are available online. Proceeds benefit the IPAA Educational Foundation.

PIPELINE SAFETY

The DOT's Pipeline Hazardous Materials and Safety Administration (PHMSA) issued a Notice of Proposed Rulemaking (NOPR) on Safety of Gas Transmission and Gathering Lines, with consideration before PHMSA's Gas Pipeline Advisory Committee (GPAC) in early 2017. The NOPR would greatly expand PHMSA's jurisdiction over gathering lines and would encroach on production facilities, based on the proposed definitions. Industry has commented on the proposal, strongly opposing any changes to the existing definitions for production operation and gathering line based on a legislative and regulatory history of the current regulatory regime. Also pending is PHMSA's NOPR on Safety of Hazardous Liquid Pipelines, which would extend certain reporting requirements to gravity lines and all hazardous liquid gathering lines (whether onshore, offshore, regulated, or unregulated). IPAA submitted comments in opposition to the NOPR in early 2016. The draft final rule is before OMB's Office of Information and Regulatory Affairs for review.

INDUSTRY TRANSPARENCY

The Extractive Industries Transparency Initiative (EITI) is a global coalition of governments, companies, and civil societies working together with the goal of improving openness and accountability of revenues from natural resources. The U.S. implementation of EITI began in 2015. DOI is the lead U.S. agency, focusing on royalties, rents and bonuses for production of oil, natural gas, and coal on federal lands, using a multi-stakeholder group (MSG) to develop the U.S. implementation plan. IPAA, as a member of MSG, will continue to participate in these proceedings and keep members apprised of developments. Under the Trump Administration, DOI is expected to minimize requests for verification from companies, yet continue with the unilateral publication of data.

Oil And Gas Museums

Alabama

Choctaw Cnty Historical Museum
40 MELVIN RD
GILBERTOWN, AL 26908
(205) 459-3383
www.ohwy.com/al/c/choccohm.htm

Arkansas

AK Museum of Natural Resources
3583 SMACKOVER HWY
SMACKOVER, AR 71762
(870) 725-2877
www.amnr.org

Arkansas Museum of Science and History
500 PRESIDENT CLINTON AVE STE 150
LITTLE ROCK, AR 72201
(501) 396-7050
www.amod.org

California

Brea Museum and Heritage Center
495 S BREA Blvd
BREA, CA 92821
(714) 256-2283
www.breamuseum.org

California Oil Museum
1001 E MAIN ST
SANTA PAULA, CA 93061
(805) 933-0076
www.caoilmuseum.org

Hathaway Ranch and Oil Museum
11901 E FLORENCE AVE
SANTA FE SPRINGS, CA 90670
(562) 777-3444

Kern Pioneer Village
3801 CHESTER AVE
BAKERSFIELD, CA 93301
(661) 437-3330
www.kernpioneer.org

Olinda Historic Museum & Park
4025 SANTA FE RD
BREA, CA 92823
(714) 671-4447
www.ci.brea.ca.us/index.asp?NID=438

Santa Barbara Maritime Museum
113 HARBOR WAY STE 190
SANTA BARBARA, CA 93109
(805) 962-8404
www.sbmm.org

West Kern Oil Museum
1168 WOOD ST
TAFT, CA 93268
(661) 765-6664
http://www.westkern-oilmuseum.org/

Colorado

Museum of Nature and Science
2001 COLORADO BLVD
DENVER, CO 80205
(303) 370-6000
www.dmns.org

Illinois

Illinois Oil Field Museum
10570 N 150th ST
OBLONG, IL 62449
(618) 592-4664
http://www.illinoisadventuretv.org/index.asp?page=st&site=1024

Museum of Science and Industry
5700 S LAKE SHORE DR
CHICAGO, IL 60637
(773) 684-1414
www.msichicago.org

Wabash County Museum
320 N MARKET ST
MT CARMEL, IL 62863
(618) 262-8774
www.museum.wabash.il.us

Wood River Refinery Museum
PO BOX 76
ROXANNA, IL 62084-0076
(618) 255-3718
www.wrrhm.org

Indiana

Red Crown Mini-Museum
6th AND SOUTH ST
LAFAYETTE, IN 47901
www.oldgas.com/info/redcrown.htm

Kansas

Hill City Oil Museum
801 W MAIN ST
HILL CITY, KS 67642
(785) 421-2141
www.travelks.com/listing/oil-museum/2330/

Independence Historical Museum and Art Center
123 N 8th ST
PO BOX 294
INDEPENDENCE, KS 67301
(620) 331-3515
ihmac.org

Kansas Oil Museum and Hall of Fame
383 E CENTRAL AVE
EL DORADO, KS 67042
(316) 321-9333
www.kansasoilmuseum.org

Norman #1 Museum & RV Park
106 S 1st
NEODESHA, KS 66757
(620) 325-5316
www.travelks.com/listings/Norman-No-1-Oil-Well-and-Museum/1871/

Oil Patch Museum
I-70 AND US 281
RUSSELL, KS 67665
(785) 483-3637
www.russellkshistory.com/html/oil-patch-museum.html

Stevens Cnty Gas & Hist. Museum
905 S ADAMS
HUGOTON, KS 67951
(620) 544-8751
stevenscountyks.com/museum

Louisiana

Int'l Petroleum Museum and Expo
PO BOX 1988
MORGAN CITY, LA 70381
(985) 384-3744
www.rigmuseum.com

LA State Oil and Gas Museum
200 S LAND AVE
OIL CITY, LA 71061
(318) 995-6845
www.sos.la.gov/HistoricalResources/VisitMuseums/LouisanaStateOilAndGasMuseum

Michigan

Henry Ford Museum
20900 OAKWOOD BLVD
DEARBORN, MI 48124-5029
(313) 982-6001
www.thehenryford.org/

New Mexico

Farmington Museum
3041 E MAIN
FARMINGTON, NM 87402
(505) 599-1174
www.fmtn.org/248/Farmington-Museum-at-Gateway-Park

New York

Pioneer Oil Museum
PO BOX 332
BOLIVAR, NY 14715
(585) 610-2038
www.pioneeroilmuseum.com

Ohio

Allen County Museum and Historical Society
620 W MARKET ST
LIMA, OH 45801
(419) 222-9426
www.allencountymuseum.org

County Line Historical Society
281 N MARKET ST
BOX 614
SHREVE, OH 44676
(330) 567-2501
countylinehistorical.com

Hancock Historical Museum
422 W SANDUSKY ST
FINDLAY, OH 45840
(419) 423-4433
www.hancockhistoricalmuseum.org

Wood County Historical Center and Museum
13660 COUNTY HOME RD
BOWLING GREEN, OH 43402
(419) 352-0967
www.woodcountyhistory.org

Oklahoma

Ames Astrobleme Museum
109 E MAIN
AMES, OK 73718
(580) 753-4624

Anadarko Basin Museum of Natural History
204 N MAIN ST
ELK CITY, OK 73644
(580) 243-0437

Bartlesville Area History Museum
401 S JOHNSTONE AVE
BARTLESVILLE, OK 74003
(918) 338-4290
www.bartlesvillehistory.com

Cherokee Strip Regional Heritage Center
507 S 4th ST
ENID, OK 73701
(508) 237-1907
www.csrhc.org

Conoco Museum
501 W SOUTH AVE
PONCA CITY, OK 74601
(580) 765-8687
www.conocomuseum.com

Drumright Community Historical Museum
301 E BROADWAY
DRUMRIGHT, OK 74030
(918) 352-3002
www.drumrighthistoricalsociety.org

Frank Phillips Home
1107 CHEROKE AVE
BARTLESVILLE, OK 74003
(918) 336-2491
www.frankphillipshome.org

Greater Southwest Historical Museum
35 SUNSET DR
ARDMORE, OK 73401
(580) 226-3857
www.gshm.org

Healdton Oil Museum
10734 HWY 76
HEALDTON, OK 73438
(580) 229-0900
www.travelok.com/listings/view.profile/id.3388

Nowata County History Museum
121 SOUTH PINE
NOWATA, OK 74048
(918) 273-1191
nowatamuseum.org

Oklahoma Historical Society
800 NAZIH ZUHDI DR
OKLAHOMA CITY, OK 73105
(405) 521-2491
www.okhistory.org

Oklahoma Oil Museum
1800 HWY 9 WEST (WRANGLER BLVD)
SEMINOLE, OK 74868
(405) 382-1500
www.seminoleoklahoma.com/museum

Phillips Petroleum Company Museum
410 KEELER
BARTLESVILLE, OK 74004
(918) 977-6166
www.phillips66museum.com

Sam Noble Museum of Natural History
2401 CHAUTAUQUA AVE
NORMAN, OK 73072-7029
(405) 325-4712
samnoblemuseum.ou.edu

Tulsa Historical Society
2445 S PEORIA
TULSA, OK 74114
(918) 712-9484
www.tulsahistory.org

Woolaroc Museum
1925 WOOLAROC RANCH RD
BARTLESVILLE, OK 74003
(918) 336-0307
www.woolaroc.org

Pennsylvania

Barbara Morgan Harvey Center for the Study of Oil Heritage
1801 W FIRST ST
OIL CITY, PA 16301
(814) 393-1242
web.clarion.edu/BMHarveyCenter/HCWBuild/Harvey_Center_Web_Site/Home.html

Coolspring Power Musuem
179 COOLSPRING RD
COOLSPRING, PA 15730
(814) 849-6883
www.coolspringpowermuseum.org

Drake Well Museum
202 MUSEUM LN
TITUSVILLE, PA 16354
(814) 827-2797
www.drakewell.org

Oil Region National Heritage Area
217 ELM ST
OIL CITY, PA 16301-1412
(814) 677-3152
www.oilregion.org

Penn-Brad Oil Museum
901 SOUTH AVE
BRADFORD, PA 16701
(814) 362-1955
pennbradoilmuseum.org

Petroleum History Institute
PO BOX 165
OIL CITY, PA 16301-0165
www.petroleumhistory.org

Pumping Jack Museum
PO BOX 25
EMLENTON, PA 16373
(724) 867-0030
www.pumpingjack.org

Simpler Times Museum
111 SIMPLER TIMES LN
TIDIOUTE, PA 16351
(814) 484-3483

Venango Museum of Art, Science and Industry
270 SENECA ST
OIL CITY, PA 16301
(814) 676-2007
www.venangomuseum.org

Texas

Bob Bullock Texas State History Museum
1800 N CONGRESS AVE
AUSTIN, TX 78701
(512) 936-8746
www.thestoryoftexas.com

Depot Museum
514 N HIGH ST
HENDERSON, TX 75652
(903) 657-4303
www.depotmuseum.com

East Texas Oil Museum
HWY 259 AND ROSS ST
KILGORE, TX 75662
(903) 983-8295
www.easttexasoilmuseum.com

Oil and Gas Museums

Fort Worth Museum of Science and History
1600 GENDY ST
FORT WORTH, TX 76107
(817) 255-9300
www.fwmuseum.org

Gaston Museum
6558 HWY 64 W
PO BOX 301
JOINERVILLE, TX 75658
(903) 722-9016
gastonmuseum.org

Heritage Museum of Montgomery County
1506 I-45 N FEEDER
CONROE, TX 77305
(936) 539-6873
www.heritagemuseum.us

Houston Museum of Natural Science
5555 HERMANN PARK DR
HOUSTON, TX 77030
(713) 639-4629
www.hmns.org

Hutchinson County Historical Museum
618 N MAIN
BORGER, TX 79007
(806) 273-0130
www.hutchinsoncountymuseum.org

London Museum and Café
10690 S MAIN ST
NEW LONDON, TX 75682
(903) 895-4602
nlsd.net

Luling Oil Museum
421 E DAVIS ST
LULING, TX 78648
(830) 875-1922
www.lulingoilmuseum.org

Million Barrel Museum
400 MUSEUM BLVD
MONAHANS, TX 79756
(432) 943-8401

Museum of the Plains
1200 N MAIN
PERRYTON, TX 79070
(806) 435-6400
www.museumoftheplains.com

Ocean Star Offshore Drilling Rig & Museum
2002 WHARF RD
GALVESTON, TX 77550
(409) 777-7827
www.oceanstaroec.com/museum.htm

Panhandle-Plains Historical Museum
2503 4th AVE
CANYON, TX 79015
(806) 651-2244
www.panhandleplains.org

Permian Basin Petroleum Museum
1500 W INTERSTATE 20
MIDLAND, TX 79701
(432) 683-4403
www.petroleummuseum.org

Ranger Historical Preservation Society
1505 W LOOP 254
RANGER, TX 76470-0313
(254) 647-5353
www.txbusiness.com/rhps

Spindletop-Gladys City Boomtown Museum
PO BOX 10070
5550 JIMMY SIMMONS BLVD
BEAUMONT, TX 77710
(409) 880-1750
www.spindletop.org

Square House Museum
503 ELSIE AVE
PANHANDLE, TX 79068
(806) 537-3524

Texas Energy Museum
600 MAIN ST
BEAUMONT, TX 77701
(409) 833-5100
www.texasenergymuseum.org

Van Area Oil and Historical Museum
170 W MAIN ST
VAN, TX 75790
(903) 963-5435
vantx.com/venue/van-area-oil-historical-muse-um/

W. K. Gordon Center for Industrial History
PO BOX 218
MINGUS, TX 76463
(254) 968-1886
www.tarleton.edu/gordoncenter

West Virginia

West Virginia Oil and Gas Museum
119 THIRD ST
PARKERSBURG, WV 26101
(304) 485-5446

Wyoming

Hot Springs County Museum and Cultural Center
700 BROADWAY
THERMOPOLIS, WY 82443
(307) 864-5183
www.hschistory.org

Salt Creek Oil Museum
531 PEAKE ST
MIDWEST, WY 82643
(307) 437-6513

Tate Geological Museum
125 COLLEGE DR
CASPER, WY 82601-4699
(307) 268-2447
www.caspercollege.edu/tate

Oil and Gas museum information compiled by the American Oil and Gas Historical Society. For additional details, visit www.aoghs.org.

Crude Oil Wells Drilled

1. Texas
2. Kansas
3. California
4. Oklahoma
5. North Dakota
6. Colorado
7. New Mexico
8. Pennsylvania
9. Utah
10. Louisiana
11. Wyoming
12. Illinois
13. Ohio
14. Kentucky
15. Montana
16. New York
17. Arkansas
18. Alaska
19. Federal Offshore
20. Indiana
21. Mississippi
22. Nebraska
23. Michigan
24. Alabama
25. West Virginia
26. Tennessee
27. South Dakota
28. Missouri
29. Nevada
30. Idaho
31. Florida
32. Virginia
33. Arizona
34. Maryland
35. Iowa

Natural Gas Wells Drilled

1. Texas
2. Pennsylvania
3. Wyoming
4. Oklahoma
5. Arkansas
6. Colorado
7. West Virginia
8. Ohio
9. Louisiana
10. Kansas
11. Utah
12. Kentucky
13. Virginia
14. Alabama
15. Federal Offshore
16. New Mexico
17. Alaska
18. Indiana
19. Montana
20. California
21. Tennessee
22. Michigan
23. Idaho
24. New York
25. North Dakota
26. Illinois
27. Nebraska
28. Oregon
29. Missouri
30. Maryland
31. Arizona
32. Washington
33. Florida
34. Nevada

Crude Oil Production

1. Texas
2. Federal Offshore
3. North Dakota
4. California
5. Alaska
6. Oklahoma
7. New Mexico
8. Colorado
9. Wyoming
10. Louisiana
11. Kansas
12. Utah
13. Montana
14. Mississippi
15. Ohio
16. Alabama
17. Illinois
18. West Virginia
19. Michigan
20. Arkansas
21. Pennsylvania
22. Kentucky
23. Nebraska
24. Indiana
25. Florida
26. South Dakota
27. New York
28. Tennessee
29. Nevada
30. Missouri
31. Arizona
32. Virginia

Natural Gas Production

1. Texas
2. Pennsylvania
3. Oklahoma
4. Louisiana
5. Wyoming
6. Colorado
7. Federal Offshore
8. New Mexico
9. Arkansas
10. West Virginia
11. Ohio
12. Utah
13. Alaska
14. North Dakota
15. Kansas
16. California
17. Alabama
18. Virginia
19. Michigan
20. Kentucky
21. Montana
22. Mississippi
23. New York
24. South Dakota
25. Indiana
26. Tennessee
27. Illinois
28. Oregon
29. Florida
30. Nebraska
31. Arizona
32. Maryland
33. Nevada

Sources: IHS for wells drilled and EIA for production.

Top Producing Congressional Districts - Crude Oil

Rank	State	District	% of US Prod
1	FOS Gulf &Pacific	7 & 3	27.9955
2	Texas	11	15.6862
3	California	20 & 22	9.8996
4	New Mexico	2	7.8294
5	Texas	15	4.5232
6	Colorado	4	3.9619
7	North Dakota	At Large	3.7777
8	Texas	23	3.2146
9	Texas	19	3.1339
10	Texas	28	2.9483
11	Oklahoma	3	2.5434
12	Wyoming	At Large	2.3088
13	Utah	2	2.1023
14	Louisiana	3	1.9381
15	Texas	13	1.4999
16	Texas	25	1.0942
17	Oklahoma	4	1.0065
18	Fos Gulf & Pacific	California	1.0033
19	Texas	1	0.4521
20	Kansas	1	0.4009
21	Texas	14	0.3401
22	Colorado	3	0.2943
23	Louisiana	4	0.2807
24	Montana	At Large	0.2779
25	Louisiana	7	0.2315
26	New Mexico	3	0.1880
27	Texas	6	0.1725
28	Texas	17	0.1194
29	Texas	22	0.1089
30	Texas	8	0.0832
31	Texas	29, 18, 7 & 9	0.0812
32	Texas	2 & 8	0.0810
33	Texas	27	0.0749
34	Texas	2	0.0743
35	Michigan	1	0.0512
36	Texas	23 & 28	0.0452
37	Alabama	1	0.0426
38	Texas	5	0.0308
39	Louisiana	5	0.0272
40	Texas	12	0.0264
41	Oklahoma	2	0.0212
42	Texas	7 & 3	0.0127
43	Texas	17 & 6	0.0054
44	Texas	11 & 23	0.0047
45	Texas	26	0.0036
46	Mississippi	3	0.0010
47	Mississippi	2 & 3	0.0003
48	Alabama	6 & 7	0.0000
49	Arkansas	2	0.0000
50	Arkansas	3	0.0000

Source: IPAA and IHS.
**Districts have been aggregated for ranking purposes and rounded in certain cases.*

Top Producing Congressional Districts - Natural Gas

Rank	State	District	% of US Prod
1	Wyoming	At Large	12.0676
2	Colorado	3	7.7926
3	Louisiana	4	6.6266
4	Texas	1	5.8080
5	Oklahoma	3	5.3701
6	New Mexico	3	4.7855
7	Texas	23 & 28	4.7418
8	Texas	12, 26, 24 & 6	4.6189
9	Fos Gulf & Pacific	7 & 3	4.4194
10	Texas	13	3.8309
11	Arkansas	2	3.5477
12	Texas	17	3.3241
13	Oklahoma	2	2.7043
14	Texas	12	2.4705
15	Texas	15	2.4533
16	Utah	2	2.4103
17	Louisiana	5	1.9383
18	Texas	26	1.5598
19	Texas	6	1.4702
20	Texas	23	1.4053
21	Texas	28	1.3339
22	Colorado	4	1.3142
23	Louisiana	3	1.2982
24	Mississippi	3	1.2770
25	Oklahoma	4	1.1337
26	Texas	25	1.1310
27	Kansas	1	1.0182
28	Mississippi	2 & 3	0.8692
29	Texas	11	0.8538
30	New Mexico	2	0.7942
31	Virginia	9	0.6805
32	Louisiana	7	0.6258
33	Michigan	1	0.4802
34	Alabama	1	0.4727
35	Texas	27	0.4631
36	Texas	14	0.3893
37	Alabama	6 & 7	0.3638
38	Texas	17 & 6	0.3461
39	Arkansas	3	0.3243
40	Texas	8	0.2972
41	Texas	11 & 23	0.2297
42	Arkansas	4	0.1782
43	Texas	2	0.1584
44	Texas	2 & 8	0.1260
45	Texas	29, 18, 7 & 9	0.0949
46	West Virginia	3	0.0759
47	Texas	5	0.0703
48	Kentucky	5	0.0690
49	Texas	22	0.0583
50	Montana	At Large	0.0564

Source: IPAA and IHS.
**Districts have been aggregated for ranking purposes and rounded in certain cases.*

Crude Oil Summary

Year	Production			Imports	Supply		Exports	Demand		Crude Reserves		Price
	Crude Oil	*NGL*	*Total*	*Total*	*Other*	*Total*		*Domestic*	*Total*	*Proved Reserves*	*New Reserves*	*Oil Wellhead*
					(thous. b/d)					*(mill. bbls.)*		*($/bbl.)*
1964	7,614	1,155	8,769	2,258	198	11,225	202	11,023	11,225	30,991	2,665	2.88
1965	7,804	1,210	9,014	2,468	217	11,699	187	11,513	11,700	31,352	3,048	2.88
1966	8,295	1,284	9,579	2,573	130	12,282	198	12,085	12,283	31,452	2,964	2.88
1967	8,810	1,409	10,219	2,537	111	12,867	307	12,560	12,867	31,377	2,962	2.92
1968	9,096	1,504	10,600	2,840	184	13,624	231	13,393	13,624	30,707	2,455	2.94
1969	9,238	1,590	10,828	3,166	376	14,370	233	14,137	14,370	29,632	2,120	3.09
1970	9,637	1,660	11,297	3,419	240	14,956	259	14,697	14,956	39,001	2,689	3.18
1971	9,463	1,694	11,157	3,925	354	15,436	224	15,213	15,437	38,063	2,318	3.39
1972	9,441	1,744	11,185	4,741	663	16,589	222	16,367	16,589	36,339	1,558	3.39
1973	9,208	1,738	10,946	6,256	337	17,539	231	17,308	17,539	35,300	2,146	3.89
1974	8,774	1,688	10,462	6,112	300	16,874	221	16,652	16,873	34,250	1,994	6.87
1975	8,375	1,632	10,007	6,056	467	16,531	209	16,322	16,531	32,682	1,318	7.67
1976	8,132	1,604	9,736	7,313	635	17,684	223	17,461	17,684	30,942	1,085	8.19
1977	8,245	1,618	9,863	8,808	4	18,674	243	18,431	18,674	31,780	1,140	8.57
1978	8,707	1,567	10,274	8,364	572	19,209	362	18,847	19,209	31,355	2,583	9.00
1979	8,552	1,583	10,135	8,456	392	18,984	471	18,513	18,984	29,810	1,410	12.64
1980	8,597	1,573	10,170	6,909	521	17,600	544	17,056	17,600	29,805	2,970	21.59
1981	8,572	1,590	10,162	5,995	495	16,653	595	16,058	16,653	29,426	2,570	31.77
1982	8,649	1,539	10,188	5,113	810	16,111	815	15,296	16,111	27,858	1,382	28.52
1983	8,688	1,547	10,235	5,051	684	15,970	739	15,231	15,970	27,735	2,897	26.19
1984	8,879	1,626	10,505	5,437	506	16,448	722	15,726	16,448	28,446	3,748	25.88
1985	8,971	1,595	10,566	5,067	874	16,507	781	15,726	16,507	28,416	3,022	24.09
1986	8,680	1,546	10,226	6,223	616	17,066	785	16,281	17,066	26,889	1,446	12.51
1987	8,349	1,591	9,940	6,678	811	17,429	764	16,665	17,429	27,256	3,240	15.40
1988	8,140	1,621	9,761	7,402	935	18,098	815	17,283	18,098	26,825	2,380	12.58
1989	7,613	1,546	9,159	8,060	964	18,184	859	17,325	18,184	26,501	2,262	15.86
1990	7,355	1,559	8,914	8,017	913	17,845	857	16,988	17,845	26,254	2,258	20.03
1991	7,417	1,659	9,076	7,626	1,012	17,715	1,001	16,714	17,715	24,682	940	16.54
1992	7,171	1,697	8,868	7,888	1,227	17,983	949	17,033	17,983	23,745	1,509	15.99
1993	6,847	1,736	8,583	8,620	1,037	18,240	1,003	17,237	18,240	22,957	1,551	14.25
1994	6,662	1,727	8,389	8,996	1,275	18,660	942	17,718	18,660	22,457	1,768	13.19
1995	6,560	1,762	8,322	8,835	1,517	18,674	949	17,725	18,674	22,351	2,107	14.62
1996	6,465	1,830	8,295	9,478	1,516	19,290	981	18,309	19,290	22,017	1,839	18.46
1997	6,452	1,817	8,269	10,162	1,193	19,623	1,003	18,620	19,623	22,546	2,667	17.23
1998	6,252	1,759	8,011	10,708	1,143	19,862	945	18,917	19,862	21,034	479	10.87
1999	5,881	1,850	7,731	10,852	1,876	20,459	940	19,519	20,459	21,765	2,683	15.56
2000	5,822	1,911	7,733	11,459	1,549	20,741	1,040	19,701	20,741	22,045	2,160	26.72
2001	5,801	1,868	7,669	11,871	1,079	20,620	971	19,649	20,620	22,446	2,316	21.84
2002	5,746	1,880	7,624	11,530	1,591	20,745	984	19,761	20,745	22,677	2,106	22.51
2003	5,644	1,719	7,363	12,264	1,434	21,061	1,027	20,034	21,061	21,891	1,091	27.56
2004	5,435	1,809	7,244	13,145	1,390	21,779	1,048	20,731	21,779	21,371	1,299	36.77
2005	5,186	1,717	6,903	13,714	1,350	21,967	1,165	20,802	21,967	21,757	2,119	50.28
2006	5,089	1,739	6,828	13,707	1,469	22,004	1,317	20,687	22,004	20,972	867	59.69
2007	5,077	1,783	6,860	13,468	1,785	22,113	1,433	20,680	22,113	21,317	2,036	66.52
2008	5,000	1,784	6,784	12,915	1,602	21,300	1,802	19,498	21,300	19,121	-524	94.04
2009	5,353	1,910	7,263	11,691	1,841	20,795	2,024	18,771	20,795	20,682	3,312	56.35
2010	5,475	2,074	7,549	11,793	2,191	21,533	2,353	19,180	21,533	23,267	4,352	74.71
2011	5,646	2,216	7,862	11,436	2,570	21,868	2,986	18,882	21,868	26,544	5,111	95.73
2012	6,487	2,408	8,895	10,598	2,202	21,695	3,205	18,490	21,695	30,529	6,097	94.52
2013	7,468	2,606	10,073	9,859	2,649	22,582	3,261	18,961	22,582	33,371	5,260	95.99
2014	**8,764**	**3,015**	**11,778**	**9,241**	**2,262**	**23,282**	**4,176**	**19,106**	**23,282**	**36,385**	**5,888**	**87.39**

Sources: Energy Information Administration.
Note: Reserves estimated as of December 31 each year. Imports to Strategic Petroleum Reserve are excluded.

Natural Gas Summary

Year	Production		Extraction	Imports	Supply		Exports	Consumption	Gas Reserves		Price
	Marketed	Dry	Loss	(Bcf)	Other*	Total			Proved Reserves	New Reserves	Gas Wellhead / CityGate ($/Mcf.)
1963	14,747	14,077	670	406	899	15,399	17	13,970	276,151	18,418	.16
1964	15,547	14,824	723	443	866	16,153	20	14,814	281,251	20,447	.15
1965	16,040	15,287	753	456	934	16,703	26	15,280	286,469	21,470	.16
1966	17,207	16,468	739	480	1,116	18,089	25	16,452	289,333	20,355	.16
1967	18,171	17,386	785	564	1,052	19,084	82	17,388	292,908	21,956	.16
1968	19,322	18,494	828	652	1,236	20,476	94	18,632	287,350	13,816	.16
1969	20,698	19,831	867	727	1,329	21,938	51	20,056	275,109	8,482	.17
1970	21,921	21,015	906	821	1,388	23,294	70	21,139	290,746	37,598	.17
1971	22,493	21,610	883	935	1,427	24,052	80	21,793	278,806	10,136	.18
1972	22,532	21,624	908	1,019	1,679	24,400	78	22,101	266,085	9,791	.19
1973	22,648	21,731	917	1,033	1,456	24,297	77	22,049	249,950	6,471	.22
1974	21,601	20,713	887	959	1,624	23,373	77	21,223	237,132	8,501	.30
1975	20,109	19,236	872	953	1,687	21,949	73	19,538	228,200	10,786	.45
1976	19,952	19,098	854	964	1,640	21,767	65	19,946	216,026	7,368	.58
1977	20,025	19,163	863	1,011	1,654	21,884	56	19,521	207,413	12,978	.79
1978	19,974	19,122	852	966	1,817	21,958	53	19,627	208,033	19,425	.91
1979	20,471	19,663	808	1,253	1,620	22,592	56	20,241	200,997	12,221	1.18
1980	20,180	19,403	777	985	1,385	21,822	49	19,877	199,021	16,723	1.59
1981	19,956	19,181	775	904	1,499	21,643	59	19,404	201,730	21,446	1.98
1982	18,582	17,820	762	933	1,647	20,452	52	18,001	201,512	17,288	2.46
1983	16,884	16,094	790	918	1,523	18,590	55	16,835	200,247	14,523	2.59
1984	18,304	17,466	838	843	1,894	20,258	55	17,951	197,463	14,409	2.66
1985	17,270	16,454	816	950	2,005	19,464	55	17,281	193,369	11,891	2.51
1986	16,859	16,059	800	750	1,364	18,234	61	16,221	191,586	13,827	1.94
1987	17,433	16,621	812	993	1,484	19,152	54	17,211	187,211	11,739	1.67
1988	17,918	17,103	816	1,294	1,807	20,278	74	18,030	168,024	-2,517	1.69
1989	18,095	17,311	785	1,382	2,917	21,717	107	19,119	167,116	16,075	1.69
1990	18,594	17,810	784	1,532	2,265	21,693	86	19,174	169,346	19,463	1.71
1991	18,532	17,698	835	1,773	2,699	22,299	129	19,562	167,062	14,918	1.64
1992	18,712	17,840	872	2,138	2,805	22,999	216	20,228	165,015	15,376	1.74
1993	18,982	18,095	886	2,350	3,105	23,690	140	20,790	162,415	15,189	2.04
1994	19,710	18,821	889	2,624	2,598	24,205	162	21,247	163,837	19,744	1.85
1995	19,506	18,599	908	2,841	3,333	24,927	154	22,207	165,146	19,275	1.55
1996	19,812	18,854	958	2,937	3,725	25,669	153	22,610	166,474	21,456	2.17
1997	19,866	18,902	964	2,994	3,641	25,694	157	22,737	167,223	19,960	2.32
1998	19,961	19,024	938	3,152	2,975	25,310	159	22,246	164,041	15,538	1.96
1999	19,805	18,832	973	3,585	2,585	25,166	163	22,405	167,406	22,293	2.19
2000	20,198	19,182	1,016	3,782	3,053	26,261	244	23,333	177,427	29,240	3.68
2001	20,570	19,616	954	3,977	2,110	26,076	373	22,239	183,460	25,812	4.00
2002	19,885	18,928	957	4,015	2,734	26,193	516	23,027	186,946	22,839	2.95
2003	19,974	19,099	876	3,944	2,526	26,249	680	22,277	189,044	21,523	4.88
2004	19,517	18,591	927	4,259	2,703	26,407	854	22,403	192,513	22,637	5.46
2005	18,927	18,051	876	4,341	2,624	25,745	729	22,014	204,385	30,330	7.33
2006	19,410	18,504	906	4,186	1,933	25,347	724	21,699	211,085	25,245	6.39
2007	20,196	19,266	930	4,608	2,363	27,059	822	23,104	247,789	47,691	6.25
2008	21,112	20,159	953	3,984	2,474	27,580	963	23,277	255,035	28,661	7.97
2009	21,648	20,624	1,024	3,751	1,850	27,297	1,072	22,910	283,879	51,381	3.67
2010	22,382	21,316	1,066	3,741	2,321	28,515	1,137	24,087	317,647	56,992	4.48
2011	24,036	22,902	1,134	3,469	1,528	29,405	1,506	24,477	348,809	7,910	5.63
2012	25,283	24,033	1,250	3,138	1,192	29,982	1,619	25,538	322,670	-42	4.73
2013	25,562	24,206	1,356	2,883	2,107	30,883	1,572	26,168	353,994	57,791	4.88
2014	**27,498**	**25,890**	**1,608**	**2,695**	**1,847**	**31,946**	**1,514**	**26,593**	**388,841**	**62,941**	**5.71**

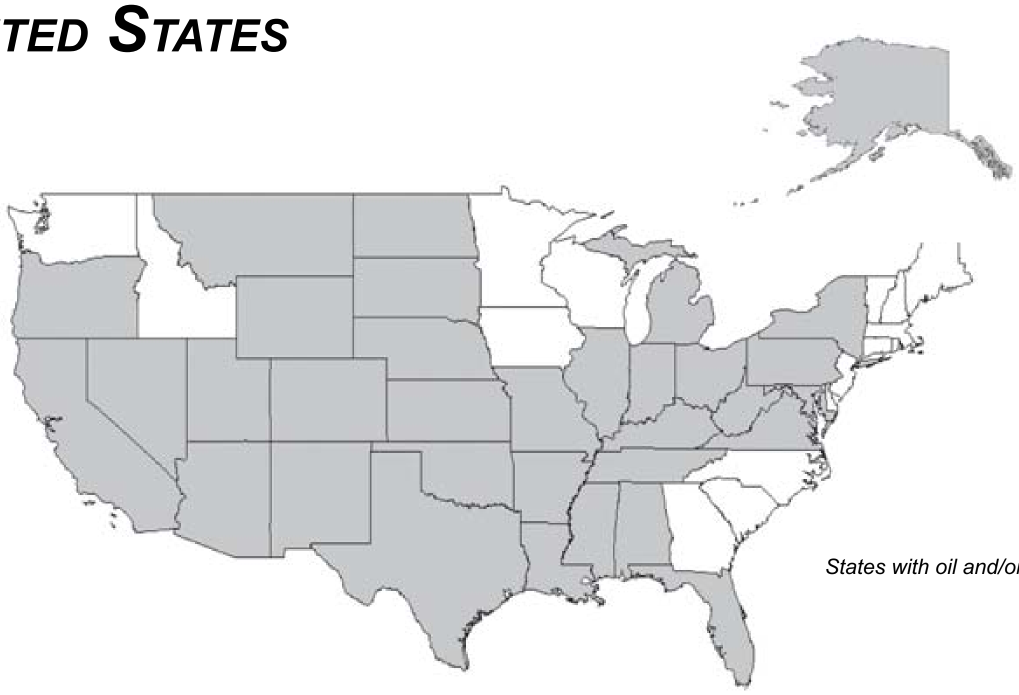
Sources: Energy Information Administration.
Note: Reserves estimated as of December 31 each year.
City Gate price used post-2010 as Wellhead price no longer available.
**Other natural gas supply includes supplemental gaseous fuels, net storage withdrawals, and a statistical balancing item.*

Drilling Summary

Year	Seismic Crews Working	Rotary Rigs Active	Exploratory Wells: New-Field Wildcats	Exploratory Wells: Total Exploratory	Total Well Completions: Oil Wells	Total Well Completions: Gas Wells	Total Well Completions: Dry Wells	Total Well Completions: Service Holes	Total Well Completions: Total Wells	Footage: Total Drilled (mill. ft.)
1963	3,966	1,500	6,570	10,664	20,288	4,751	16,347	2,267	43,653	184.4
1964	4,102	1,502	6,623	10,747	20,620	4,855	17,488	2,273	45,236	189.9
1965	4,247	1,387	6,175	9,466	18,761	4,724	16,025	1,913	41,423	181.5
1966	3,672	1,273	6,158	10,313	16,447	4,167	15,770	2,152	38,536	165.5
1967	3,337	1,134	5,260	8,878	15,329	3,659	13,246	1,584	33,818	144.7
1968	3,268	1,169	5,205	8,879	14,331	3,456	12,812	2,315	32,914	149.3
1969	3,156	1,194	5,956	9,701	14,368	4,083	13,736	1,866	34,053	161.0
1970	2,340	1,028	4,829	7,436	13,043	4,031	11,099	1,369	29,542	142.0
1971	2,655	976	4,636	7,131	11,903	3,983	10,382	1,414	27,682	130.7
1972	3,016	1,107	5,011	7,551	11,437	5,484	11,013	1,486	29,420	142.5
1973	2,999	1,195	5,096	7,771	10,251	6,975	10,466	970	28,662	141.9
1974	3,662	1,471	5,946	8,969	13,644	7,168	12,205	1,398	34,415	153.8
1975	3,416	1,660	6,234	9,459	16,979	8,169	13,736	1,920	40,804	184.9
1976	3,140	1,658	5,856	9,317	17,697	9,438	13,805	1,674	42,614	187.3
1977	3,063	2,001	6,162	10,140	18,700	12,119	15,036	1,453	47,308	215.7
1978	4,148	2,259	6,731	11,030	19,065	14,405	16,591	1,610	51,671	238.4
1979	4,400	2,176	6,423	10,735	20,689	15,166	16,035	1,472	53,362	243.7
1980	4,962	2,910	7,332	12,870	32,120	17,132	20,234	2,076	71,562	311.4
1981	5,877	3,970	9,151	17,430	42,520	19,742	26,972	2,366	91,600	406.5
1982	5,676	3,105	7,386	15,882	39,252	18,810	25,827	2,212	86,101	375.4
1983	4,944	2,229	6,057	13,845	37,396	14,505	23,837	2,047	77,785	316.7
1984	4,655	2,428	6,528	15,138	44,472	14,962	25,549	2,251	87,234	368.8
1985	3,494	1,980	5,630	12,208	36,458	12,917	21,431	1,736	75,542	316.8
1986	2,016	964	3,484	7,156	18,598	8,055	12,362	834	39,849	177.6
1987	1,561	936	3,515	6,903	16,441	8,114	11,698	890	37,143	163.8
1988	1,512	936	3,271	6,350	13,508	8,446	10,284	953	33,191	155.2
1989	1,392	869	2,644	5,247	10,230	9,522	8,236	672	27,988	134.5
1990	1,493	1,010	2,685	5,241	12,839	11,246	8,245	802	32,330	156.0
1991	1,251	860	2,195	4,513	12,588	9,793	7,481	1,070	29,862	145.0
1992	847	721	1,762	3,468	9,402	8,163	5,862	989	23,427	119.9
1993	952	755	1,683	3,483	8,856	9,839	6,096	716	24,791	133.5
1994	1,087	775	1,618	3,624	7,348	9,375	5,096	669	21,819	125.0
1995	1,253	723	1,605	3,152	8,248	8,082	4,814	885	21,144	117.2
1996	1,307	779	1,676	3,021	8,836	9,027	4,890	791	22,753	126.4
1997	1,336	943	1,757	3,166	11,206	11,498	5,874	1,017	28,578	161.2
1998	1,566	827	1,478	2,483	7,682	11,639	4,761	838	24,082	137.2
1999	1,125	625	1,244	1,924	4,805	12,027	3,550	478	20,382	102.9
2000	63*	918	1,511	2,286	8,090	17,051	4,146	930	29,287	144.4
2001	61	1,156	1,786	3,142	8,888	22,072	4,598	-	35,558	180.1
2002	54	830	1,455	2,384	6,775	17,342	3,754	-	27,871	145.2
2003	40	1,032	1,738	2,644	8,129	20,722	3,982	-	32,833	177.2
2004	43	1,192	2,015	3,404	8,789	24,186	4,082	-	37,057	204.3
2005	52	1,381	2,185	4,142	10,779	28,590	4,653	-	44,022	240.3
2006	55	1,649	2,469	4,649	13,385	32,838	5,206	-	51,429	282.7
2007	63	1,769	2,496	5,184	13,371	32,719	4,981	-	51,071	301.5
2008	76	1,880	2,347	4,957	16,633	32,264	5,423	-	54,302	334.1
2009	75	1,086	1,383	2,866	11,190	18,088	3,525	-	32,803	231.6
2010	65	1,541	1,420	2,840	15,753	16,696	4,162	-	36,611	239.2
2011	66	1,875	1,281	2,609	19,468	13,220	4,081	-	36,769	280.0
2012	NA	1,919	1,424	2,666	26,713	10,256	4,462	-	41,431	343.9
2013	NA	1,761	1,349	2,197	25,632	7,514	3,805	-	36,951	325.9
2014	**NA**	**1,862**	**1,165**	**1,972**	**31,374**	**8,189**	**5,444**	**-**	**45,007**	**402.9**

Sources: EIA & IHS, World Oil, Baker Hughes & American Petroleum Institute (wells drilled data pre-2005).
Notes: Total well completions include exploratory and development wells. API historical data may not match IHS data used for recent decade on state and summary pages.
**Switched to maximum U.S. active seismic crew count as per http://www.eia.gov/dnav/pet/pet_crd_seis_s1_m.htm.*

United States



States with oil and/or gas production

Background Information

States

Number of states	50
With oil and/or gas production	33

First year of production

Crude oil (Pennsylvania)	1859
Natural gas (Pennsylvania)	1881

Year and amount of peak production

Crude oil — 3,517,450 thous. bbls.	1970
Natural gas — 27,497,754 MMcf	2014

Deepest producing well (ft.)

Crude oil (Federal Offshore)	37,165
Natural gas (Louisiana)	36,120

Year and depth of deepest well drilled (ft.)

2010 (Federal Offshore)	37,165

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	1,957,372	48%
Gas wells	949,978	24%
Dry holes	1,131,207	28%
Total	4,038,557	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $3,423,122,876

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	243,931	56,422	300,353	1,625,005
Production	206,002	41,990	247,992	1,253,605

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$87.39
Natural gas ($Mcf)*	$5.71

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$230,368,142
Natural gas*	$144,416,854
Total	$374,784,996

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.97
Commercial consumers	$8.90
Industrial consumers	$5.62
Electric utilities	$5.19
City Gate	$5.71

Severance taxes paid $18,921,095

(2014 in thous. $)

Top 10 producing counties/fields

(2014 on a BOE basis)

County	State	% US Prod
Sublette	WY	2.46
Mississippi Canyon	FOS	2.43
Green Canyon	FOS	2.35
Susquehanna	PA	2.34
Beechey Point	AK	2.06
Bradford	PA	2.02
McKenzie	ND	1.94
Webb	TX	1.74
Tarrant	TX	1.69
Kern	CA	1.67

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	788	30,458	31,246
Gas	192	7,950	8,142
Dry	943	4,397	5,340
Total	1,923	42,805	44,728

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	6,151	270,047	276,199
Gas	2,038	92,014	94,052
Dry	4,858	25,152	30,010
Total	13,048	387,213	400,261

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	1,116
Footage (thous. ft.)	7,615
Average rotary rigs active	1,862
Permits	76,112

Worldwide rank

	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	1st	1st
Reserves (2014)	11th	4th

Number of operators	16,071

Number of producing wells
(12/31/14)

Crude oil	478,513
Natural gas	502,012
Total	980,525

Average production

Crude oil (thous. b/d)	7,889
NGL (thous. b/d)	834
Natural gas (MMcf/d)	63,764

Total production

Crude oil (YTD bbls, in thous.)	2,879,519
Natural gas (YTD MMcf)	23,273,829

Natural gas marketed production

(MMcf)	27,497,754

Shale gas production	13,447 Bcf

Average output per producing well

Crude oil (bbls.)	6,018
Natural gas (Mcf)	46,361

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	1,135,896
Oil Wells	24
Gas Wells	34,192
Daily Average (MMcf) / Well	3,112.04

Heavy oil (av. bbls/day, in thous.)

Heavy oil (av. bbls/day, in thous.)	430,293
Wells	69,896
Av. bbls per day (in thous.)	1,179
Av. bbls per well	6,156

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	6,613	NA	6,613
Production	3,200	NA	3,200
Net annual change	3,413	NA	3,413
Proved reserves	39,933	NA	39,933

Natural gas reserves
(as of 12/31/14 Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserve	15,904	47,037	62,941
Production	5,277	22,817	28,094
Net annual change	10,627	24,220	34,847
Proved reserves	69,117	319,724	388,841

Marginal oil wells

Producing marginal wells	397,920
Crude oil production in bbls. (thous.)	408,498
Crude oil production b/d (thous.)	1,119

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	388,859
Natural gas production (MMcf)	2,878,561

Mineral lease royalties, bonuses & rent

Oil	$7,496,088,342
Natural Gas	$1,755,988,289
Rent, Bonuses & Other	$1,516,275,074
Total Oil and Gas Revenues	$10,768,351,705
Total Federal Reported Revenues	$12,041,338,740
Oil and Gas Percent of Total	89%

Federal lands production shares*

Oil	17%
Natural Gas	12%
Combined on BOE basis	14%

Horizontal wells drilled	20,521
Directional wells drilled	4,209
Vertical wells drilled	19,995

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	35,282 Mmcf
CNG stations	1,432
LNG stations	105
LPG stations	2,941

Average number of employees

Oil and natural gas extraction	640,057
Refining	109,903
Transportation	165,352
Wholesale	173,270
Retail	880,461
Pipeline construction	136,535
Oilfield machinery	83,174
Total petroleum industry	2,188,752

Source: For specific methodology and source details, please see pages 13 and 140
**NGLs are not included*

Federal Offshore

Federal Offshore planning areas

Background Information

Planning Areas

Number of areas	25
With oil and/or gas production	3

First year of production

Crude oil	1946
Natural gas	1946

Year and amount of peak production

Crude oil — 599,484 thous. bbls.	2002
Natural gas — 5,248,041 MMcf	1997

Deepest producing well (ft.)

Natural gas (water depth 9,356)	25,400
Crude oil	37,165

Year and depth of deepest well drilled (ft.)

Water depth (2008)	10,011
Well depth (2010)	37,165

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	23,229	33%
Gas wells	28,570	40%
Dry holes	19,412	27%
Total	71,211	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$646,912,244

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	25,982	4,999	30,981	155,967
Production	21,769	3,248	25,017	78,183

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$92.88
Natural gas ($Mcf)*	$5.71

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$49,083,643
Natural gas*	$7,158,501
Total	$56,242,144

Federal Revenues

(2014, in thousands $)

Bonuses and other revenues	$1,048,280.8
Rents	$237,476.1
Royalties	$6,096,449.7
Total	$7,382,206.6

Top 10 producing fields

(2014 on a BOE basis)

Field	% Production State	US
Mississippi Canyon	26.61	2.43
Green Canyon	25.79	2.35
Garden Banks	5.59	0.51
Alaminos Canyon	4.89	0.45
Viosca Knoll	2.94	0.27
Santa Cruz Area	2.38	0.22
Ship Shoal	2.24	0.20
Eugene Island	2.12	0.19
South Timbalier	1.95	0.18
Walker Ridge	1.93	0.18

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	0	128	128
Gas	0	47	47
Dry	49	55	104
Total	49	230	279

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	0	1,188	1,188
Gas	0	516	516
Dry	598	352	950
Total	598	2,056	2,654

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	49
Footage (thous. ft.)	598

Average rotary rigs active 57

Permits 555

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	19th	15th
Production	2nd	7th
Reserves (2014)	3rd	10th

Number of producing wells
(12/31/14)

Crude oil	3,446
Natural gas	1,440
Total	4,886

Average production

Crude oil (thous. b/d)	1,338
NGL (est.)	113
Natural gas (MMcf/day)	2,116

Total production

Crude oil (YTD bbls, in thous.)	488,483
Natural gas (YTD MMcf)	772,240

Natural gas gross withdrawals

(MMcf) 1,275,738

Average output per producing well

Crude oil (bbls.)	141,754
Natural gas (Mcf)	536,278

Producing well depth

	Oil Wells	Gas Wells
Shelf (wd <1,000 ft)	2,852	1,348
Deep (wd 1,000-4,999 ft)	491	81
Ultra Deep (wd >5,000 ft)	103	11
Total	3,446	1,440

Number of operators* 77

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	293	NA	293
Production	3,200	NA	3,200
Net annual change	-254	NA	-254
Proved reserves	5,022	NA	5,022

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	419	1,189	1,608
Production	615	592	1,207
Net annual change	-196	597	401
Proved reserves	5,334	3,634	8,968

2014 Lease Statistics**

G&G permits	72
Platform installations	21
Platform removals	203
Platforms in place	2,428

Lease characteristics

Number of Active Leases	6,056
Gulf of Mexico	5,406
Pacific	43
Alaska	607

Number of producing leases	1,025
Gulf of Mexico	979
Pacific	43
Alaska	3

Number of non-producing leases 5,031

Total Offshore blocks 69,780

Total Offshore acres 381,641,990

Mineral lease royalties, bonuses & rent

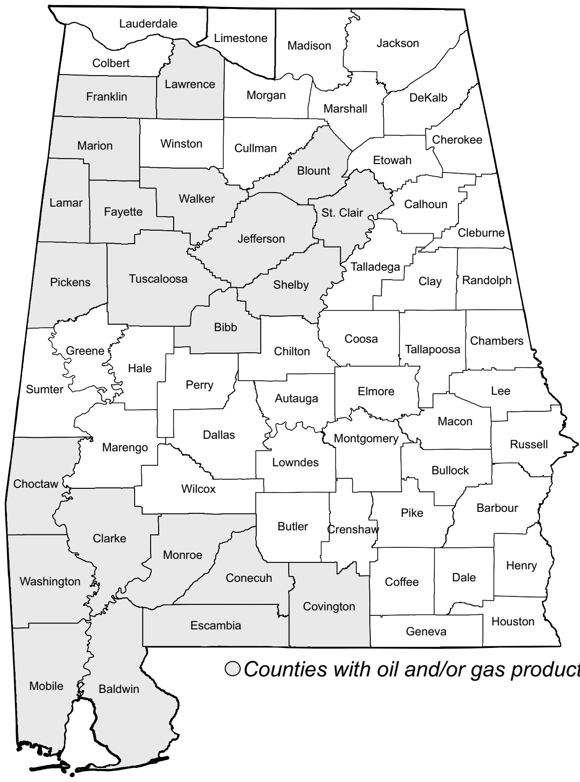
Oil	$5,581,805,763
Natural Gas	$514,643,920
Rent, Bonuses & Other	$1,285,756,885
Total Oil and Gas Revenues	$7,382,206,568
Total Federal Reported Revenues	$7,388,640,961
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	100%
Natural Gas	100%
Combined on BOE basis	100%

Source: For specific methodology and source details, please see pages 13 and 140
** IHS*
*** BOEM*

ALABAMA



Counties with oil and/or gas production

Background Information

Counties

Number of counties	67
With oil and/or gas production	22

First year of production

Crude oil	1944
Natural gas	1904

Year and amount of peak production

Crude oil — 22,153 thous. bbls.	1980
Natural gas —378,877 MMcf	1996

Deepest producing well (ft.)

Crude oil	18,448
Natural gas	23,330

Year and depth of deepest well drilled (ft.)

1995	24,275

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	1,824	11%
Gas wells	9,720	59%
Dry holes	4,982	30%
Total	16,526	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$17,144,582

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	584	459	1,043	8,441
Production	539	404	943	8,701

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$89.73
Natural gas ($Mcf)*	$4.93

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$881,777
Natural gas*	$892,626
Total	$1,774,403

Average natural gas price
(2014 $/Mcf)

Residential consumers	$14.62
Commercial consumers	$11.98
Industrial consumers	$5.49
Electric utilities	NA
City Gate	$4.93

Severance taxes paid
(2014 in thous. $)

Severance taxes paid	$113,563

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Tuscaloosa	25.13	0.13
Mobile	17.66	0.09
Baldwin	16.74	0.09
Conecuh	12.57	0.07
Escambia	10.64	0.06
Jefferson	8.28	0.04
Pickens	1.97	0.01
Walker	1.70	0.01
Choctaw	1.16	0.01
Monroe	1.12	0.01

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	12	38	50
Gas	NA	60	60
Dry	25	18	43
Total	37	116	153

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	111.09	354.16	465.25
Gas	NA	113.01	113.01
Dry	275.58	158.95	434.52
Total	386.66	626.11	1,012.77

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	31
Footage (thous. ft.)	338.84
Average rotary rigs active	6
Permits	221

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	24th	14th
Production	16th	17th
Reserves (2014)	18th	18th

Number of operators	71

Number of producing wells
(12/31/14)

Crude oil	647
Natural gas	6,138
Total	6,785

Average production

Crude oil (thous. b/d)	23.3
NGL (thous. b/d)	3.7
Natural gas (MMcf/d)	447.4

Total production

Crude oil (YTD bbls, in thous.)	8,508
Natural gas (YTD MMcf)	163,294

Natural gas marketed production

(MMcf)	181,060

Average output per producing well

Crude oil (bbls.)	13,151
Natural gas (Mcf)	26,604

Coalbed methane (YTD MMcf)	77,952
Oil Wells	3
Gas Wells	5,783
Daily Average (MMcf) / Well	213.57

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	30	NA	30
Production	9	NA	9
Net annual change	21	NA	21
Proved reserves	79	NA	79

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	112	523	635
Production	17	167	184
Net annual change	95	356	451
Proved reserves	141	1,980	2,121

Marginal oil wells

Producing marginal wells	379
Crude oil production in Bbls. (thous.)	816
Crude oil production Bbls./d (thous.)	2

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	5,780
Natural gas production (MMcf)	68,668

Mineral lease royalties, bonuses & rent

Oil	$3,438,642
Natural Gas	$13,033,160
Rent, Bonuses & Other	$1,070,733
Total Oil and Gas Revenues	$17,542,534
Total Federal Reported Revenues	$19,343,771
Oil and Gas Percent of Total	91%

Federal lands production shares

Oil	<1%
Natural Gas	10%
Combined on BOE basis	8%

Horizontal wells drilled	15
Directional wells drilled	44
Vertical wells drilled	94

Natural gas vehicle fuel demand & fueling stations

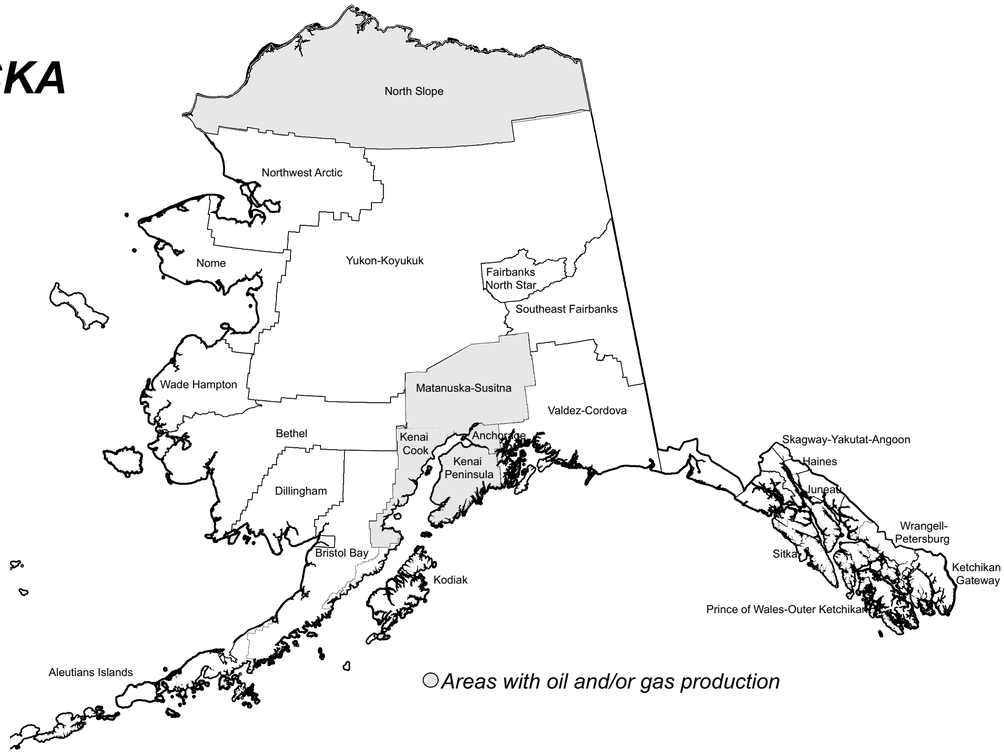
Natural gas vehicle demand	377 Mmcf
CNG stations	24
LNG stations	1
LPG stations	101

Average number of employees

Oil and natural gas extraction	1,734
Refining	1,431
Transportation	2,909
Wholesale	2,739
Retail	17,925
Pipeline construction	1,429
Oilfield machinery	0
Total petroleum industry	28,167

Source: For specific methodology and source details, please see pages 13 and 140.

ALASKA



Background Information

Areas

Number of areas	25
With oil and/or gas production	10

First year of production

Crude oil	1905
Natural gas	1945

Year and amount of peak production

Crude oil — 738,143 thous. bbls.	1988
Natural gas — 555,402 MMcf	1994

Deepest producing well (ft.)

Crude oil	26,350
Natural gas	18,091

Year and depth of deepest well drilled (ft.)

2009	26,090

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	5,516	79%
Gas wells	403	6%
Dry holes	1,091	15%
Total	7,010	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $382,622,553

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	20,190	497	20,687	20,220
Production	17,337	429	17,766	14,356

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$86.41
Natural gas ($Mcf)*	$6.34

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$15,655,332
Natural gas*	$2,189,265
Total	$17,844,597

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.11
Commercial consumers	$8.30
Industrial consumers	$7.97
Electric utilities	$5.06
City Gate	$6.34

Severance taxes paid $3,191,719

(2014 in thous. $)

Top producing areas

(2014 on a BOE basis)

County	Areas State	% Production US
Beechey Point	69.02	2.06
Harrison Bay	14.85	0.44
Kenai	4.93	0.15
Kenai Offshore	3.47	0.10
Tyonek	2.26	0.07
Beechey Point Offshore	2.24	0.07
Harrison Bay Offshore	1.74	0.05
Tyonek Offshore	0.83	0.02
Seldovia	0.55	0.02
Barrow	0.13	<0.01

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	1	132	133
Gas	2	19	21
Dry	6	2	8
Total	9	153	162

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	2.70	665.68	668.38
Gas	16.87	162.80	179.67
Dry	48.11	4.56	52.67
Total	67.68	833.03	900.72

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	6
Footage (thous. ft.)	48.11
Average rotary rigs active	10
Permits	206

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	18th	17th
Production	5th	13th
Reserves (2014)	5th	13th

Number of operators	8

Number of producing wells
(12/31/14)

Crude oil	2,697
Natural gas	234
Total	2,931

Average production

Crude oil (thous. b/d)	495.0
NGL (thous. b/d)	2.1
Natural gas (MMcf/day)	343.6

Total production

Crude oil (YTD bbls, in thous.)	180,686
Natural gas (YTD MMcf)	125,403

Natural gas marketed production

(MMcf)	345,310

Average output per producing well

Crude oil (bbls.)	66,995
Natural gas (Mcf)	535,908

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	141	NA	141
Production	182	NA	182
Net annual change	-41	NA	-41
Proved reserves	2,857	NA	2,857

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	-373	100	-273
Production	204	101	305
Net annual change	-577	-1	-578
Proved reserves	5,851	954	6,805

Marginal oil wells

Producing marginal wells	193
Crude oil production in Bbls. (thous.)	351
Crude oil production Bbls./d (thous.)	1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	-$16,131,062
Natural Gas	$8,087,671
Rent, Bonuses & Other	$45,159,391
Total Oil and Gas Revenues	$37,116,000
Total Federal Reported Revenues	$37,123,680
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	NA
Natural Gas	NA
Combined on BOE basis	NA

Horizontal wells drilled	121
Directional wells drilled	38
Vertical wells drilled	3

Natural gas vehicle fuel demand & fueling stations

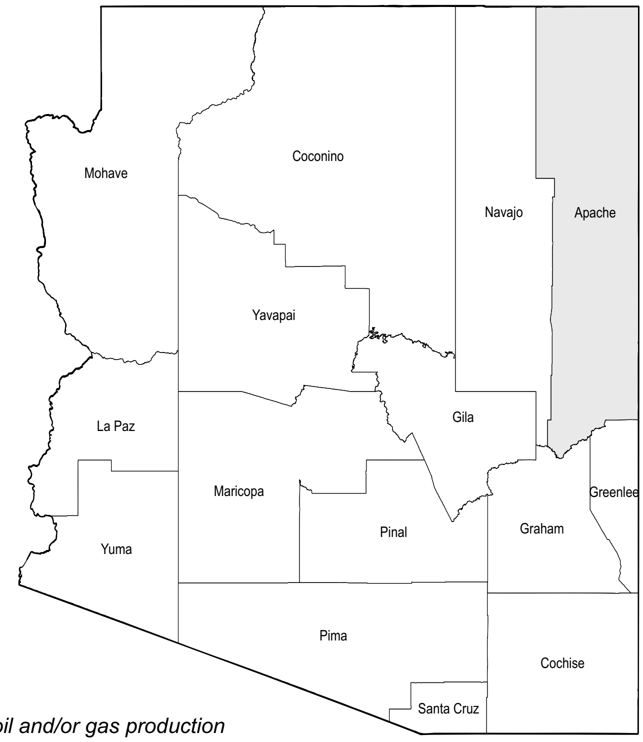
Natural gas vehicle demand	9 Mmcf
CNG stations	1
LNG stations	0
LPG stations	6

Average number of employees

Oil and natural gas extraction	15,015
Refining	0
Transportation	271
Wholesale	459
Retail	1,809
Pipeline construction	1,166
Oilfield machinery	0
Total petroleum industry	18,720

Source: For specific methodology and source details, please see pages 13 and 140

ARIZONA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	15
With oil and/or gas production	1

First year of production

Crude oil	1958
Natural gas	1955

Year and amount of peak production

Crude oil — 3,370 thous. bbls.	1968
Natural gas —3,161 MMcf	1966

Deepest producing well (ft.)

Crude oil	5,411
Natural gas	5,753

Year and depth of deepest well drilled (ft.)

1981	18,013

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	71	6%
Gas wells	55	5%
Dry holes	1,003	89%
Total	1,129	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$70,831,877

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	0	NA	NA
Production	NA	0	NA	NA

Value of Oil and Gas

Average wellhead/City Gate price*

(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$5.20

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	NA
Natural gas*	$551
Total	$551

Average natural gas price

(2014 $/Mcf)

Residential consumers	$17.20
Commercial consumers	$10.34
Industrial consumers	$7.52
Electric utilities	$5.30
City Gate	$5.20

Severance taxes paid - FY $3,494

(2014 in thous. $)

Top producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Apache	100	<0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	NA
Footage (thous. ft.)	NA
Average rotary rigs active	0
Permits	11

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	33rd	32nd
Production	31st	31st
Reserves (2014)	26th	25th

Number of operators	2

Number of producing wells
(12/31/14)

Crude oil	28
Natural gas	4
Total	32

Average production

Crude oil (thous. b/d)	0.2
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	0.2

Total production

Crude oil (YTD bbls, in thous.)	55
Natural gas (YTD MMcf)	90

Natural gas marketed production

(MMcf)	106

Average output per producing well

Crude oil (bbls.)	1,978
Natural gas (Mcf)	22,493

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	26
Crude oil production in Bbls. (thous.)	41
Crude oil production Bbls./d (thous.)	<1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	3
Natural gas production (MMcf)	55

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	$33,887
Total Oil and Gas Revenues	$33,887
Total Federal Reported Revenues	$34,978
Oil and Gas Percent of Total	97%

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	0
Directional wells drilled	0
Vertical wells drilled	0

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	2,181 Mmcf
CNG stations	34
LNG stations	7
LPG stations	66

Average number of employees

Oil and natural gas extraction	550
Refining	200
Transportation	271
Wholesale	1,858
Retail	16,463
Pipeline construction	671
Oilfield machinery	0
Total petroleum industry	20,013

Source: For specific methodology and source details, please see pages 13 and 140

ARKANSAS

○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	75
With oil and/or gas production	27

First year of production

Crude oil	1921
Natural gas	1889

Year and amount of peak production

Crude oil — 77,398 thous. bbls.	1925
Natural gas — 1,146,168 MMcf	2012

Deepest producing well (ft.)

Crude oil	13,000
Natural gas	19,850

Year and depth of deepest well drilled (ft.)

1992	20,661

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	17,789	37%
Gas wells	13,782	29%
Dry holes	16,107	34%
Total	47,678	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $15,038,947

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,900	95	1,995	27,718
Production	1,801	89	1,890	14,647

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$85.23
Natural gas ($Mcf)*	$5.84

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$583,399
Natural gas*	$6,556,761
Total	$7,140,160

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.39
Commercial consumers	$7.88
Industrial consumers	$6.99
Electric utilities	NA
City Gate	$5.84

Severance taxes paid $104,580

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	US
Van Buren	25.34	0.72
Conway	20.44	0.58
Cleburne	19.72	0.56
White	17.35	0.49
Faulkner	5.74	0.16
Sebastian	2.64	0.07
Logan	2.30	0.07
Franklin	1.54	0.04
Columbia	1.19	0.03
Crawford	0.50	0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	2	145	147
Gas	NA	529	529
Dry	6	50	56
Total	8	724	732

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	11.10	858.08	869.18
Gas	NA	5,029.89	5,029.89
Dry	32.40	292.96	325.36
Total	43.51	6,180.93	6,224.43

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	5
Footage (thous. ft.)	29.30
Average rotary rigs active	12
Permits	961

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	17th	5th
Production	20th	9th
Reserves (2014)	20th	9th

Number of operators	244

Number of producing wells
(12/31/14)

Crude oil	1,385
Natural gas	9,610
Total	10,995

Average production

Crude oil (thous. b/d)	13.2
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	3,064.0

Total production

Crude oil (YTD bbls, in thous.)	4,805
Natural gas (YTD MMcf)	1,118,342

Natural gas marketed production

(MMcf)	1,122,733
Shale gas production	1,038 Bcf

Average output per producing well

Crude oil (bbls.)	3,469
Natural gas (Mcf)	116,373

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	945
Oil Wells	0
Gas Wells	40
Daily Average (MMcf) / Well	2.59

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	32	NA	32
Production	6	NA	6
Net annual change	26	NA	26
Proved reserves	67	NA	67

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	64	350	414
Production	10	1,133	1,143
Net annual change	54	-783	-729
Proved reserves	189	12,606	12,795

Marginal oil wells

Producing marginal wells	1,141
Crude oil production in Bbls. (thous.)	1,647
Crude oil production Bbls./d (thous.)	5

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	3,844
Natural gas production (MMcf)	48,770

Mineral lease royalties, bonuses & rent

Oil	$16
Natural Gas	$5,720,428
Rent, Bonuses & Other	$269,390
Total Oil and Gas Revenues	$5,989,834
Total Federal Reported Revenues	$5,991,268
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled	527
Directional wells drilled	49
Vertical wells drilled	155

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	32 Mmcf
CNG stations	11
LNG stations	1
LPG stations	37

Average number of employees

Oil and natural gas extraction	5,041
Refining	1,087
Transportation	1,875
Wholesale	2,371
Retail	12,185
Pipeline construction	738
Oilfield machinery	0
Total petroleum industry	23,297

Source: For specific methodology and source details, please see pages 13 and 140

California

○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	58
With oil and/or gas production	35*

First year of production

Crude oil	1861
Natural gas	1889

Year and amount of peak production

Crude oil —423,877 thous. bbls.	1985
Natural gas —714,893 MMcf	1968

Deepest producing well (ft.)

Crude oil	24,426
Natural gas	18,114

Year and depth of deepest well drilled (ft.)

1993	24,426

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	185,051	81%
Gas wells	7,325	3%
Dry holes	35,908	16%
Total	228,284	100%

Cumulative crude oil wellhead value
(as of 12/31/14 - thous. $) $350,579,546

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	32,156	1,548	33,704	47,468
Production	26,251	1,444	27,695	38,382

**Includes offshore areas*

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$92.14
Natural gas ($Mcf)*	$4.88

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$18,860,966
Natural gas*	$1,166,261
Total	$20,027,227

Average natural gas price
(2014 $/Mcf)

Residential consumers	$11.51
Commercial consumers	$9.05
Industrial consumers	$7.65
Electric utilities	$5.22
City Gate	$4.88

Severance taxes paid - Est. $400,000
(2014 in thous. $)

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Kern	53.75	1.67
Kern	15.38	0.48
Los Angeles	6.82	0.21
Los Angeles Offshore	5.02	0.16
Ventura	4.16	0.13
Monterey	3.80	0.12
Fresno	3.11	0.10
Santa Barbara	2.08	0.06
Orange	1.17	0.04
Orange Offshore	0.98	0.03

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	2	2,664	2,666
Gas	NA	6	6
Dry	5	38	43
Total	7	2,708	2,715

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	18.54	6,654.97	6,673.51
Gas	NA	47.33	47.33
Dry	34.90	132.51	167.41
Total	53.44	6,834.81	6,888.25

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	5
Footage (thous. ft.)	38.24
Average rotary rigs active	42
Permits	5,718

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	3rd	21st
Production	4th	16th
Reserves (2014)	4th	17th

Number of operators	344

Number of producing wells
(12/31/14)

Crude oil	55,410
Natural gas	1,573
Total	56,983

Average production

Crude oil (thous. b/d)	560.9
NGL (thous. b/d)	0.4
Natural gas (MMcf/day)	94.5

Total production

Crude oil (YTD bbls, in thous.)	204,711
Natural gas (YTD MMcf)	34,484

Natural gas marketed production

(MMcf)	238,988
Shale gas production	3 Bcf

Average output per producing well

Crude oil (bbls.)	3,695
Natural gas (Mcf)	21,922

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	199,166
Wells	50,766
Av. bbls per day (in thous.)	545.66
Av. bbls per well	3,923

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	199	NA	199
Production	203	NA	203
Net annual change	-4	NA	-4
Proved reserves	2,874	NA	2,874

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	358	-96	426
Production	147	42	189
Net annual change	211	26	237
Proved reserves	1,987	273	2,260

Marginal oil wells

Producing marginal wells	43,796
Crude oil production in Bbls. (thous.)	74,629
Crude oil production Bbls./d (thous.)	204

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	959
Natural gas production (MMcf)	11,903

Mineral lease royalties, bonuses & rent

Oil	$216,172,401
Natural Gas	$3,753,094
Rent, Bonuses & Other	$223,689
Total Oil and Gas Revenues	$220,149,184
Total Federal Reported Revenues	$238,402,576
Oil and Gas Percent of Total	92%

Federal lands production shares

Oil	9%
Natural Gas	3%
Combined on BOE basis	8%

Horizontal wells drilled	358
Directional wells drilled	1,114
Vertical wells drilled	1,243

Natural gas vehicle fuel demand & fueling stations

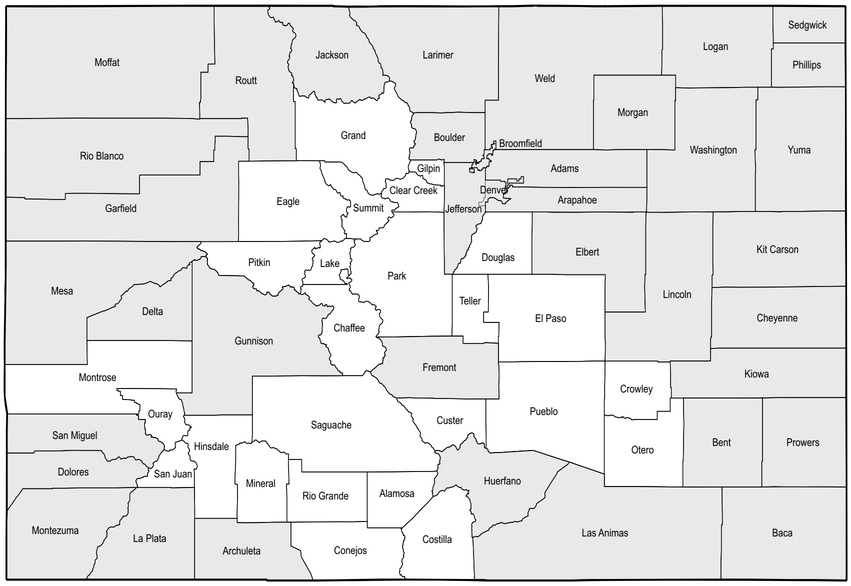
Natural gas vehicle demand	15,331 Mmcf
CNG stations	285
LNG stations	45
LPG stations	235

Average number of employees

Oil and natural gas extraction	23,709
Refining	12,843
Transportation	2,956
Wholesale	10,342
Retail	54,796
Pipeline construction	10,865
Oilfield machinery	2,577
Total petroleum industry	118,088

Source: For specific methodology and source details, please see pages 13 and 140

COLORADO



Counties with oil and/or gas production

Background Information

Counties

Number of counties	63
With oil and/or gas production	38

First year of production

Crude oil	1887
Natural gas	1893

Year and amount of peak production

Crude oil — 68,443 thous. bbls.	2014
Natural gas — 1,709,376 MMcf	2012

Deepest producing well (ft.)

Crude oil	18,805
Natural gas	19,500

Year and depth of deepest well drilled (ft.)

1987	22,092

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	20,810	20%
Gas wells	54,737	53%
Dry holes	27,344	27%
Total	102,891	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $51,862,970

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	3,595	1,726	5,321	50,507
Production	2,306	777	3,083	27,560

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$82.48
Natural gas ($Mcf)*	$5.42

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$7,900,512
Natural gas*	$8,907,700
Total	$16,808,212

Average natural gas price
(2014 $/Mcf)

Residential consumers	$8.89
Commercial consumers	$8.15
Industrial consumers	$6.84
Electric utilities	$5.49
City Gate	$5.42

Severance taxes paid $235,200
(2014 in thous. $)

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Garfield	33.88	1.52
Weld	28.35	1.27
La Plata	18.40	0.82
Rio Blanco	5.88	0.26
Las Animas	4.83	0.22
Mesa	2.00	0.09
Yuma	1.56	0.07
Moffat	0.96	0.04
Archuleta	0.87	0.04
Cheyenne	0.48	0.02

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	41	1,265	1,306
Gas	8	504	512
Dry	30	177	207
Total	79	1,946	2,025

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	434.25	15,144.84	15,579.08
Gas	78.16	4,026.76	4,104.92
Dry	155.61	990.07	1,145.68
Total	668.01	20,161.67	20,829.68

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	46
Footage (thous. ft.)	336.92

Average rotary rigs active	68

Permits	3,460

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	6th	6th
Production	8th	6th
Reserves (2014)	8th	7th

Number of operators	353

Number of producing wells
(12/31/14)

Crude oil	8,990
Natural gas	47,538
Total	56,528

Average production

Crude oil (thous. b/d)	187.5
NGL (thous. b/d)	73.3
Natural gas (MMcf/day)	3,847.5

Total production

Crude oil (YTD bbls, in thous.)	68,443
Natural gas (YTD MMcf)	1,404,323

Natural gas marketed production

(MMcf)	1,643,487

Shale gas production	236 Bcf

Average output per producing well

Crude oil (bbls.)	7,613
Natural gas (Mcf)	29,541

Coalbed methane (YTD MMcf)	413,523
Oil Wells	0
Gas Wells	5,043
Daily Average (MMcf) / Well	1,132,94

Heavy oil (YTD Bbls, in thous.)	23,417
Wells	2,069
Av. bbls per day (in thous.)	64.16
Av. bbls per well	11,318

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	382	NA	382
Production	102	NA	102
Net annual change	280	NA	280
Proved reserves	1,451	NA	1,451

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	1,506	-1,401	105
Production	304	1,342	1,646
Net annual change	1,202	-2,743	-1,541
Proved reserves	5,482	16,510	21,992

Marginal oil wells

Producing marginal wells	6,135
Crude oil production in Bbls. (thous.)	5,778
Crude oil production Bbls./d (thous.)	16

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	35,814
Natural gas production (MMcf)	317,229

Mineral lease royalties, bonuses & rent

Oil	$84,881,846
Natural Gas	$145,523,684
Rent, Bonuses & Other	$9,489,469
Total Oil and Gas Revenues	$239,894,999
Total Federal Reported Revenues	$358,488,057
Oil and Gas Percent of Total	67%

Federal lands production shares

Oil	5%
Natural Gas	20%
Combined on BOE basis	16%

Horizontal wells drilled	1,319
Directional wells drilled	514
Vertical wells drilled	192

Natural gas vehicle fuel demand & fueling stations

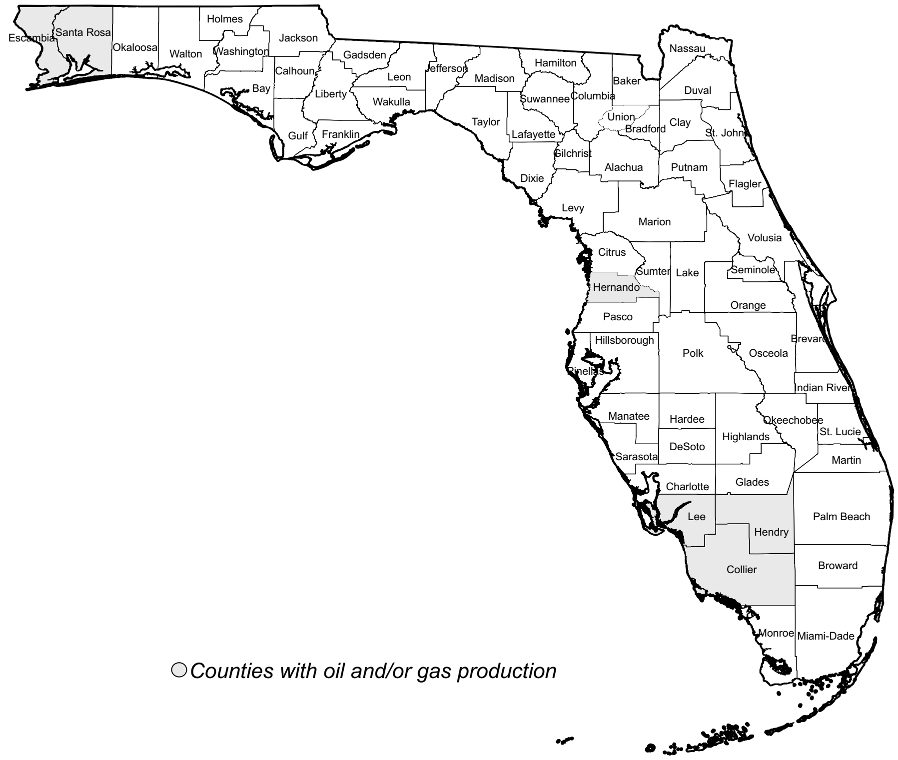
Natural gas vehicle demand	327 Mmcf
CNG stations	37
LNG stations	0
LPG stations	51

Average number of employees

Oil and natural gas extraction	30,014
Refining	729
Transportation	1,911
Wholesale	2,431
Retail	12,915
Pipeline construction	5,204
Oilfield machinery	368
Total petroleum industry	53,572

Source: For specific methodology and source details, please see pages 13 and 140

FLORIDA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	67
With oil and/or gas production	6

First year of production

Crude oil	1943
Natural gas	1943

Year and amount of peak production

Crude oil — 47,536 thous. bbls.	1978
Natural gas — 51,595 MMcf	1978

Deepest producing well (ft.)

Crude oil	16,250
Natural gas	NA

Year and depth of deepest well drilled (ft.)

2008	18,875

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	338	26%
Gas wells	3	0%
Dry holes	952	74%
Total	1,293	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$9,352,458

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	768	81	849	629
Production	698	86	784	618

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$5.05

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	NA
Natural gas*	$2,505
Total	$2,505

Average natural gas price
(2014 $/Mcf)

Residential consumers	$19.02
Commercial consumers	$11.42
Industrial consumers	$6.89
Electric utilities	$5.58
City Gate	$5.05

Severance taxes paid - FY $11,054
(2014 in thous. $)

Top producing counties
(2014 on a BOE basis)

County	% Production State	US
Santa Rosa	51.45	0.02
Collier	22.05	0.01
Escambia	14.19	<0.01
Hendry	8.42	<0.01
Hernando	2.99	<0.01
Lee	0.90	<0.01

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	1	1
Gas	NA	NA	NA
Dry	NA	2	2
Total	NA	3	3

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	14.53	14.53
Gas	NA	NA	NA
Dry	NA	11.44	11.44
Total	NA	25.96	25.96

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	NA
Footage (thous. ft.)	NA
Average rotary rigs active	2
Permits	NA

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	31st	34th
Production	25th	29th
Reserves (2014)	19th	24th

Number of operators	7

Number of producing wells
(12/31/14)

Crude oil	82
Natural gas	NA
Total	82

Average production

Crude oil (thous. b/d)	6.1
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)	2,226
Natural gas (YTD MMcf)	NA

Natural gas marketed production

(MMcf)	496

Average output per producing well

Crude oil (bbls.)	27,146
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	36	NA	36
Production	4	NA	4
Net annual change	32	NA	32
Proved reserves	70	NA	70

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	-1	-14	-15
Production	0	0	0
Net annual change	-1	-14	-15
Proved reserves	0	0	0

Marginal oil wells

Producing marginal wells	13
Crude oil production in Bbls. (thous.)	34
Crude oil production Bbls./d (thous.)	<1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	$7,527
Total Oil and Gas Revenues	$7,527
Total Federal Reported Revenues	$9,478
Oil and Gas Percent of Total	79%

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	3
Directional wells drilled	0
Vertical wells drilled	0

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	290 Mmcf
CNG stations	40
LNG stations	1
LPG stations	62

Average number of employees

Oil and natural gas extraction	977
Refining	2,490
Transportation	1,919
Wholesale	5,540
Retail	41,750
Pipeline construction	691
Oilfield machinery	64
Total petroleum industry	53,431

Source: For specific methodology and source details, please see pages 13 and 140

ILLINOIS

○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	102
With oil and/or gas production	44

First year of production

Crude oil	1889
Natural gas	1882

Year and amount of peak production

Crude oil — 147,647 thous. bbls.	1940
Natural gas — 18,137 MMcf	1944

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1976	14,942

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	81,663	56%
Gas wells	1,616	1%
Dry holes	62,328	43%
Total	145,607	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$27,430,791

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	3,576	NA	3,576	NA
Production	3,582	NA	3,582	NA

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$87.66
Natural gas ($Mcf)*	$6.28

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$836,890
Natural gas*	$12,114
Total	$849,004

Average natural gas price
(2014 $/Mcf)

Residential consumers	$9.59
Commercial consumers	$8.86
Industrial consumers	$7.75
Electric utilities	NA
City Gate	$6.28

Severance taxes paid --
(2014 in thous. $)

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
White	14.05	0.02
Crawford	10.55	0.01
Marion	10.38	0.01
Lawrence	8.49	0.01
Fayette	7.88	0.01
Wabash	4.93	0.01
Clay	4.77	0.01
Wayne	4.75	0.01
Richland	3.94	0.01
Gallatin	3.51	<0.01

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	12	349	361
Gas	NA	NA	NA
Dry	48	90	138
Total	60	439	499

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	41.65	1,018.28	1,059.93
Gas	NA	NA	NA
Dry	114.38	219.14	333.52
Total	156.03	1,237.42	1,393.45

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	25
Footage (thous. ft.)	54.85
Average rotary rigs active	2
Permits	1,194

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	12th	27th
Production	17th	27th
Reserves (2014)	22nd	26th

Number of operators	804

Number of producing wells
(12/31/14)

Crude oil	NA
Natural gas	NA
Total	NA

Average production

Crude oil (thous. b/d)	26.2
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)	9,547
Natural gas (YTD MMcf)	NA

Natural gas marketed production

(MMcf)	1,929

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	-6	NA	-6
Production	2	NA	2
Net annual change	-8	NA	-8
Proved reserves	34	NA	34

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	7,220
Crude oil production in Bbls. (thous.)	5,668
Crude oil production Bbls./d (thous.)	16

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	$257,717
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	$257,717
Total Federal Reported Revenues	$257,717
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	0%
Combined on BOE basis	<1%

Horizontal wells drilled	8
Directional wells drilled	1
Vertical wells drilled	490

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	407 Mmcf
CNG stations	45
LNG stations	1
LPG stations	106

Average number of employees

Oil and natural gas extraction	2,885
Refining	5,582
Transportation	5,397
Wholesale	4,307
Retail	28,327
Pipeline construction	1,671
Oilfield machinery	0
Total petroleum industry	48,169

Source: For specific methodology and source details, please see pages 13 and 140

INDIANA

○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	92
With oil and/or gas production	16

First year of production

Crude oil	1889
Natural gas	1885

Year and amount of peak production

Crude oil — 12,833 thous. bbls.	1953
Natural gas — 9,075 MMcf	2011

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

2008	10,064

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	21,832	35%
Gas wells	10,310	17%
Dry holes	29,658	48%
Total	61,800	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $4,894,527

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	558	NA	558	NA
Production	556	NA	556	NA

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$87.88
Natural gas ($Mcf)*	$5.63

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$220,315
Natural gas*	$37,248
Total	$257,563

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.02
Commercial consumers	$8.19
Industrial consumers	$7.32
Electric utilities	NA
City Gate	$5.63

Severance taxes paid $2,454

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	US
Gibson	41.49	0.02
Posey	23.36	0.01
Vigo	10.33	<0.01
Pike	7.05	<0.01
Greene	3.59	<0.01
Daviess	2.92	<0.01
Knox	2.82	<0.01
Spencer	2.70	<0.01
Vanderburgh	2.55	<0.01
Sullivan	1.35	<0.01

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	5	115	120
Gas	NA	19	19
Dry	17	24	41
Total	22	158	180

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	9.23	385.58	394.82
Gas	NA	27.94	27.94
Dry	37.96	38.80	76.75
Total	47.19	452.32	499.51

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	8
Footage (thous. ft.)	22.43
Average rotary rigs active	2
Permits	273

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	20th	18th
Production	24th	25th
Reserves (2014)	25th	27th

Number of operators	273

Number of producing wells
(12/31/14)

Crude oil	NA
Natural gas	NA
Total	NA

Average production

Crude oil (thous. b/d)	6.8
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)	2,474
Natural gas (YTD MMcf)	NA

Natural gas marketed production

(MMcf)	6,616

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	1	NA	1
Production	1	NA	1
Net annual change	0	NA	0
Proved reserves	8	NA	8

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	1,741
Crude oil production in Bbls. (thous.)	1,168
Crude oil production Bbls./d (thous.)	3

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	$45,352
Total Oil and Gas Revenues	$45,352
Total Federal Reported Revenues	$45,352
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	0%
Combined on BOE basis	<1%

Horizontal wells drilled	19
Directional wells drilled	0
Vertical wells drilled	161

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	82 Mmcf
CNG stations	28
LNG stations	2
LPG stations	174

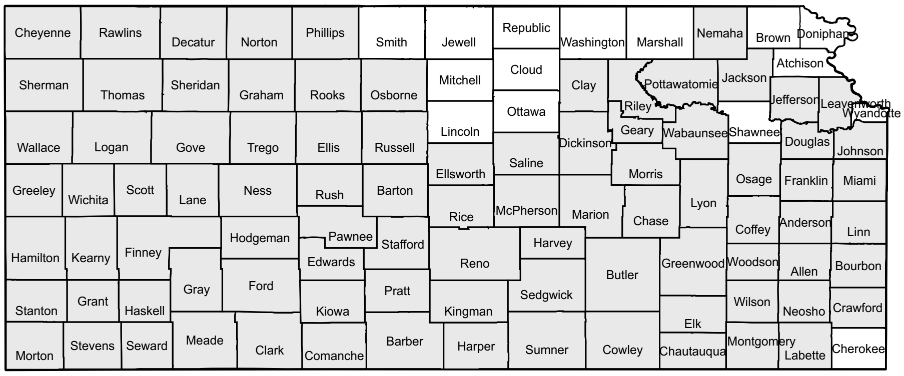
Average number of employees

Oil and natural gas extraction	721
Refining	3,538
Transportation	2,327
Wholesale	3,518
Retail	22,341
Pipeline construction	1,494
Oilfield machinery	128
Total petroleum industry	34,067

Source: For specific methodology and source details, please see pages 13 and 140

INDIANA

KANSAS



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	105
With oil and/or gas production	90

First year of production

Crude oil	1889
Natural gas	1882

Year and amount of peak production

Crude oil —124,204 thous. bbls.	1956
Natural gas — 899,955 MMcf	1970

Deepest producing well (ft.)

Crude oil	12,920
Natural gas	12,920

Year and depth of deepest well drilled (ft.)

1986	14,100

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	153,500	49%
Gas wells	39,536	13%
Dry holes	116,790	38%
Total	309,826	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $76,042,947

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	6,861	1,499	8,360	47,493
Production	6,481	1,391	7,872	42,919

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$86.80
Natural gas ($Mcf)*	$6.10

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$4,297,034
Natural gas*	$1,747,528
Total	$6,044,562

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.59
Commercial consumers	$9.61
Industrial consumers	$5.68
Electric utilities	$5.65
City Gate	$6.10

Severance taxes paid - FY $389,800

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Harper	7.12	0.10
Barber	6.78	0.10
Stevens	6.21	0.09
Grant	5.31	0.08
Haskell	4.96	0.07
Kearny	4.90	0.07
Finney	4.75	0.07
Ellis	3.40	0.05
Morton	3.03	0.04
Stanton	2.59	0.04

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	297	2,886	3,183
Gas	16	170	186
Dry	348	783	1,131
Total	661	3,839	4,500

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	1,324.80	7,640.31	8,965.11
Gas	81.26	684.18	765.44
Dry	1,461.89	2,671.74	4,133.64
Total	2,867.95	10,996.23	13,864.18

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 363

Footage (thous. ft.) 1,575.14

Average rotary rigs active 29

Permits 7,214

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	2nd	10th
Production	11th	15th
Reserves (2014)	12th	15th

Number of operators 1,810

Number of producing wells
(12/31/14)

Crude oil	45,315
Natural gas	21,718
Total	67,033

Average production

Crude oil (thous. b/d)	135.1
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	803.4

Total production

Crude oil (YTD bbls, in thous.)	49,324
Natural gas (YTD MMcf)	293,243

Natural gas marketed production

(MMcf) 286,480

Shale gas production 1 Bcf

Average output per producing well

Crude oil (bbls.)	1,089
Natural gas (Mcf)	13,502

Coalbed methane (YTD MMcf) 24,940

Oil Wells	15
Gas Wells	3,681
Daily Average (MMcf) / Well	68.33

Heavy oil (YTD Bbls, in thous.) NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	109	NA	109
Production	48	NA	48
Net annual change	61	NA	61
Proved reserves	451	NA	451

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	258	863	1,121
Production	34	253	287
Net annual change	224	610	834
Proved reserves	657	3,949	4,606

Marginal oil wells

Producing marginal wells	43,729
Crude oil production in Bbls. (thous.)	28,942
Crude oil production Bbls./d (thous.)	79

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	20,741
Natural gas production (MMcf)	217,173

Mineral lease royalties, bonuses & rent

Oil	$3,576,179
Natural Gas	$1,650,579
Rent, Bonuses & Other	$71,362
Total Oil and Gas Revenues	$5,298,121
Total Federal Reported Revenues	$5,298,381
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	0%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled 223

Directional wells drilled 4

Vertical wells drilled 4,273

Natural gas vehicle fuel demand & fueling stations

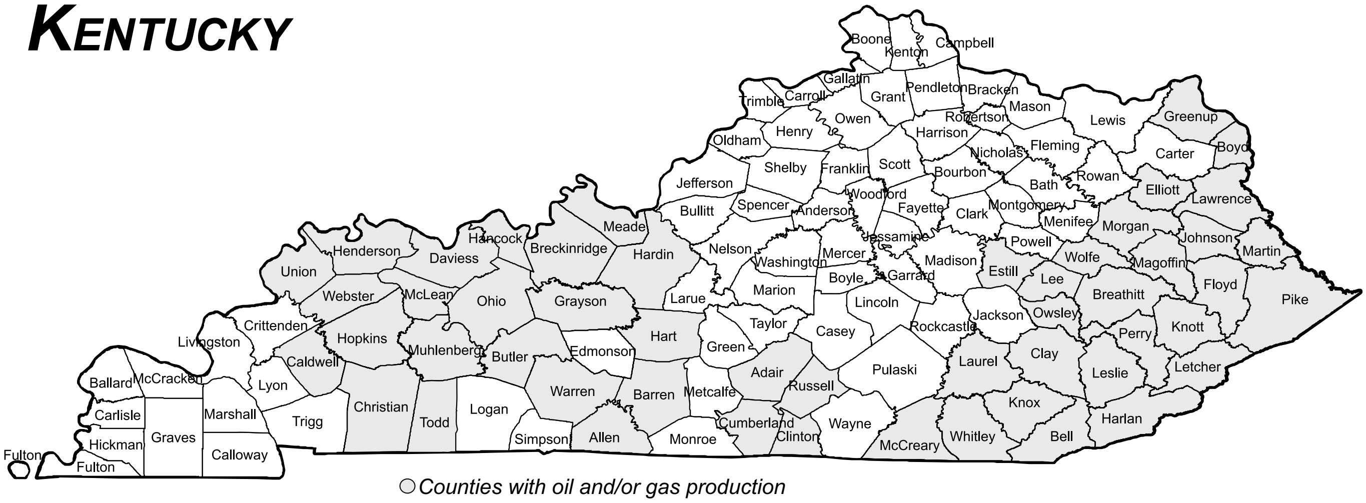
Natural gas vehicle demand	15 Mmcf
CNG stations	10
LNG stations	0
LPG stations	35

Average number of employees

Oil and natural gas extraction	9,586
Refining	2,205
Transportation	2,663
Wholesale	1,862
Retail	10,702
Pipeline construction	2,690
Oilfield machinery	0
Total petroleum industry	29,708

Source: For specific methodology and source details, please see pages 13 and 140

Kentucky



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	120
With oil and/or gas production	52

First year of production

Crude oil	1860
Natural gas	1888

Year and amount of peak production

Crude oil — 27,272 thous. bbls.	1959
Natural gas — 135,330 MMcf	2010

Deepest producing well (ft.)

Crude oil	NA
Natural gas	10,608

Year and depth of deepest well drilled (ft.)

1977	15,200

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	35,023	33%
Gas wells	27,308	26%
Dry holes	44,071	41%
Total	106,402	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $19,321,756

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	774	267	1,041	7,464
Production	768	277	1,045	6,008

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$86.61
Natural gas ($Mcf)*	$5.16

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$292,395
Natural gas*	$480,350
Total	$772,745

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.62
Commercial consumers	$9.06
Industrial consumers	$5.78
Electric utilities	NA
City Gate	$5.16

Severance taxes paid $87,065

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	US
Pike	29.30	0.03
Knott	10.21	0.01
Martin	9.43	0.01
Floyd	5.89	0.01
Letcher	4.83	<0.01
Henderson	4.44	<0.01
Union	4.37	<0.01
Perry	3.99	<0.01
Clay	2.83	<0.01
Knox	2.52	<0.01

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	15	228	243
Gas	9	123	132
Dry	30	152	182
Total	54	503	557

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	35.44	475.21	510.65
Gas	23.25	853.49	876.75
Dry	46.37	212.77	259.14
Total	105.06	1,541.47	1,646.53

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	22
Footage (thous. ft.)	36.76
Average rotary rigs active	3
Permits	932

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	14th	12th
Production	22nd	20th
Reserves (2014)	23rd	20th

Number of operators	543

Number of producing wells
(12/31/14)

Crude oil	NA
Natural gas	6,552
Total	6,552

Average production

Crude oil (thous. b/d)	2.6
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	80.3

Total production

Crude oil (YTD bbls, in thous.)	931
Natural gas (YTD MMcf)	29,297

Natural gas marketed production

(MMcf)	93,091
Shale gas production	2 Bcf

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	4,471

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	112
Oil Wells	0
Gas Wells	18
Daily Average (MMcf) / Well	0.31

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	0	NA	0
Production	1	NA	1
Net annual change	-1	NA	-1
Proved reserves	21	NA	21

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	7	28	35
Production	2	74	76
Net annual change	5	-46	-41
Proved reserves	49	1,704	1,753

Marginal oil wells

Producing marginal wells	1,124
Crude oil production in Bbls. (thous.)	578
Crude oil production Bbls./d (thous.)	2

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	6,512
Natural gas production (MMcf)	27,356

Mineral lease royalties, bonuses & rent

Oil	$156,110
Natural Gas	$41,148
Rent, Bonuses & Other	$60,658
Total Oil and Gas Revenues	$257,916
Total Federal Reported Revenues	$339,424
Oil and Gas Percent of Total	76%

Federal lands production shares

Oil	<1%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled	137
Directional wells drilled	0
Vertical wells drilled	420

Natural gas vehicle fuel demand & fueling stations

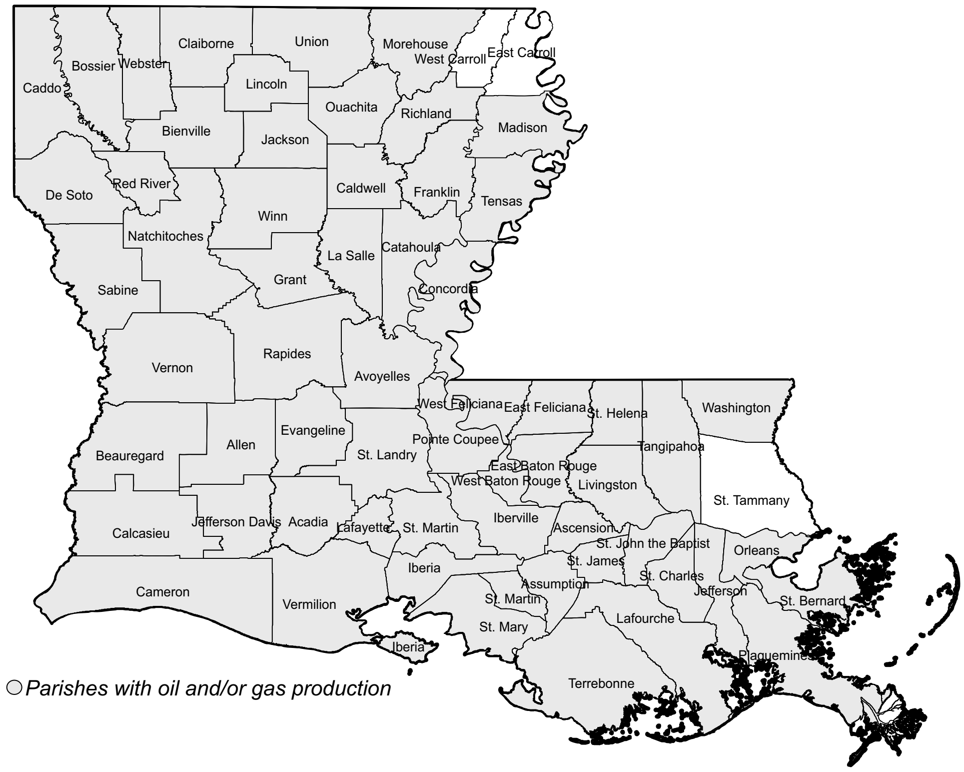
Natural gas vehicle demand	41 Mmcf
CNG stations	4
LNG stations	1
LPG stations	47

Average number of employees

Oil and natural gas extraction	1,612
Refining	1,435
Transportation	1,818
Wholesale	2,722
Retail	16,491
Pipeline construction	737
Oilfield machinery	0
Total petroleum industry	24,815

Source: For specific methodology and source details, please see pages 13 and 140

LOUISIANA



○ *Parishes with oil and/or gas production*

Background Information

Parishes

Number of parishes	64
With oil and/or gas production	61

First year of production

Crude oil	1902
Natural gas	1905

Year and amount of peak production

Crude oil —935,243 thous. bbls.	1971
Natural gas — 8,242,423 MMcf	1973

Deepest producing well (ft.)

Crude oil	22,856
Natural gas	30,374

Year and depth of deepest well drilled (ft.)

2013	36,120

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	93,063	40%
Gas wells	56,677	25%
Dry holes	80,907	35%
Total	230,647	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $311,442,623

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	28,341	6,477	34,818	296,635
Production	19,142	4,758	23,900	163,090

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$94.13
Natural gas ($Mcf)*	$4.90

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$6,473,979
Natural gas*	$9,607,984
Total	$16,081,963

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.89
Commercial consumers	$9.01
Industrial consumers	$5.05
Electric utilities	NA
City Gate	$4.90

Severance taxes paid - FY

(2014 in thous. $) $847,757

Top 10 producing parishes

(2014 on a BOE basis)

Parish	% Production State	% Production US
De Soto	28.79	1.56
Red River	11.39	0.62
Caddo	8.24	0.45
Bossier	7.01	0.38
Plaquemines	4.92	0.27
St Mary	3.99	0.22
Lincoln	3.89	0.21
Sabine	3.48	0.19
Bienville	3.45	0.19
Vermillion	3.17	0.17

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	5	635	640
Gas	2	284	286
Dry	16	253	269
Total	23	1,172	1,195

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	49.76	2,584.62	2,634.38
Gas	33.59	4,249.32	4,282.91
Dry	78.30	1,894.89	1,973.19
Total	161.65	8,728.83	8,890.48

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 15

Footage (thous. ft.) 96.66

Average rotary rigs active 111

Permits 2,458

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	10th	9th
Production	10th	4th
Reserves (2014)	10th	6th

Number of operators 954

Number of producing wells
(12/31/14)

Crude oil	18,290
Natural gas	19,763
Total	38,053

Average production

Crude oil (thous. b/d)	150.2
NGL (thous. b/d)	38.7
Natural gas (MMcf/day)	5,113.9

Total production

Crude oil (YTD bbls, in thous.)	54,836
Natural gas (YTD MMcf)	1,866,589

Natural gas marketed production

(MMcf) 1,960,813

Shale gas production 1,191 Bcf

Average output per producing well

Crude oil (bbls.)	2,998
Natural gas (Mcf)	94,449

Coalbed methane (YTD MMcf) NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.) 33,721

Wells	12,631
Av. bbls per day (in thous.)	92.39
Av. bbls per well	2,670

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14)(mill. bbls.)

	Crude Oil	NGL	Total
New reserves	96	NA	96
Production	69	NA	69
Net annual change	27	NA	27
Proved reserves	649	NA	649

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	147	4,711	4,858
Production	109	1,880	1,989
Net annual change	38	2,831	2,869
Proved reserves	908	22,350	23,358

Marginal oil wells

Producing marginal wells	15,751
Crude oil production in Bbls. (thous.)	11,280
Crude oil production Bbls./d (thous.)	31

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	11,961
Natural gas production (MMcf)	79,774

Mineral lease royalties, bonuses & rent

Oil	$99,700,112
Natural Gas	$33,839,993
Rent, Bonuses & Other	$3,587,556
Total Oil and Gas Revenues	$137,127,662
Total Federal Reported Revenues	$137,127,662
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	8%
Natural Gas	3%
Combined on BOE basis	4%

Horizontal wells drilled 258

Directional wells drilled 291

Vertical wells drilled 646

Natural gas vehicle fuel demand & fueling stations

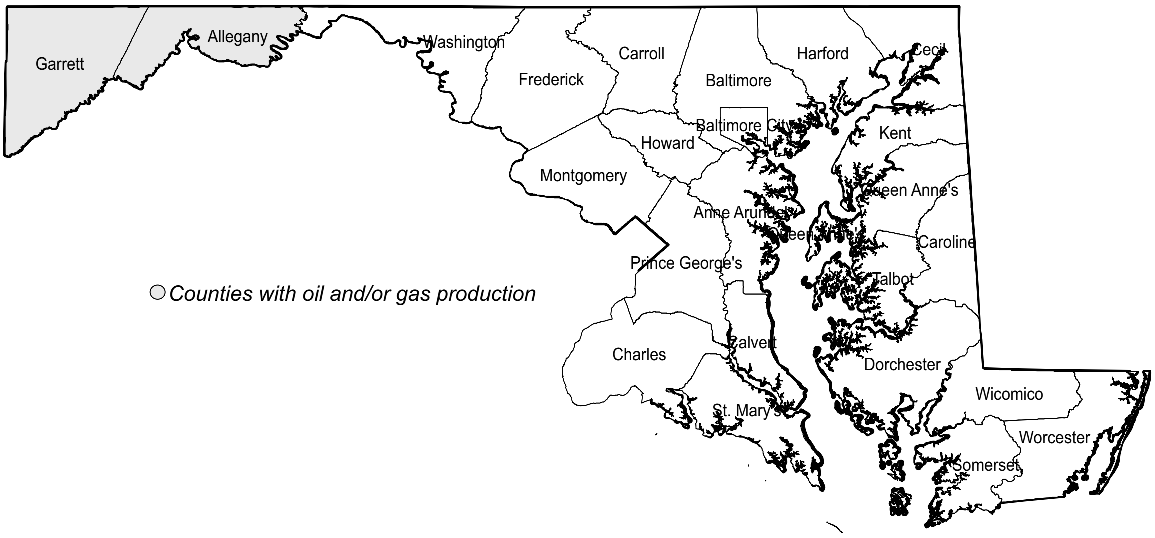
Natural gas vehicle demand	54 Mmcf
CNG stations	23
LNG stations	1
LPG stations	33

Average number of employees

Oil and natural gas extraction	50,387
Refining	12,029
Transportation	4,605
Wholesale	3,302
Retail	19,057
Pipeline construction	14,864
Oilfield machinery	0
Total petroleum industry	104,244

Source: For specific methodology and source details, please see pages 13 and 140

MARYLAND



Background Information

Counties

Number of counties	23
With oil and/or gas production	2

First year of production

Crude oil	--
Natural gas	1950

Year and amount of peak production

Crude oil —	--
Natural gas — 4,543 MMcf	1959

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1973	11,617

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	NA	NA
Gas wells	88	46%
Dry holes	102	54%
Total	190	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	NA

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	0	NA	NA	NA
Production	0	NA	NA	NA

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$6.36

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	NA
Natural gas*	$127
Total	$127

Average natural gas price

(2014 $/Mcf)

Residential consumers	$12.21
Commercial consumers	$10.52
Industrial consumers	$9.94
Electric utilities	$5.35
City Gate	$6.36

Severance taxes paid

(2014 in thous. $)	$2

Top producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
NA	NA	NA

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	NA
Footage (thous. ft.)	NA
Average rotary rigs active	0
Permits	0

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	34th	31st
Production	NA	32nd
Reserves (2014)	27th	28th

Number of operators	NA

Number of producing wells
(12/31/14)

Crude oil	NA
Natural gas	NA
Total	NA

Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	NA

Natural gas marketed production

(MMcf)	20

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	$16,743
Total Oil and Gas Revenues	$16,743
Total Federal Reported Revenues	$16,743
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	0
Directional wells drilled	0
Vertical wells drilled	0

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	235 Mmcf
CNG stations	9
LNG stations	0
LPG stations	20

Average number of employees

Oil and natural gas extraction	419
Refining	852
Transportation	522
Wholesale	2,808
Retail	11,492
Pipeline construction	789
Oilfield machinery	0
Total petroleum industry	16,882

Source: For specific methodology and source details, please see pages 13 and 140

Michigan

Background Information

Counties

Number of counties	83
With oil and/or gas production	59

First year of production

Crude oil	1900
Natural gas	1909

Year and amount of peak production

Crude oil — 34,862 thous. bbls.	1979
Natural gas —311,616 MMcf	1997

Deepest producing well (ft.)

Crude oil	11,882
Natural gas	15,224

Year and depth of deepest well drilled (ft.)

2012	19,972

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	16,161	27%
Gas wells	14,986	26%
Dry holes	27,540	47%
Total	58,687	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$19,298,150

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,315	314	1,629	11,164
Production	1,286	250	1,536	6,748

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$89.46
Natural gas ($Mcf)*	$5.54

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$655,026
Natural gas*	$637,460
Total	$1,292,486

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.33
Commercial consumers	$8.28
Industrial consumers	$7.84
Electric utilities	$6.71
City Gate	$5.54

Severance taxes paid

(2014 in thous. $)	$75,422

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Otsego	20.13	0.07
Montmorency	17.60	0.06
Antrim	12.95	0.05
Jackson	7.24	0.03
Alpena	6.32	0.02
Manistee	4.22	0.02
Kalkaska	3.22	0.01
Oscoda	3.04	0.01
Alcona	2.95	0.01
Crawford	2.49	0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	18	39	57
Gas	1	4	5
Dry	38	14	52
Total	57	57	114

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	55.53	124.29	179.82
Gas	4.49	5.41	9.90
Dry	154.18	53.57	207.74
Total	214.19	183.27	397.46

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	48
Footage (thous. ft.)	186.05
Average rotary rigs active	0
Permits	200

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	23rd	23rd
Production	19th	19th
Reserves (2014)	21st	19th

Number of operators	162

Number of producing wells
(12/31/14)

Crude oil	4,008
Natural gas	10,010
Total	14,018

Average production

Crude oil (thous. b/d)	20.4
NGL (thous. b/d)	1.6
Natural gas (MMcf/day)	286.0

Total production

Crude oil (YTD bbls, in thous.)	7,458
Natural gas (YTD MMcf)	104,383

Natural gas marketed production

(MMcf)	115,065
Shale gas production	96 Bcf

Average output per producing well

Crude oil (bbls.)	1,861
Natural gas (Mcf)	10,428

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	-4	NA	-4
Production	8	NA	8
Net annual change	-12	NA	-12
Proved reserves	55	NA	55

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	-3	163	160
Production	14	112	126
Net annual change	-17	51	34
Proved reserves	108	1,765	1,873

Marginal oil wells

Producing marginal wells	3,869
Crude oil production in Bbls. (thous.)	3,132
Crude oil production Bbls./d (thous.)	9

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	9,822
Natural gas production (MMcf)	92,285

Mineral lease royalties, bonuses & rent

Oil	$378,610
Natural Gas	$837,164
Rent, Bonuses & Other	$392,432
Total Oil and Gas Revenues	$1,608,206
Total Federal Reported Revenues	$1,608,206
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled	45
Directional wells drilled	15
Vertical wells drilled	54

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	442 Mmcf
CNG stations	18
LNG stations	0
LPG stations	81

Average number of employees

Oil and natural gas extraction	2,902
Refining	1,412
Transportation	3,402
Wholesale	4,414
Retail	25,425
Pipeline construction	1,961
Oilfield machinery	0
Total petroleum industry	39,516

Source: For specific methodology and source details, please see pages 13 and 140

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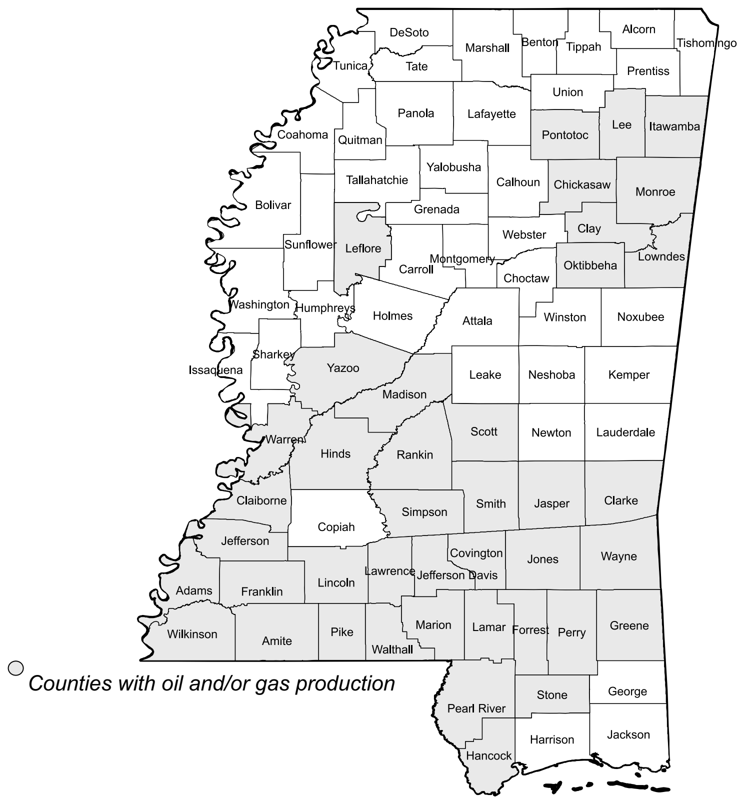


Background Information

Counties

Number of counties	82
With oil and/or gas production	41

First year of production

Crude oil	1889
Natural gas	1923

Year and amount of peak production

Crude oil —65,119 thous. bbls.	1970
Natural gas — 221,331 MMcf	1988

Deepest producing well (ft.)

Crude oil	21,533
Natural gas	23,894

Year and depth of deepest well drilled (ft.)

1986	25,500

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	13,073	36%
Gas wells	4,664	13%
Dry holes	18,714	51%
Total	36,451	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$37,194,642

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	2,939	139	3,078	10,107
Production	2,730	154	2,884	9,617

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$90.81
Natural gas ($Mcf)*	$5.29

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$2,210,860
Natural gas*	$288,019
Total	$2,498,879

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.51
Commercial consumers	$8.36
Industrial consumers	$6.15
Electric utilities	NA
City Gate	$5.29

Severance taxes paid $76,654

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Rankin	37.93	0.47
Madison	25.81	0.32
Jasper	5.45	0.07
Yazoo	5.44	0.07
Wayne	4.14	0.05
Jones	3.10	0.04
Lincoln	2.02	0.02
Jefferson Davis	1.87	0.02
Lamar	1.77	0.02
Amite	1.69	0.02

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	13	95	108
Gas	NA	10	10
Dry	17	37	54
Total	30	142	172

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	194.39	986.54	1,180.93
Gas	NA	126.87	126.87
Dry	188.05	305.01	493.06
Total	382.45	1,418.42	1,800.86

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	8
Footage (thous. ft.)	98.96
Average rotary rigs active	13
Permits	813

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	21st	20th
Production	14th	22nd
Reserves (2014)	14th	21st

Number of operators	170

Number of producing wells
(12/31/14)

Crude oil	2,563
Natural gas	1,623
Total	4,186

Average production

Crude oil (thous. b/d)	64.3
NGL (thous. b/d)	2.8
Natural gas (MMcf/day)	980.1

Total production

Crude oil (YTD bbls, in thous.)	23,487
Natural gas (YTD MMcf)	357,732

Natural gas marketed production

(MMcf)	54,446
Shale gas production	2 Bcf

Average output per producing well

Crude oil (bbls.)	9,164
Natural gas (Mcf)	220,414

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	1,542
Wells	230
Av. bbls per day (in thous.)	4.22
Av. bbls per well	6,704

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	31	NA	31
Production	25	NA	25
Net annual change	6	NA	6
Proved reserves	241	NA	241

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	23	-5	18
Production	8	47	55
Net annual change	15	-52	-37
Proved reserves	58	505	563

Marginal oil wells

Producing marginal wells	1,364
Crude oil production in Bbls. (thous.)	2,835
Crude oil production Bbls./d (thous.)	8

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	1,332
Natural gas production (MMcf)	11,694

Mineral lease royalties, bonuses & rent

Oil	$4,537,556
Natural Gas	$5,478,046
Rent, Bonuses & Other	$801,801
Total Oil and Gas Revenues	$10,817,402
Total Federal Reported Revenues	$10,817,402
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	1%
Natural Gas	14%
Combined on BOE basis	5%

Horizontal wells drilled	38
Directional wells drilled	48
Vertical wells drilled	86

Natural gas vehicle fuel demand & fueling stations

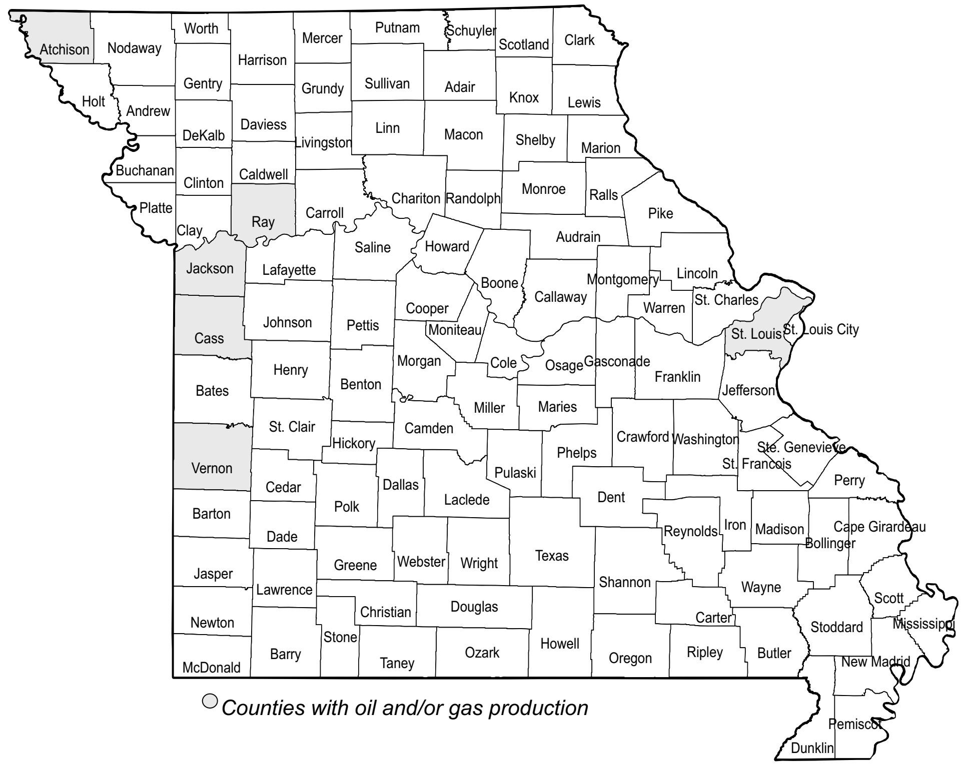
Natural gas vehicle demand	73 Mmcf
CNG stations	8
LNG stations	0
LPG stations	111

Average number of employees

Oil and natural gas extraction	4,001
Refining	2,404
Transportation	1,604
Wholesale	1,888
Retail	14,322
Pipeline construction	1,650
Oilfield machinery	270
Total petroleum industry	26,139

Source: For specific methodology and source details, please see pages 13 and 140

Missouri



Counties with oil and/or gas production

Background Information

Counties

Number of counties	114
With oil and/or gas production	6

First year of production

Crude oil	1889
Natural gas	1887

Year and amount of peak production

Crude oil —285 thous. bbls.	1984
Natural gas —1,368 MMcf	1938

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1988	10,089

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	2,524	27%
Gas wells	1,671	17%
Dry holes	5,293	56%
Total	9,488	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$191,461

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	7	NA	7	15

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$82.38
Natural gas ($Mcf)*	$5.76

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$16,146
Natural gas*	$17
Total	$16,163

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.83
Commercial consumers	$8.96
Industrial consumers	$8.00
Electric utilities	NA
City Gate	$5.76

Severance taxes paid

(2014 in thous. $) NA

Top producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
NA	NA	NA

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	1	2	3
Gas	NA	NA	NA
Dry	NA	6	6
Total	1	8	9

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	0.40	3.35	3.75
Gas	NA	NA	NA
Dry	NA	2.86	2.86
Total	0.40	6.21	6.61

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	1
Footage (thous. ft.)	0.40

Average rotary rigs active

Permits	347

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	28th	30th
Production	30th	NA
Reserves (2014)	28th	29th

Number of operators*	14

Number of producing wells*
(12/31/14)

Crude oil	601
Natural gas	7
Total	608

Average production

Crude oil (thous. b/d)	196
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	8.8

Total production*

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	NA

Natural gas marketed production (MMcf)	3

Average output per producing well

Crude oil (bbls.)	326
Natural gas (Mcf)	1,257

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	--
Total Federal Reported Revenues	$10,762,076
Oil and Gas Percent of Total	0%

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	1
Directional wells drilled	0
Vertical wells drilled	8

Natural gas vehicle fuel demand & fueling stations

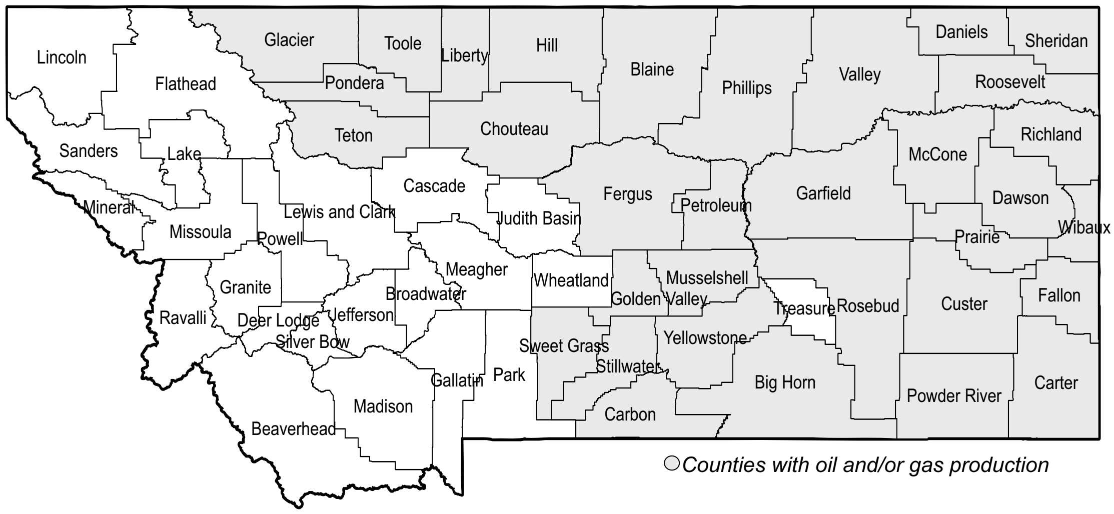
Natural gas vehicle demand	109 Mmcf
CNG stations	19
LNG stations	0
LPG stations	62

Average number of employees

Oil and natural gas extraction	190
Refining	1,202
Transportation	3,048
Wholesale	2,936
Retail	26,812
Pipeline construction	916
Oilfield machinery	0
Total petroleum industry	35,104

Source: For specific methodology and source details, please see pages 13 and 140
** State data*

Montana



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	56
With oil and/or gas production	33

First year of production

Crude oil	1916
Natural gas	1915

Year and amount of peak production

Crude oil —48,460 thous. bbls.	1968
Natural gas — 116,848 MMcf	2007

Deepest producing well (ft.)

Crude oil	24,821
Natural gas	20,787

Year and depth of deepest well drilled (ft.)

2012	24,822

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	16,610	36%
Gas wells	11,430	25%
Dry holes	17,691	39%
Total	45,731	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$37,380,251

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	2,278	59	2,337	4,776
Production	1,845	50	1,895	4,040

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$80.54
Natural gas ($Mcf)*	$5.03

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$2,408,065
Natural gas*	$297,575
Total	$2,705,640

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.11
Commercial consumers	$8.77
Industrial consumers	$7.99
Electric utilities	NA
City Gate	$5.03

Severance taxes paid

(2014 in thous. $)	$232,259

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Richland	44.49	0.23
Fallon	15.32	0.08
Roosevelt	12.01	0.06
Phillips	4.35	0.02
Blaine	3.08	0.02
Sheridan	3.07	0.02
Dawson	2.04	0.01
Hill	2.02	0.01
Toole	2.02	0.01
Powder River	2.01	0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	8	184	192
Gas	NA	16	16
Dry	15	19	34
Total	23	219	242

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	43.67	2,476.40	2,520.07
Gas	NA	16.09	16.09
Dry	80.70	150.35	231.05
Total	124.38	2,642.84	2,767.21

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	18
Footage (thous. ft.)	79.50
Average rotary rigs active	8
Permits	407

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	15th	19th
Production	13th	21st
Reserves (2014)	13th	22nd

Number of operators	228

Number of producing wells
(12/31/14)

Crude oil	5,011
Natural gas	5,625
Total	10,636

Average production

Crude oil (thous. b/d)	81.7
NGL (thous. b/d)	0.2
Natural gas (MMcf/day)	96.3

Total production

Crude oil (YTD bbls, in thous.)	29,808
Natural gas (YTD MMcf)	35,153

Natural gas marketed production

(MMcf)	59,160
Shale gas production	42 Bcf

Average output per producing well

Crude oil (bbls.)	5,949
Natural gas (Mcf)	6,250

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	495
Oil Wells	1
Gas Wells	91
Daily Average (MMcf) / Well	1.36

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	304
Wells	86
Av. bbls per day (in thous.)	0.83
Av. bbls per well	3,538

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	62	NA	62
Production	30	NA	30
Net annual change	32	NA	32
Proved reserves	445	NA	445

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	46	110	156
Production	25	35	60
Net annual change	21	75	96
Proved reserves	325	361	686

Marginal oil wells

Producing marginal wells	3,382
Crude oil production in Bbls. (thous.)	4,474
Crude oil production Bbls./d (thous.)	12

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	5,530
Natural gas production (MMcf)	32,716

Mineral lease royalties, bonuses & rent

Oil	$26,709,891
Natural Gas	$7,328,253
Rent, Bonuses & Other	$3,232,238
Total Oil and Gas Revenues	$37,270,382
Total Federal Reported Revenues	$80,496,265
Oil and Gas Percent of Total	46%

Federal lands production shares

Oil	9%
Natural Gas	21%
Combined on BOE basis	12%

Horizontal wells drilled	164
Directional wells drilled	6
Vertical wells drilled	72

Natural gas vehicle fuel demand & fueling stations

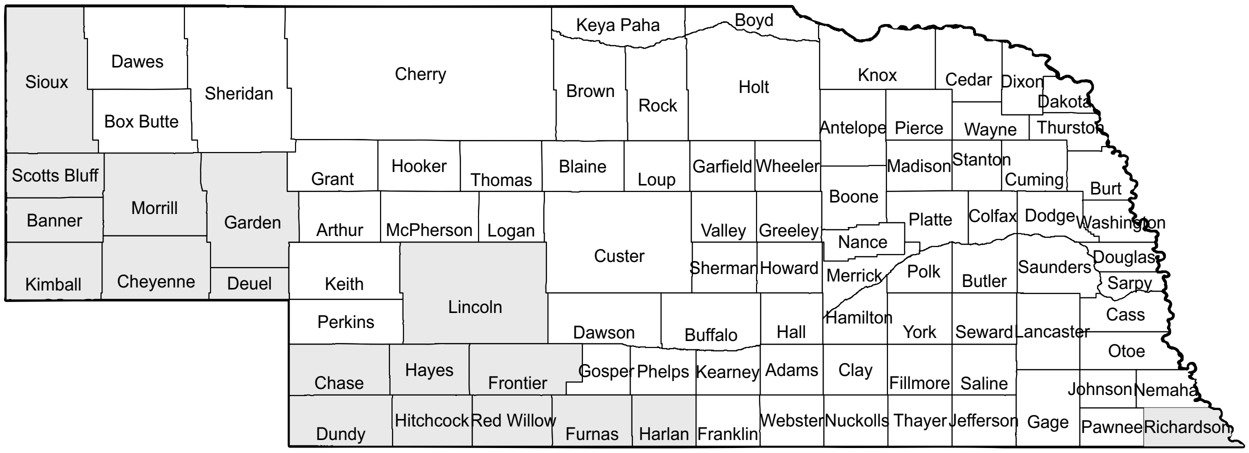
Natural gas vehicle demand	1 Mmcf
CNG stations	2
LNG stations	0
LPG stations	50

Average number of employees

Oil and natural gas extraction	3,756
Refining	1,142
Transportation	784
Wholesale	882
Retail	5,367
Pipeline construction	1,065
Oilfield machinery	0
Total petroleum industry	12,996

Source: For specific methodology and source details, please see pages 13 and 140

NEBRASKA



○*Counties with oil and/or gas production*

Background Information

Counties

Number of counties	93
With oil and/or gas production	18

First year of production

Crude oil	1939
Natural gas	1950

Year and amount of peak production

Crude oil —24,894 thous. bbls.	1962
Natural gas —15,743 MMcf	1961

Deepest producing well (ft.)

Crude oil	13,500
Natural gas	5,832

Year and depth of deepest well drilled (ft.)

1997	13,128

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	6,611	31%
Gas wells	580	3%
Dry holes	13,926	66%
Total	21,117	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$5,975,743

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	534	NA	534	NA
Production	522	NA	522	NA

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$82.82
Natural gas ($Mcf)*	$5.58

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$252,601
Natural gas*	$2,327
Total	$254,928

Average natural gas price
(2014 $/Mcf)

Residential consumers	$8.77
Commercial consumers	$7.27
Industrial consumers	$5.69
Electric utilities	$5.84
City Gate	$5.58

Severance taxes paid

(2014 in thous. $)	$6,751

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	US
Hitchcock	36.80	0.02
Dundy	14.76	0.01
Kimball	14.53	0.01
Red Willow	9.04	<0.01
Cheyenne	8.12	<0.01
Banner	5.34	<0.01
Richardson	3.31	<0.01
Morrill	1.57	<0.01
Harlan	1.43	<0.01
Hayes	1.38	<0.01

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	26	73	99
Gas	NA	NA	NA
Dry	56	38	94
Total	82	111	193

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	110.38	314.47	424.84
Gas	NA	NA	NA
Dry	259.38	163.20	422.59
Total	369.76	477.67	847.43

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	62
Footage (thous. ft.)	275.70
Average rotary rigs active	2
Permits	241

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	22nd	28th
Production	23rd	30th
Reserves (2014)	24th	30th

Number of operators	109

Number of producing wells
(12/31/14)

Crude oil	1,492
Natural gas	105
Total	1,597

Average production

Crude oil (thous. b/d)	7.8
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	0.9

Total production

Crude oil (YTD bbls, in thous.)	2,842
Natural gas (YTD MMcf)	334

Natural gas marketed production

(MMcf)	417

Average output per producing well

Crude oil (bbls.)	1,905
Natural gas (Mcf)	3,181

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	6	NA	6
Production	3	NA	3
Net annual change	3	NA	3
Proved reserves	21	NA	21

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	1,387
Crude oil production in Bbls. (thous.)	1,753
Crude oil production Bbls./d (thous.)	5

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	104
Natural gas production (MMcf)	334

Mineral lease royalties, bonuses & rent

Oil	$274,123
Natural Gas	$5,064
Rent, Bonuses & Other	$102,362
Total Oil and Gas Revenues	$381,550
Total Federal Reported Revenues	$381,550
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	1%
Natural Gas	<1%
Combined on BOE basis	1%

Horizontal wells drilled	2
Directional wells drilled	0
Vertical wells drilled	191

Natural gas vehicle fuel demand & fueling stations

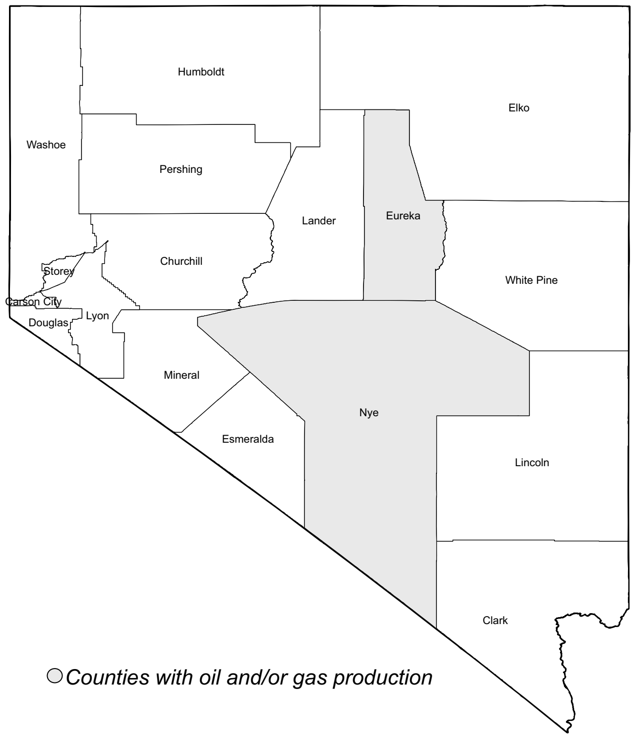
Natural gas vehicle demand	50 Mmcf
CNG stations	10
LNG stations	0
LPG stations	21

Average number of employees

Oil and natural gas extraction	216
Refining	14
Transportation	1,197
Wholesale	947
Retail	9,116
Pipeline construction	187
Oilfield machinery	0
Total petroleum industry	11,677

Source: For specific methodology and source details, please see pages 13 and 140

NEVADA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	17
With oil and/or gas production	2

First year of production

Crude oil	1954
Natural gas	NA

Year and amount of peak production

Crude oil —3,230 thous. bbls.	1988
Natural gas — 53 MMcf	1991

Deepest producing well (ft.)

Crude oil	10,192
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1980	19,562

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	129	14%
Gas wells	2	1%
Dry holes	775	85%
Total	906	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $1,058,301

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	NA

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$85.06
Natural gas ($Mcf)*	$5.90

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$26,879
Natural gas*	$17,700
Total	$44,579

Average natural gas price

(2014 $/Mcf)

Residential consumers	$11.44
Commercial consumers	$8.21
Industrial consumers	$7.83
Electric utilities	NA
City Gate	$5.90

Severance taxes paid $677

(2014 in thous. $)

Top producing counties

(2014 on a BOE basis)

County	% Production State	US
Nye	87.59	<0.01
Eureka	10.82	<0.01
Elko	1.59	<0.01

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	2	1	3
Gas	NA	NA	NA
Dry	1	NA	1
Total	3	1	4

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	22.61	1.20	23.81
Gas	NA	NA	NA
Dry	5.00	NA	5.00
Total	27.61	1.20	28.81

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	3
Footage (thous. ft.)	27.61
Average rotary rigs active	1
Permits	34

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	29th	35th
Production	29th	33rd
Reserves (2014)	29th	31st

Number of operators	7

Number of producing wells
(12/31/14)

Crude oil	74
Natural gas	NA
Total	74

Average production

Crude oil (thous. b/d)	0.9
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)	316
Natural gas (YTD MMcf)	NA

Natural gas marketed production

(MMcf)	3

Average output per producing well

Crude oil (bbls.)	4,276
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	55
Crude oil production in Bbls. (thous.)	110
Crude oil production Bbls./d (thous.)	<1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	$3,391,418
Natural Gas	--
Rent, Bonuses & Other	$6,554,586
Total Oil and Gas Revenues	$9,946,004
Total Federal Reported Revenues	$14,225,463
Oil and Gas Percent of Total	70%

Federal lands production shares

Oil	99%
Natural Gas	0%
Combined on BOE basis	99%

Horizontal wells drilled	0
Directional wells drilled	0
Vertical wells drilled	4

Natural gas vehicle fuel demand & fueling stations

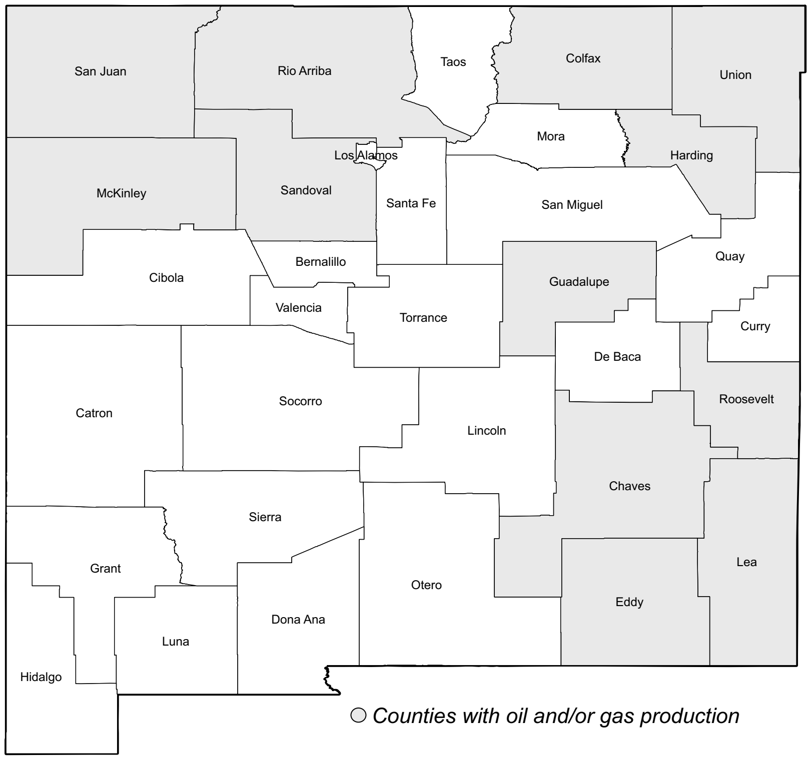
Natural gas vehicle demand	976 Mmcf
CNG stations	8
LNG stations	4
LPG stations	32

Average number of employees

Oil and natural gas extraction	213
Refining	225
Transportation	0
Wholesale	704
Retail	7,912
Pipeline construction	545
Oilfield machinery	0
Total petroleum industry	9,599

Source: For specific methodology and source details, please see pages 13 and 140

NEW MEXICO



Background Information

Counties

Number of counties	33
With oil and/or gas production	12

First year of production

Crude oil	1911
Natural gas	1924

Year and amount of peak production

Crude oil — 129,227 thous. bbls.	1969
Natural gas — 1,689,125 MMcf	2001

Deepest producing well (ft.)

Crude oil	23,889
Natural gas	26,579

Year and depth of deepest well drilled (ft.)

2014	23,413

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	58,827	49%
Gas wells	42,735	35%
Dry holes	19,126	16%
Total	120,688	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$109,594,518

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	8,480	3,506	11,986	89,380
Production	7,089	2,653	9,742	74,084

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$83.44
Natural gas ($Mcf)*	$4.99

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$10,331,624
Natural gas*	$6,135,300
Total	$16,466,924

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.13
Commercial consumers	$7.87
Industrial consumers	$6.18
Electric utilities	$4.93
City Gate	$4.99

Severance taxes paid $1,299,798

(2014 in thous. $)

Top producing counties

(2014 on a BOE basis)

County	% Production State	US
San Juan	27.13	1.04
Eddy	26.95	1.03
Lea	23.81	0.91
Rio Arriba	18.19	0.69
Colfax	1.54	0.06
Chaves	1.34	0.05
Sandoval	0.85	0.03
Roosevelt	0.15	0.01
McKinley	0.04	<0.01
Harding	0.00	<0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	101	1,047	1,148
Gas	7	35	42
Dry	14	82	96
Total	122	1,164	1,286

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	1,079.60	10,532.98	11,612.58
Gas	77.40	295.17	372.57
Dry	55.13	435.85	490.98
Total	1,212.13	11,263.99	12,476.13

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	121
Footage (thous. ft.)	1,203.47
Average rotary rigs active	92
Permits	2,525

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	7th	16th
Production	7th	8th
Reserves (2014)	7th	8th

Number of operators	470

Number of producing wells
(12/31/14)

Crude oil	26,281
Natural gas	33,742
Total	60,023

Average production

Crude oil (thous. b/d)	328.0
NGL (thous. b/d)	11.7
Natural gas (MMcf/day)	2,270.7

Total production

Crude oil (YTD bbls, in thous.)	119,735
Natural gas (YTD MMcf)	828,799

Natural gas marketed production

(MMcf)	1,229,519
Shale gas production	28 Bcf

Average output per producing well

Crude oil (bbls.)	4,556
Natural gas (Mcf)	24,563

Coalbed methane (YTD MMcf)	297,873
Oil Wells	1
Gas Wells	5,847
Daily Average (MMcf) / Well	816.09

Heavy oil (YTD Bbls, in thous.)	13
Wells	23
Av. bbls per day (in thous.)	0.04
Av. bbls per well	580

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	405	NA	405
Production	124	NA	124
Net annual change	281	NA	281
Proved reserves	1,558	NA	1,558

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	1,613	1,509	3,122
Production	343	920	1,263
Net annual change	1,270	589	1,859
Proved reserves	4,683	11,743	16,426

Marginal oil wells

Producing marginal wells	20,903
Crude oil production in Bbls. (thous.)	25,745
Crude oil production Bbls./d (thous.)	71

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	25,703
Natural gas production (MMcf)	314,015

Mineral lease royalties, bonuses & rent

Oil	$741,796,828
Natural Gas	$322,710,507
Rent, Bonuses & Other	$77,404,712
Total Oil and Gas Revenues	$1,151,912,047
Total Federal Reported Revenues	$1,191,929,885
Oil and Gas Percent of Total	97%

Federal lands production shares

Oil	44%
Natural Gas	51%
Combined on BOE basis	49%

Horizontal wells drilled	799
Directional wells drilled	87
Vertical wells drilled	400

Natural gas vehicle fuel demand & fueling stations

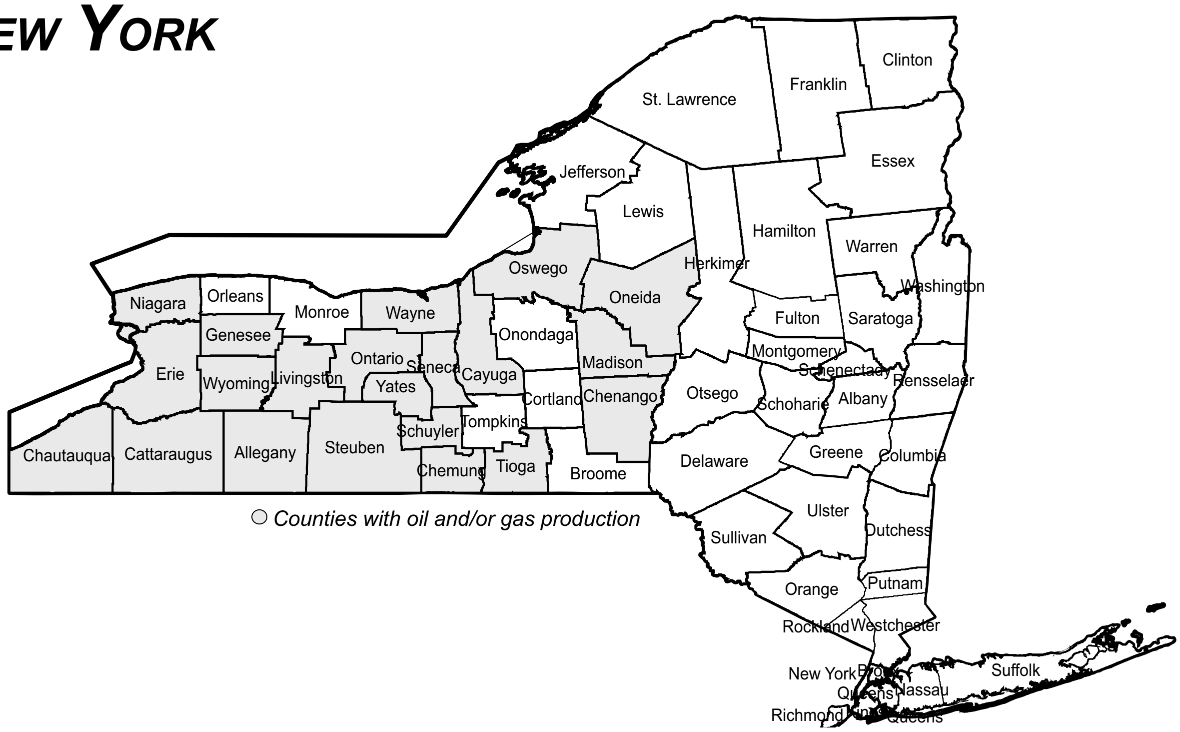
Natural gas vehicle demand	154 Mmcf
CNG stations	14
LNG stations	1
LPG stations	45

Average number of employees

Oil and natural gas extraction	22,719
Refining	787
Transportation	1,364
Wholesale	1,527
Retail	7,936
Pipeline construction	2,541
Oilfield machinery	0
Total petroleum industry	36,874

Source: For specific methodology and source details, please see *pages 13 and 140*

NEW YORK



Background Information

Counties

Number of counties	62
With oil and/or gas production	21

First year of production

Crude oil	1865
Natural gas	1821

Year and amount of peak production

Crude oil — 6,685 thous. bbls.	1882
Natural gas — 55,980 MMcf	2006

Deepest producing well (ft.)

Crude oil	3,000
Natural gas	13,950

Year and depth of deepest well drilled (ft.)

2002	15,079

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	16,825	53%
Gas wells	10,895	34%
Dry holes	4,108	13%
Total	31,828	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $1,331,351

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	1,600
Production	NA	NA	NA	1,471

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$5.47

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	NA
Natural gas*	$110,499
Total	$110,499

Average natural gas price

(2014 $/Mcf)

Residential consumers	$12.54
Commercial consumers	$8.31
Industrial consumers	$8.13
Electric utilities	$5.42
City Gate	$5.47

Severance taxes paid --

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Chautauqua	23.21	0.01
Steuben	19.64	0.01
Chemung	18.98	0.01
Cattaraugus	11.60	0.01
Erie	7.47	<0.01
Seneca	3.21	<0.01
Chenango	3.21	<0.01
Cayuga	3.14	<0.01
Genesee	2.82	<0.01
Madison	1.92	<0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	1	154	155
Gas	1	NA	1
Dry	NA	1	1
Total	2	155	157

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	2.07	262.75	264.82
Gas	9.35	NA	9.35
Dry	NA	11.45	11.45
Total	11.42	274.20	285.62

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	1
Footage (thous. ft.)	2.07

Average rotary rigs active	0

Permits	174

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	16th	25th
Production	27th	23rd
Reserves (2014)	30th	23rd

Number of operators	670

Number of producing wells
(12/31/14)

Crude oil	3,009
Natural gas	7,613
Total	10,622

Average production

Crude oil (thous. b/d)	0.8
NGL (thous. b/d)	0.1
Natural gas (MMcf/day)	50.2

Total production

Crude oil (YTD bbls, in thous.)	292
Natural gas (YTD MMcf)	18,306

Natural gas marketed production

(MMcf)	20,201

Average output per producing well

Crude oil (bbls.)	97
Natural gas (Mcf)	2,405

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	0	19	19
Production	1	19	20
Net annual change	-1	0	-1
Proved reserves	5	138	143

Marginal oil wells

Producing marginal wells	2,673
Crude oil production in Bbls. (thous.)	292
Crude oil production Bbls./d (thous.)	1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	6,787
Natural gas production (MMcf)	9,844

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	$70,052
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	$70,052
Total Federal Reported Revenues	$70,052
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	0%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled	0
Directional wells drilled	2
Vertical wells drilled	155

Natural gas vehicle fuel demand & fueling stations

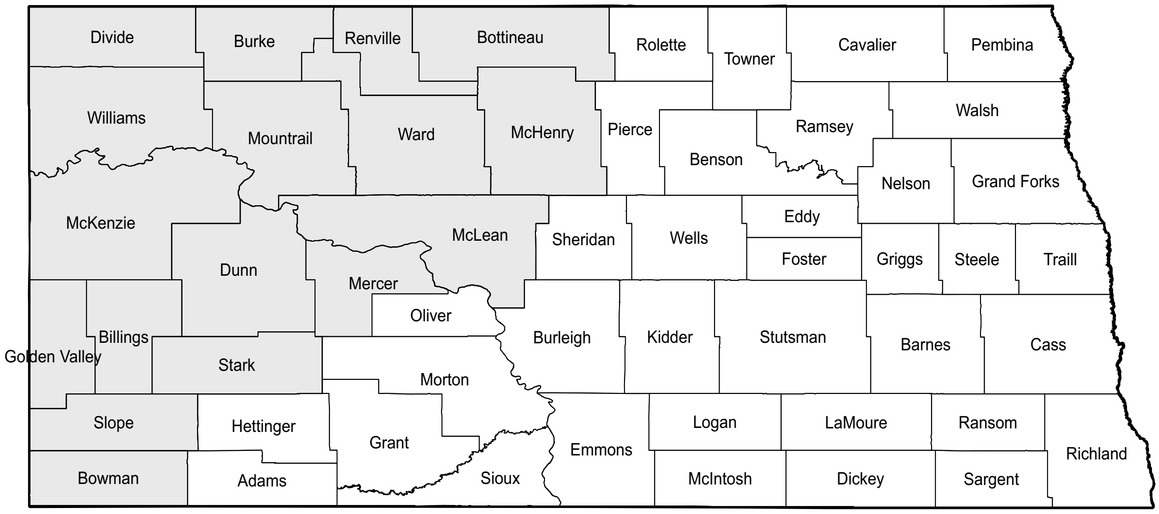
Natural gas vehicle demand	3,677 Mmcf
CNG stations	113
LNG stations	0
LPG stations	58

Average number of employees

Oil and natural gas extraction	1,230
Refining	1,825
Transportation	6,904
Wholesale	11,827
Retail	28,436
Pipeline construction	1,757
Oilfield machinery	0
Total petroleum industry	51,979

Source: For specific methodology and source details, please see pages 13 and 140

NORTH DAKOTA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	53
With oil and/or gas production	17

First year of production

Crude oil	1951
Natural gas	1907

Year and amount of peak production

Crude oil — 391,113 thous. bbls.	2014
Natural gas — 326,491 MMcf	2014

Deepest producing well (ft.)

Crude oil—(25,828 MD horizontal)	26,908
Natural gas—(21,070 MD horizontal)	21,525

Year and depth of deepest well drilled (ft.)

2013	26,908

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	21,537	73%
Gas wells	341	1%
Dry holes	7,679	26%
Total	29,557	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$143,060,989

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	8,913	485	9,398	10,287
Production	2,952	216	3,168	3,787

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$82.89
Natural gas ($Mcf)*	$6.37

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$32,697,453
Natural gas*	$2,079,748
Total	$34,777,201

Average natural gas price
(2014 $/Mcf)

Residential consumers	$8.86
Commercial consumers	$7.74
Industrial consumers	$5.61
Electric utilities	$4.09
City Gate	$6.37

Severance taxes paid

(2014 in thous. $)	$3,247,807

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	US
McKenzie	33.38	1.94
Mountrail	24.20	1.41
Dunn	16.19	0.94
Williams	14.17	0.82
Divide	3.78	0.22
Stark	1.95	0.11
Bowman	1.82	0.11
Burke	1.65	0.10
Billings	1.36	0.08
Bottineau	0.67	0.04

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	11	2,558	2,569
Gas	NA	NA	NA
Dry	16	167	183
Total	27	2,725	2,752

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	66.96	44,670.61	44,737.57
Gas	NA	NA	NA
Dry	94.35	1,455.80	1,550.15
Total	161.31	46,126.41	46,287.72

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	24
Footage (thous. ft.)	140.27

Average rotary rigs active	176

Permits	3,459

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	5th	26th
Production	3rd	14th
Reserves (2014)	2nd	14th

Number of operators	156

Number of producing wells
(12/31/14)

Crude oil	12,492
Natural gas	316
Total	12,808

Average production

Crude oil (thous. b/d)	1,071.5
NGL (thous. b/d)	9.2
Natural gas (MMcf/day)	28.3

Total production

Crude oil (YTD bbls, in thous.)	391,113
Natural gas (YTD MMcf)	10,319

Natural gas marketed production

(MMcf)	326,491

Shale gas production	426 Bcf

Average output per producing well

Crude oil (bbls.)	31,309
Natural gas (Mcf)	32,654

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	756	NA	756
Production	394	NA	394
Net annual change	362	NA	362
Proved reserves	6,045	NA	6,045

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	1,203	-41	1,162
Production	451	5	456
Net annual change	752	-46	706
Proved reserves	6,742	45	6,787

Marginal oil wells

Producing marginal wells	2,745
Crude oil production in Bbls. (thous.)	5,920
Crude oil production Bbls./d (thous.)	16

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	267
Natural gas production (MMcf)	2,019

Mineral lease royalties, bonuses & rent

Oil	$197,829,228
Natural Gas	$9,841,238
Rent, Bonuses & Other	$25,665,056
Total Oil and Gas Revenues	$233,335,522
Total Federal Reported Revenues	$235,515,311
Oil and Gas Percent of Total	99%

Federal lands production shares

Oil	5%
Natural Gas	4%
Combined on BOE basis	4%

Horizontal wells drilled	2,653
Directional wells drilled	30
Vertical wells drilled	69

Natural gas vehicle fuel demand & fueling stations

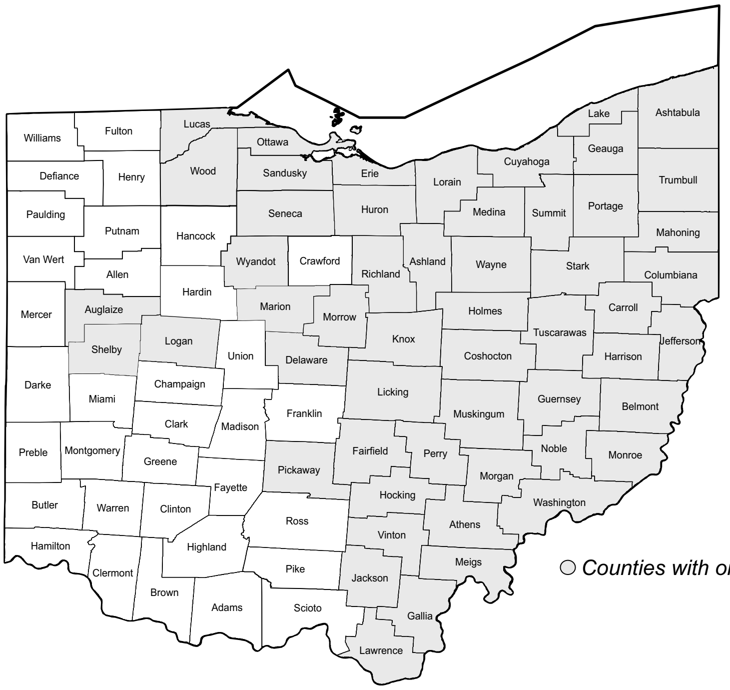
Natural gas vehicle demand	0 Mmcf
CNG stations	1
LNG stations	0
LPG stations	19

Average number of employees

Oil and natural gas extraction	27,612
Refining	0
Transportation	842
Wholesale	2,351
Retail	5,790
Pipeline construction	4,002
Oilfield machinery	0
Total petroleum industry	40,597

Source: For specific methodology and source details, please see pages 13 and 140

OHIO



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	88
With oil and/or gas production	54

First year of production

Crude oil	1860
Natural gas	1884

Year and amount of peak production

Crude oil — 23,941 thous. bbls.	1896
Natural gas — 512,371 MMcf	2014

Deepest producing well (ft.)

Crude oil	19,946
Natural gas	20,796

Year and depth of deepest well drilled (ft.)

2014	20,730

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	105,904	53%
Gas wells	58,419	29%
Dry holes	35,363	18%
Total	199,686	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$13,217,389

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,275	NA	1,275	16,865
Production	1,137	NA	1,137	10,032

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$83.95
Natural gas ($Mcf)*	$4.91

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$1,253,122
Natural gas*	$2,515,742
Total	$3,768,864

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.16
Commercial consumers	$7.82
Industrial consumers	$7.06
Electric utilities	$4.31
City Gate	$4.91

Severance taxes paid $3,973

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Carroll	30.83	0.36
Belmont	19.45	0.22
Monroe	12.36	0.14
Harrison	9.13	0.11
Noble	5.46	0.06
Columbiana	4.64	0.05
Guernsey	2.67	0.03
Mahoning	2.05	0.02
Jefferson	1.66	0.02
Stark	1.40	0.02

**City Gate price used for natural gas.*

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	3	296	299
Gas	30	312	342
Dry	17	43	60
Total	50	651	701

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	29.43	2,910.59	2,940.02
Gas	308.47	3,955.80	4,264.27
Dry	87.89	202.91	290.81
Total	425.79	7,069.30	7,495.09

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	6
Footage (thous. ft.)	32.73

Average rotary rigs active	41

Permits	1,158

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	13th	8th
Production	15th	11th
Reserves (2014)	16th	11th

Number of operators	789

Number of producing wells
(12/31/14)

Crude oil	20,397
Natural gas	24,905
Total	45,302

Average production

Crude oil (thous. b/d)	30.8
NGL (thous. b/d)	10.0
Natural gas (MMcf/day)	1,098.7

Total production

Crude oil (YTD bbls, in thous.)	11,253
Natural gas (YTD MMcf)	401,009

Natural gas marketed production

(MMcf)	512,371

Shale gas production	441 Bcf

Average output per producing well

Crude oil (bbls.)	552
Natural gas (Mcf)	16,102

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	90	NA	90
Production	14	NA	14
Net annual change	76	NA	76
Proved reserves	163	NA	163

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	-82	4,584	4,502
Production	24	486	510
Net annual change	-106	4,098	3,992
Proved reserves	208	6,985	7,193

Marginal oil wells

Producing marginal wells	17,267
Crude oil production in Bbls. (thous.)	3,443
Crude oil production Bbls./d (thous.)	9

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	23,909
Natural gas production (MMcf)	40,258

Mineral lease royalties, bonuses & rent

Oil	$198,684
Natural Gas	$219,620
Rent, Bonuses & Other	$39,176
Total Oil and Gas Revenues	$457,480
Total Federal Reported Revenues	$457,480
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled	456
Directional wells drilled	12
Vertical wells drilled	233

Natural gas vehicle fuel demand & fueling stations

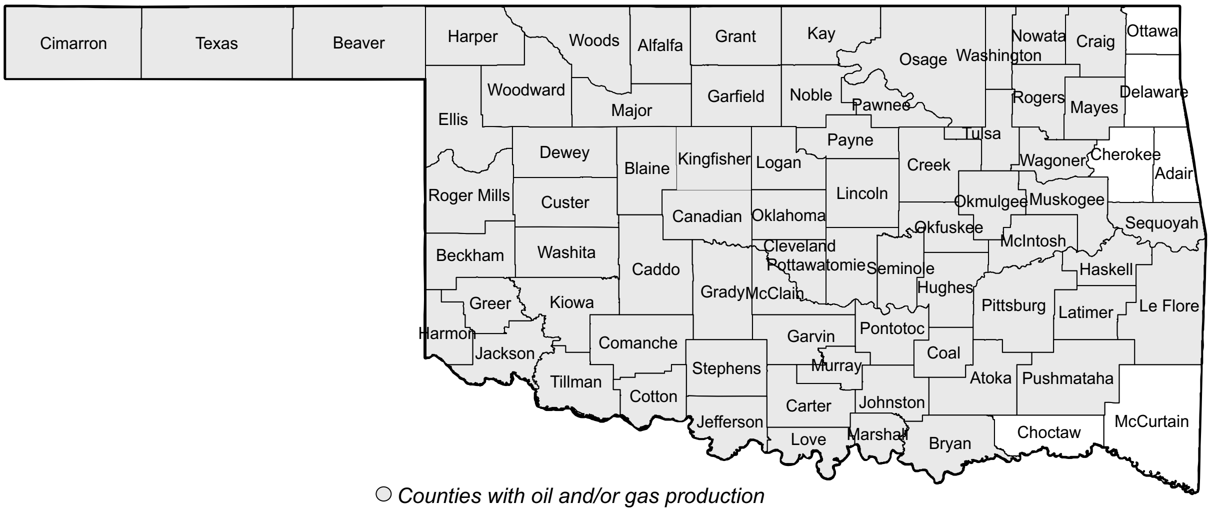
Natural gas vehicle demand	501 Mmcf
CNG stations	39
LNG stations	2
LPG stations	68

Average number of employees

Oil and natural gas extraction	8,120
Refining	4,869
Transportation	5,159
Wholesale	4,813
Retail	35,882
Pipeline construction	5,739
Oilfield machinery	428
Total petroleum industry	65,010

Source: For specific methodology and source details, please see pages 13 and 140

OKLAHOMA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	77
With oil and/or gas production	71

First year of production

Crude oil	1891
Natural gas	1902

Year and amount of peak production

Crude oil —277,775 thous. bbls.	1927
Natural gas — 2,331,086 MMcf	2014

Deepest producing well (ft.)

Crude oil	25,105
Natural gas	26,402

Year and depth of deepest well drilled (ft.)

1974	31,441

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	257,712	53%
Gas wells	93,444	19%
Dry holes	139,185	28%
Total	490,341	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$165,743,574

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	16,432	6,434	22,866	142,979
Production	15,075	4,803	19,878	125,541

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$89.25
Natural gas ($Mcf)*	$5.35

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$12,981,770
Natural gas*	$12,471,310
Total	$25,453,080

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.10
Commercial consumers	$8.25
Industrial consumers	$8.30
Electric utilities	NA
City Gate	$5.35

Severance taxes paid $860,108

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Canadian	10.13	0.55
Pittsburg	7.43	0.41
Roger Mills	6.37	0.35
Grady	5.68	0.31
Alfalfa	4.76	0.26
Stephens	4.38	0.24
Washita	3.83	0.21
Coal	3.70	0.20
Woods	3.59	0.20
Carter	3.25	0.18

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	16	2,615	2,631
Gas	2	554	556
Dry	14	278	292
Total	32	3,447	3,479

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	166.15	23,723.88	23,890.03
Gas	29.15	6,757.78	6,786.94
Dry	70.07	1,860.20	1,930.27
Total	265.37	32,341.87	32,607.24

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	16
Footage (thous. ft.)	142.90
Average rotary rigs active	199
Permits	4,927

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	4th	4th
Production	6th	3rd
Reserves (2014)	6th	3rd

Number of operators	2,944

Number of producing wells
(12/31/14)

Crude oil	31,086
Natural gas	36,969
Total	68,055

Average production

Crude oil (thous. b/d)	305.6
NGL (thous. b/d)	54.9
Natural gas (MMcf/day)	4,237.8

Total production

Crude oil (YTD bbls, in thous.)	111,537
Natural gas (YTD MMcf)	1,546,782

Natural gas marketed production

(MMcf)	2,331,086

Shale gas production	869 Bcf

Average output per producing well

Crude oil (bbls.)	3,588
Natural gas (Mcf)	41,840

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	19,657
Oil Wells	0
Gas Wells	2,805
Daily Average (MMcf) / Well	53.85

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	384	NA	384
Production	132	NA	132
Net annual change	252	NA	252
Proved reserves	1,721	NA	1,721

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	2,921	4,791	7,712
Production	490	1,803	2,293
Net annual change	2,431	2,988	5,419
Proved reserves	6,961	27,358	34,319

Marginal oil wells

Producing marginal wells	22,005
Crude oil production in Bbls. (thous.)	21,372
Crude oil production Bbls./d (thous.)	59

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	27,498
Natural gas production (MMcf)	293,362

Mineral lease royalties, bonuses & rent

Oil	$8,444,563
Natural Gas	$7,641,990
Rent, Bonuses & Other	$1,210,622
Total Oil and Gas Revenues	$17,297,175
Total Federal Reported Revenues	$18,043,705
Oil and Gas Percent of Total	96%

Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled	2,333
Directional wells drilled	113
Vertical wells drilled	1,033

Natural gas vehicle fuel demand & fueling stations

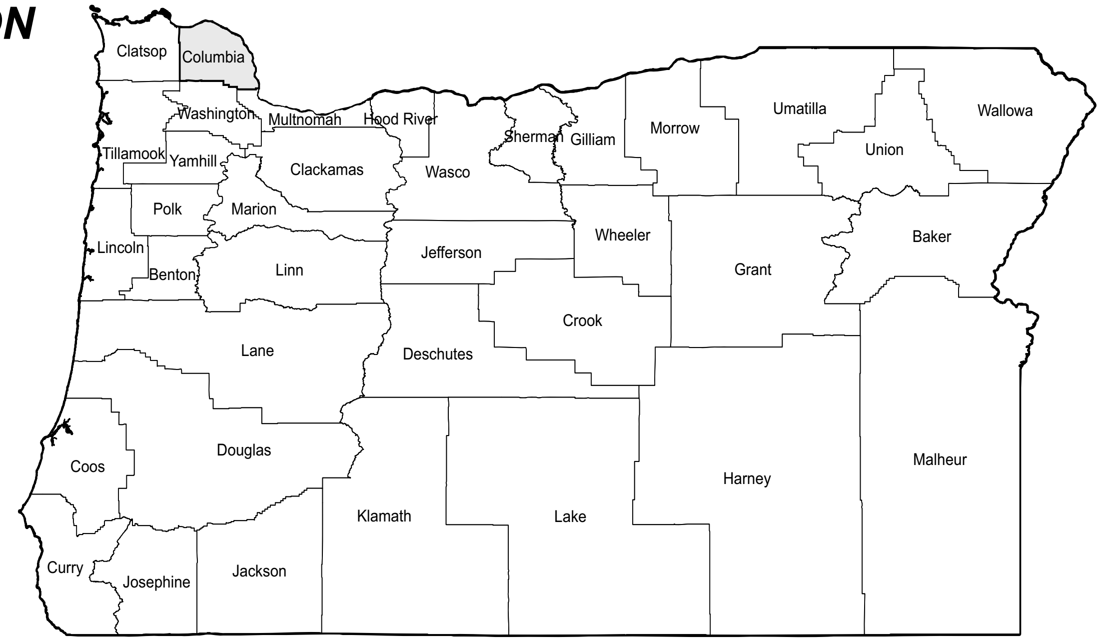
Natural gas vehicle demand	471 Mmcf
CNG stations	102
LNG stations	1
LPG stations	144

Average number of employees

Oil and natural gas extraction	60,101
Refining	2,390
Transportation	7,805
Wholesale	3,359
Retail	16,411
Pipeline construction	4,862
Oilfield machinery	10,181
Total petroleum industry	105,109

Source: For specific methodology and source details, please see pages 13 and 140

Oregon



Background Information

Counties

Number of counties	36
With oil and/or gas production	1

First year of production

Crude oil	NA
Natural gas	1979

Year and amount of peak production

Crude oil —	NA
Natural gas — 5,000 MMcf	1980/81

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1979	13,177

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	NA	NA
Gas wells	86	21%
Dry holes	329	79%
Total	415	100%

Cumulative crude oil wellhead value
(as of 12/31/14 - thous. $) NA

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	72

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$5.40

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	NA
Natural gas*	$6,167
Total	$6,167

Average natural gas price
(2014 $/Mcf)

Residential consumers	$11.72
Commercial consumers	$9.44
Industrial consumers	$6.20
Electric utilities	NA
City Gate	$5.40

Severance taxes paid 76
(2014 in thous. $)

Top producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
NA	NA	NA

City Gate price used for natural gas.

Oregon

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	NA
Footage (thous. ft.)	NA
Average rotary rigs active	0
Permits	2

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	NA	29th
Production	NA	28th
Reserves (2014)	31st	32nd

Number of operators	NA

Number of producing wells*
(12/31/14)

Crude oil	NA
Natural gas	24
Total	24

Average production*

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	2

Total production*

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	585

Natural gas marketed production

(MMcf)	1,142

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	$377,474
Total Oil and Gas Revenues	$377,474
Total Federal Reported Revenues	$601,432
Oil and Gas Percent of Total	63%

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	0
Directional wells drilled	0
Vertical wells drilled	1

Natural gas vehicle fuel demand & fueling stations

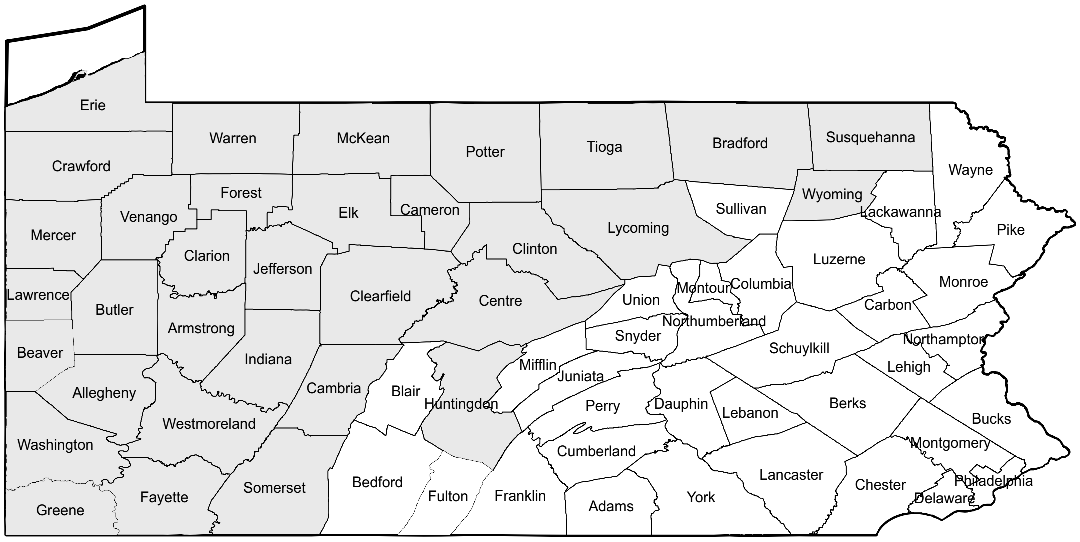
Natural gas vehicle demand	165 Mmcf
CNG stations	14
LNG stations	1
LPG stations	31

Average number of employees

Oil and natural gas extraction	15
Refining	433
Transportation	1,182
Wholesale	1,391
Retail	10,634
Pipeline construction	286
Oilfield machinery	0
Total petroleum industry	13,941

** 2013 Data used*
Source: For specific methodology and source details, please see pages 13 and 140

PENNSYLVANIA



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	67
With oil and/or gas production	33

First year of production

Crude oil	1859
Natural gas	1881

Year and amount of peak production

Crude oil — 31,424 thous. bbls.	1891
Natural gas — 4,245,819 MMcf	2014

Deepest producing well (ft.)

Crude oil	17,012
Natural gas	27,696

Year and depth of deepest well drilled (ft.)

1901	22,568

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	66,252	42%
Gas wells	84,023	53%
Dry holes	7,808	5%
Total	158,083	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$8,013,772

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,451	143	1,594	85,457
Production	1,385	8	1,393	25,394

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$80.07
Natural gas ($Mcf)*	$5.59

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$547,759
Natural gas*	$23,800,504
Total	$24,348,263

Average natural gas price

(2014 $/Mcf)

Residential consumers	$11.77
Commercial consumers	$10.13
Industrial consumers	$9.95
Electric utilities	$5.04
City Gate	$5.59

Severance taxes paid

(2014 in thous. $)	223,500

Top producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Susquehanna	22.27	2.34
Bradford	19.21	2.02
Lycoming	12.53	1.32
Washington	10.61	1.11
Greene	9.12	0.96
Wyoming	5.84	0.61
Tioga	4.88	0.51
Westmoreland	2.57	0.27
Butler	2.19	0.23
Sullivan	1.95	0.21

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	4	920	924
Gas	61	1,210	1,271
Dry	11	118	129
Total	76	2,248	2,324

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	10.00	1,472.22	1,482.22
Gas	774.79	14,855.25	15,630.04
Dry	63.63	675.04	738.67
Total	848.42	17,002.50	17,850.93

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	42
Footage (thous. ft.)	494.81
Average rotary rigs active	56
Permits	3,485

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	8th	2nd
Production	21st	2nd
Reserves (2014)	17th	2nd

Number of operators	1,170

Number of producing wells
(12/31/14)

Crude oil	18,020
Natural gas	65,038
Total	83,058

Average production

Crude oil (thous. b/d)	5.5
NGL (thous. b/d)	13.2
Natural gas (MMcf/day)	11,632.4

Total production

Crude oil (YTD bbls, in thous.)	2,024
Natural gas (YTD MMcf	4,245,819

Natural gas marketed production

(MMcf)	4,257,693
Shale gas production	4,009 Bcf

Average output per producing well

Crude oil (bbls.)	112
Natural gas (Mcf)	65,282

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	36	NA	36
Production	7	NA	7
Net annual change	29	NA	29
Proved reserves	87	NA	87

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	58	14,544	14,602
Production	28	4,209	4,237
Net annual change	30	10,335	10,365
Proved reserves	299	60,144	60,443

Marginal oil wells

Producing marginal wells	16,121
Crude oil production in Bbls. (thous.)	1,664
Crude oil production Bbls./d (thous.)	5

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	58,161
Natural gas production (MMcf)	129,291

Mineral lease royalties, bonuses & rent

Oil	$16,975
Natural Gas	$5,332
Rent, Bonuses & Other	$88,864
Total Oil and Gas Revenues	$111,171
Total Federal Reported Revenues	$111,171
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled	1,223
Directional wells drilled	28
Vertical wells drilled	1,073

Natural gas vehicle fuel demand & fueling stations

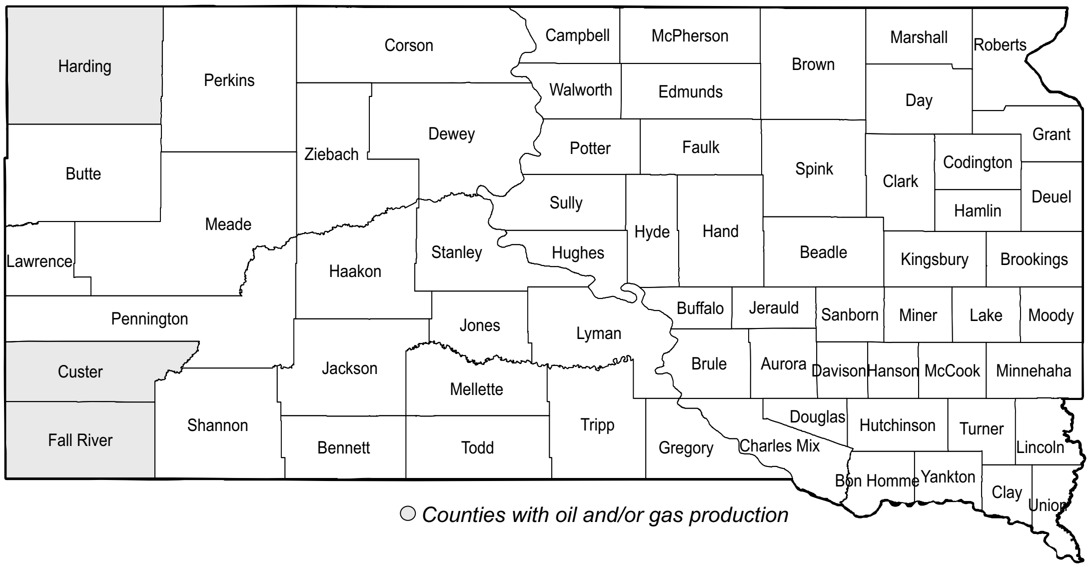
Natural gas vehicle demand	393 Mmcf
CNG stations	39
LNG stations	0
LPG stations	71

Average number of employees

Oil and natural gas extraction	23,833
Refining	5,997
Transportation	6,579
Wholesale	9,724
Retail	39,024
Pipeline construction	6,011
Oilfield machinery	595
Total petroleum industry	91,763

Source: For specific methodology and source details, please see pages 13 and 140

South Dakota



Background Information

Counties

Number of counties	66
With oil and/or gas production	3

First year of production

Crude oil	1954
Natural gas	1979

Year and amount of peak production

Crude oil — 1,841 thous. bbls.	2013
Natural gas — 16,205 MMcf	2013

Deepest producing well (ft.)

Crude oil	19,675
Natural gas	11,493

Year and depth of deepest well drilled (ft.)

2014	19,675

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	545	27%
Gas wells	164	8%
Dry holes	1,284	65%
Total	1,993	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$2,001,620

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	NA

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$82.78
Natural gas ($Mcf)*	$6.14

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$145,924
Natural gas*	$93,973
Total	$239,897

Average natural gas price
(2014 $/Mcf)

Residential consumers	$9.27
Commercial consumers	$7.65
Industrial consumers	$6.88
Electric utilities	$4.98
City Gate	$6.14

Severance taxes paid — $7,053
(2014 in thous. $)

Top producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Harding	99.10	0.03
Fall River	0.88	<0.01
Custer	0.02	<0.01

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	15	15
Gas	NA	NA	NA
Dry	2	NA	2
Total	2	15	17

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	214.72	214.72
Gas	NA	NA	NA
Dry	11.91	NA	11.91
Total	11.91	214.72	226.63

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	2
Footage (thous. ft.)	11.91
Average rotary rigs active	0
Permits	23

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	27th	NA
Production	26th	24th
Reserves (2014)	32nd	33rd

Number of operators	15

Number of producing wells
(12/31/14)

Crude oil	179
Natural gas	67
Total	246

Average production

Crude oil (thous. b/d)	4.9
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	0.7

Total production

Crude oil (YTD bbls, in thous.)	1,792
Natural gas (YTD MMcf)	263

Natural gas marketed production

(MMcf)	15,305

Average output per producing well

Crude oil (bbls.)	10,012
Natural gas (Mcf)	3,925

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	67
Crude oil production in Bbls. (thous.)	192
Crude oil production Bbls./d (thous.)	1

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	66
Natural gas production (MMcf)	263

Mineral lease royalties, bonuses & rent

Oil	$1,734,082
Natural Gas	$46,064
Rent, Bonuses & Other	$1,407,119
Total Oil and Gas Revenues	$3,187,266
Total Federal Reported Revenues	$3,187,266
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	9%
Natural Gas	1%
Combined on BOE basis	4%

Horizontal wells drilled	14
Directional wells drilled	0
Vertical wells drilled	3

Natural gas vehicle fuel demand & fueling stations

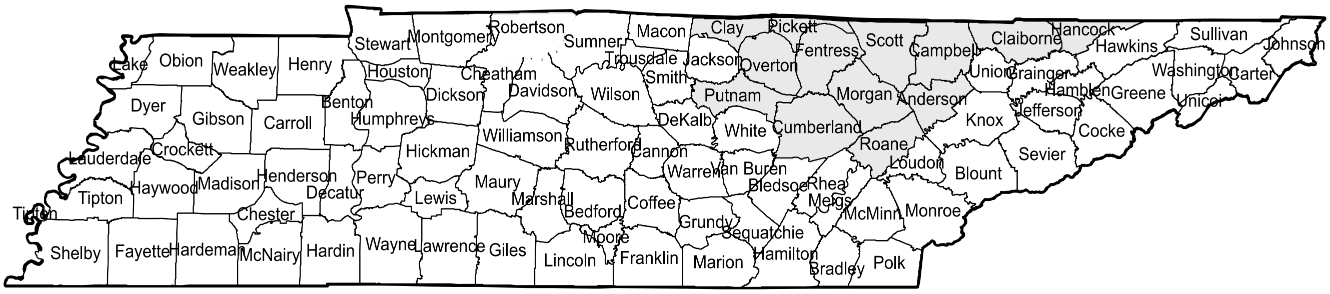
Natural gas vehicle demand	0 Mmcf
CNG stations	0
LNG stations	0
LPG stations	17

Average number of employees

Oil and natural gas extraction	136
Refining	0
Transportation	268
Wholesale	1,167
Retail	6,309
Pipeline construction	52
Oilfield machinery	0
Total petroleum industry	7,932

Source: For specific methodology and source details, please see pages 13 and 140

TENNESSEE



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	95
With oil and/or gas production	12

First year of production

Crude oil	1860
Natural gas	1889

Year and amount of peak production

Crude oil — 1,132 thous. bbls.	1982
Natural gas — 5,825 MMcf	2012

Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)

1982	11,540

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	3,248	23%
Gas wells	4,193	29%
Dry holes	6,847	48%
Total	14,288	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$592,629

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	NA

Value of Oil and Gas

Average wellhead/City Gate price*
(2014)

Crude oil ($/bbl.)	$90.48
Natural gas ($Mcf)*	$5.37

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$29,858
Natural gas*	$28,429
Total	$58,287

Average natural gas price
(2014 $/Mcf)

Residential consumers	$10.13
Commercial consumers	$9.30
Industrial consumers	$6.31
Electric utilities	$4.64
City Gate	$5.37

Severance taxes paid - FY $1,433
(2014 in thous. $)

Top producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
NA	NA	NA

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	2	42	44
Gas	NA	6	6
Dry	6	55	61
Total	8	103	111

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	1.66	62.55	64.21
Gas	NA	9.83	9.83
Dry	8.22	94.36	102.57
Total	9.87	166.74	176.61

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	3
Footage (thous. ft.)	2.67
Average rotary rigs active	0
Permits	139

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	26th	22nd
Production	28th	26th
Reserves (2014)	33rd	34th

Number of operators	NA

Number of producing wells***
(12/31/14)

Crude oil	1,213
Natural gas	1,006
Total	2,219

Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

Total production

Crude oil (YTD bbls, in thous.)**	330
Natural gas (YTD MMcf)***	5,294

Natural gas marketed production

(MMcf)	5,294

Average output per producing well***

Crude oil (bbls.)	272
Natural gas (Mcf)	5,262

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	--
Total Federal Reported Revenues	--
Oil and Gas Percent of Total	--

Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled	0
Directional wells drilled	0
Vertical wells drilled	111

Natural gas vehicle fuel demand & fueling stations

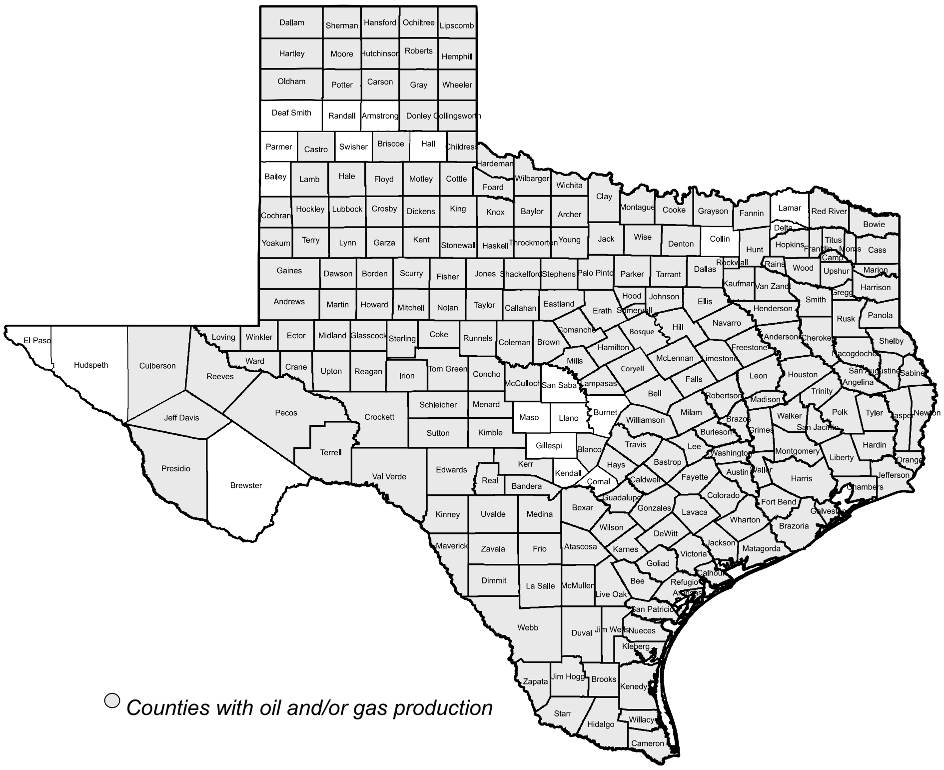
Natural gas vehicle demand	221 Mmcf
CNG stations	16
LNG stations	2
LPG stations	91

Average number of employees

Oil and natural gas extraction	358
Refining	1,110
Transportation	2,423
Wholesale	3,158
Retail	21,932
Pipeline construction	857
Oilfield machinery	0
Total petroleum industry	29,838

Source: For specific methodology and source details, please see pages 13 and 140
*** EIA data*
**** State data*

TEXAS



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	254
With oil and/or gas production	235

First year of production

Crude oil	1889
Natural gas	1889

Year and amount of peak production

Crude oil — 1,301,685 thous. bbls.	1972
Natural gas — 8,657,840 MMcf	1972

Deepest producing well (ft.)

Crude oil	27,011
Natural gas	30,712

Year and depth of deepest well drilled (ft.)

1983	29,670

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	663,651	54%
Gas wells	227,997	19%
Dry holes	338,047	27%
Total	1,229,695	100%

Cumulative crude oil wellhead value

(as of 12/31/14 -thous. $)	$1,008,382,802

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	85,915	23,635	109,550	528,584
Production	73,362	18,549	91,911	479,209

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$87.02
Natural gas ($Mcf)*	$5.77

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$100,783,605
Natural gas*	$46,073,560
Total	$146,857,165

Average natural gas price
(2014 $/Mcf)

Residential consumers	$11.16
Commercial consumers	$8.26
Industrial consumers	$4.71
Electric utilities	$6.62
City Gate	$5.77

Severance taxes paid - FY $5,773,652
(2014 in thous. $)

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Webb	5.61	1.74
Tarrant	5.44	1.69
Karnes	5.11	1.59
La Salle	4.24	1.31
DeWitt	3.77	1.17
Dimmit	3.23	1.00
Panola	2.90	0.90
McMullen	2.75	0.85
Johnson	2.60	0.80
Gonzales	2.24	0.69

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	35	12,808	12,843
Gas	21	2,729	2,750
Dry	169	1,797	1,966
Total	225	17,334	17,559

Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	235.01	136,916.28	137,151.29
Gas	178.22	36,740.32	36,918.54
Dry	1,231.96	12,498.07	13,730.02
Total	1,645.18	186,154.67	187,799.85

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	117
Footage (thous. ft.)	901.12
Average rotary rigs active	882
Permits	29,307

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	1st	1st
Reserves (2014)	1st	1st

Number of operators	4,598

Number of producing wells

(12/31/14)

Crude oil	196,717
Natural gas	106,569
Total	303,286

Average production

Crude oil (thous. b/d)	2,728.6
NGL (thous. b/d)	450.8
Natural gas (MMcf/day)	18,071.1

Total production

Crude oil (YTD bbls, in thous.)	995,948
Natural gas (YTD MMcf)	6,595,953

Natural gas marketed production

(MMcf)	7,985,019
Shale gas production	4,156 Bcf

Average output per producing well

Crude oil (bbls.)	5,063
Natural gas (Mcf)	61,894

Coalbed methane (YTD MMcf)	62
Oil Wells	0
Gas Wells	6
Daily Average (MMcf) / Well	0.17

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves

(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	3,214	NA	3,214
Production	1,160	NA	1,160
Net annual change	2,054	NA	2,054
Proved reserves	14,058	NA	14,058

Natural gas reserves

(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	7,009	9,628	16,637
Production	2,248	6,355	8,603
Net annual change	4,761	3,273	8,034
Proved reserves	26,928	79,027	105,955

Marginal oil wells

Producing marginal wells	169,018
Crude oil production in Bbls. (thous.)	184,376
Crude oil production Bbls./d (thous.)	505

Marginal natural gas wells

(as of 12/31/14)

Producing marginal wells	67,368
Natural gas production (MMcf)	709,571

Mineral lease royalties, bonuses & rent

Oil	$6,927,144
Natural Gas	$28,119,361
Rent, Bonuses & Other	$3,420,497
Total Oil and Gas Revenues	$38,467,002
Total Federal Reported Revenues	$38,467,002
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	<1%

Horizontal wells drilled	8,889
Directional wells drilled	662
Vertical wells drilled	8,008

Natural gas vehicle fuel demand & fueling stations

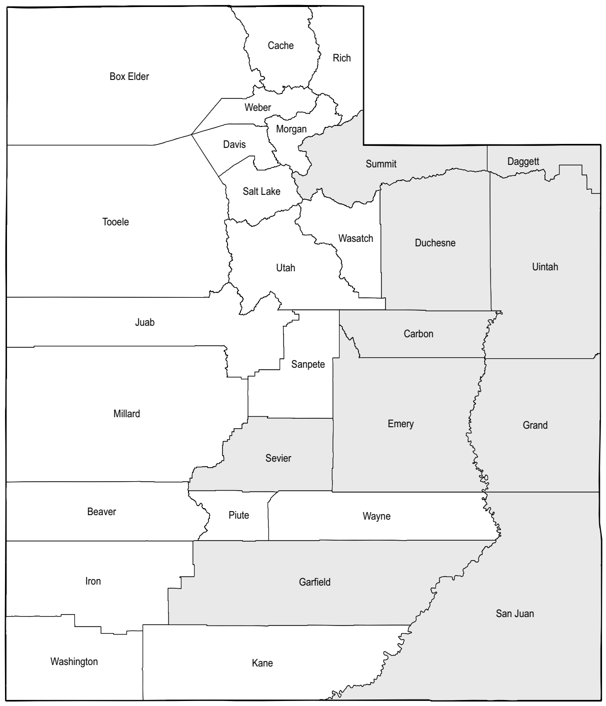
Natural gas vehicle demand	4,162 Mmcf
CNG stations	91
LNG stations	13
LPG stations	479

Average number of employees

Oil and natural gas extraction	303,533
Refining	22,794
Transportation	25,742
Wholesale	20,832
Retail	79,820
Pipeline construction	41,194
Oilfield machinery	54,978
Total petroleum industry	548,893

Source: For specific methodology and source details, please see pages 13 and 140

UTAH



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	29
With oil and/or gas production	10

First year of production

Crude oil	1907
Natural gas	1886

Year and amount of peak production

Crude oil — 42,301 thous. bbls.	1975
Natural gas — 490,393 MMcf	2012

Deepest producing well (ft.)

Crude oil	20,600
Natural gas	20,900

Year and depth of deepest well drilled (ft.)

1982	21,874

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	12,339	44%
Gas wells	10,342	37%
Dry holes	5,414	19%
Total	28,095	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $35,291,422

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,897	1,981	3,878	16,581
Production	1,407	491	1,898	9,802

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$79.04
Natural gas ($Mcf)*	$5.74

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$3,232,341
Natural gas*	$2,609,088
Total	$5,841,429

Average natural gas price

(2014 $/Mcf)

Residential consumers	$9.48
Commercial consumers	$7.71
Industrial consumers	$5.87
Electric utilities	NA
City Gate	$5.74

Severance taxes paid $96,981

(2014 in thous. $)

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	US
Uintah	59.60	0.90
Duchesne	19.26	0.29
Carbon	10.03	0.15
San Juan	4.95	0.07
Grand	1.92	0.03
Sevier	1.58	0.02
Emery	1.55	0.02
Summit	0.71	0.01
Daggett	0.24	<0.01
Garfield	0.15	<0.01

**City Gate price used for natural gas.*

UTAH

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	11	699	710
Gas	1	159	160
Dry	8	49	57
Total	20	907	927

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	83.20	5,299.88	5,383.08
Gas	4.10	1,520.43	1,524.52
Dry	43.06	44.28	87.34
Total	130.36	6,864.59	6,994.94

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	9
Footage (thous. ft.)	49.73

Average rotary rigs active	25

Permits	1,760

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	9th	11th
Production	12th	12th
Reserves (2014)	11th	12th

Number of operators	120

Number of producing wells
(12/31/14)

Crude oil	5,583
Natural gas	7,526
Total	13,109

Average production

Crude oil (thous. b/d)	105.8
NGL (thous. b/d)	6.2
Natural gas (MMcf/day)	1,034.5

Total production

Crude oil (YTD bbls, in thous.)	38,627
Natural gas (YTD MMcf)	377,592

Natural gas marketed production

(MMcf)	454,545

Average output per producing well

Crude oil (bbls.)	6,919
Natural gas (Mcf)	50,172

Coalbed methane (YTD MMcf)	41,035
Oil Wells	1
Gas Wells	861
Daily Average (MMcf) / Well	112.42

Heavy oil (YTD Bbls, in thous.)	410
Wells	91
Av. bbls per day (in thous.)	1.12
Av. bbls per well	4,500

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	-21	NA	-21
Production	43	NA	43
Net annual change	-64	NA	-64
Proved reserves	606	NA	606

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	55	310	365
Production	78	374	452
Net annual change	-23	-64	-87
Proved reserves	872	6,098	6,970

Marginal oil wells

Producing marginal wells	3,605
Crude oil production in Bbls. (thous.)	7,471
Crude oil production Bbls./d (thous.)	20

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	4,069
Natural gas production (MMcf)	60,418

Mineral lease royalties, bonuses & rent

Oil	$179,644,376
Natural Gas	$109,132,380
Rent, Bonuses & Other	$9,489,284
Total Oil and Gas Revenues	$298,266,040
Total Federal Reported Revenues	$346,006,675
Oil and Gas Percent of Total	86%

Federal lands production shares

Oil	32%
Natural Gas	53%
Combined on BOE basis	46%

Horizontal wells drilled	38
Directional wells drilled	654
Vertical wells drilled	235

Natural gas vehicle fuel demand & fueling stations

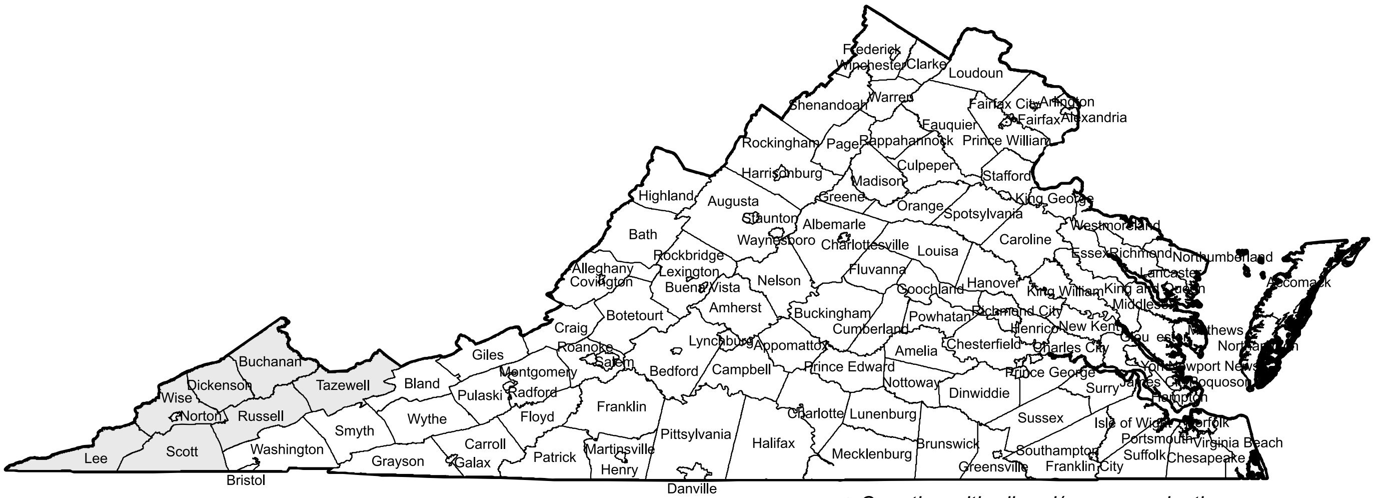
Natural gas vehicle demand	256 Mmcf
CNG stations	87
LNG stations	7
LPG stations	24

Average number of employees

Oil and natural gas extraction	6,743
Refining	1,478
Transportation	1,041
Wholesale	950
Retail	9,528
Pipeline construction	1,000
Oilfield machinery	369
Total petroleum industry	21,109

Source: For specific methodology and source details, please see pages 13 and 140

VIRGINIA



Counties with oil and/or gas production

Background Information

Counties

Number of counties	95
With oil and/or gas production	7

First year of production

Crude oil	1943
Natural gas	1931

Year and amount of peak production

Crude oil — 65 thous. bbls.	1983
Natural gas — 151,094 MMcf	2011

Deepest producing well (ft.)

Crude oil	NA
Natural gas	10,134

Year and depth of deepest well drilled (ft.)

1977	17,003

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	154	2%
Gas wells	9,143	95%
Dry holes	338	3%
Total	9,635	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $)	$11,097

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	4,563
Production	NA	NA	NA	2,371

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	NA
Natural gas ($Mcf)*	$5.98

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	NA
Natural gas*	$799,293
Total	$799,293

Average natural gas price

(2014 $/Mcf)

Residential consumers	$12.07
Commercial consumers	$9.17
Industrial consumers	$6.43
Electric utilities	$6.12
City Gate	$5.98

Severance taxes paid

(2014 in thous. $) --

Top producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Buchanan	54.33	0.18
Dickenson	21.08	0.07
Tazewell	10.78	0.04
Russell	7.89	0.03
Wise	5.74	0.02
Lee	0.11	<0.01
Scott	0.07	<0.01

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	117	117
Dry	NA	NA	NA
Total	NA	117	117

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	341.10	341.10
Dry	NA	NA	NA
Total	NA	341.10	341.10

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	NA
Footage (thous. ft.)	NA
Average rotary rigs active	0
Permits	198

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	32nd	13th
Production	32nd	18th
Reserves (2014)	34th	16th

Number of operators*	22

Number of producing wells
(12/31/14)

Crude oil	NA
Natural gas	8,063
Total	8,063

Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	366.0

Total production

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	133,585

Natural gas marketed production

(MMcf)	133,661

Shale gas production	3 Bcf

Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	16,568

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	NA	572	572
Production	NA	145	145
Net annual change	NA	427	427
Proved reserves	NA	2,800	2,800

Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	7,184
Natural gas production (MMcf)	89,833

Mineral lease royalties, bonuses & rent

Oil	$91.93
Natural Gas	$63,404
Rent, Bonuses & Other	$20,991
Total Oil and Gas Revenues	$84,395
Total Federal Reported Revenues	$119,693
Oil and Gas Percent of Total	71%

Federal lands production shares

Oil	0%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled	6
Directional wells drilled	0
Vertical wells drilled	111

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	207 Mmcf
CNG stations	21
LNG stations	0
LPG stations	64

Average number of employees

Oil and natural gas extraction	1,243
Refining	599
Transportation	1,918
Wholesale	4,221
Retail	28,658
Pipeline construction	2,113
Oilfield machinery	0
Total petroleum industry	38,752

Source: For specific methodology and source details, please see pages 13 and 140
** State data*

West Virginia

Background Information

Counties

Number of counties	55
With oil and/or gas production	48

First year of production

Crude oil	1860
Natural gas	1885

Year and amount of peak production

Crude oil — 16,196 thous. bbls.	1900
Natural gas — 1,067,114 MMcf	2014

Deepest producing well (ft.)

Crude oil	17,829
Natural gas	19,660

Year and depth of deepest well drilled (ft.)

1974	20,222

Cumulative number of total wells drilled

(as of 12/31/14 - excluding service wells)

Oil wells	18,008	18%
Gas wells	72,150	73%
Dry holes	8,267	9%
Total	98,425	100%

Cumulative crude oil wellhead value

(as of 12/31/14 - thous. $) $4,963,947

Cumulative production & new reserves

(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	792	541	1,333	54,694
Production	641	437	1,078	23,882

Value of Oil and Gas

Average wellhead/City Gate price

(2014)

Crude oil ($/bbl.)	$82.46
Natural gas* ($Mcf)	$5.07

Wellhead/City Gate value of production

(2014 in thous. $)

Crude oil	$625,212
Natural gas*	$5,410,268
Total	$6,035,480

Average natural gas price

(2014 $/Mcf)

Residential consumers	$10.21
Commercial consumers	$8.92
Industrial consumers	$5.00
Electric utilities	NA
City Gate	$5.07

Severance taxes paid

(2014 in thous. $) $232,000

Top 10 producing counties

(2014 on a BOE basis)

County	% Production State	% Production US
Doddridge	22.69	0.58
Harrison	17.86	0.46
Wetzel	15.52	0.40
Marshall	9.77	0.25
Ritchie	3.79	0.10
Tyler	3.70	0.09
Taylor	2.68	0.07
Marion	2.63	0.07
Ohio	2.35	0.06
Barbour	2.09	0.05

City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	NA	49	49
Gas	31	445	476
Dry	NA	5	5
Total	31	499	530

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	NA	146.52	146.52
Gas	419.35	5,550.48	5,969.82
Dry	NA	19.69	19.69
Total	419.35	5,716.68	6,136.03

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	18
Footage (thous. ft.)	243.21

Average rotary rigs active	29

Permits	874

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	25th	7th
Production	18th	10th
Reserves (2014)	15th	4th

Number of operators	635

Number of producing wells
(12/31/14)

Crude oil	3,013
Natural gas	54,230
Total	57,243

Average production

Crude oil (thous. b/d)	9.6
NGL (thous. b/d)	11.1
Natural gas (MMcf/day)	2,787.2

Total production

Crude oil (YTD bbls, in thous.)	3,516
Natural gas (YTD MMcf)	1,017,331

Natural gas marketed production

(MMcf)	1,067,114

Shale gas production	869 Bcf

Average output per producing well

Crude oil (bbls.)	1,167
Natural gas (Mcf)	18,760

Coalbed methane (YTD MMcf)	1,243
Oil Wells	0
Gas Wells	89
Daily Average (MMcf) / Well	3.41

Heavy oil (YTD Bbls, in thous.)	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	100	NA	100
Production	9	NA	9
Net annual change	91	NA	91
Proved reserves	185	NA	185

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	-35	9,021	8,986
Production	3	1,039	1,042
Net annual change	-38	7,982	7,944
Proved reserves	32	31,121	31,153

Marginal oil wells

Producing marginal wells	2,239
Crude oil production in Bbls. (thous.)	689
Crude oil production Bbls./d (thous.)	2

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	52,171
Natural gas production (MMcf)	163,882

Mineral lease royalties, bonuses & rent

Oil	52
Natural Gas	$81,227
Rent, Bonuses & Other	$532,317
Total Oil and Gas Revenues	$613,595
Total Federal Reported Revenues	$613,595
Oil and Gas Percent of Total	100%

Federal lands production shares

Oil	0%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled	420
Directional wells drilled	6
Vertical wells drilled	102

Natural gas vehicle fuel demand & fueling stations

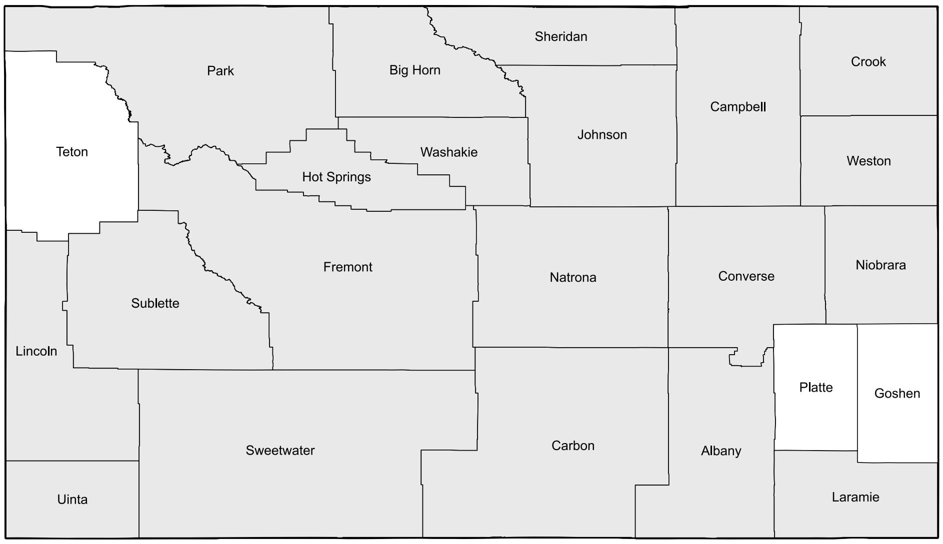
Natural gas vehicle demand	9 Mmcf
CNG stations	4
LNG stations	0
LPG stations	12

Average number of employees

Oil and natural gas extraction	7,466
Refining	632
Transportation	2,075
Wholesale	958
Retail	9,973
Pipeline construction	3,109
Oilfield machinery	0
Total petroleum industry	24,213

Source: For specific methodology and source details, please see pages 13 and 140

WYOMING



○ *Counties with oil and/or gas production*

Background Information

Counties

Number of counties	23
With oil and/or gas production	20

First year of production

Crude oil	1894
Natural gas	1889

Year and amount of peak production

Crude oil — 160,345 thous. bbls.	1970
Natural gas — 2,335,328 MMcf	2009

Deepest producing well (ft.)

Crude oil	23,205
Natural gas	25,175

Year and depth of deepest well drilled (ft.)

2001	25,830

Cumulative number of total wells drilled
(as of 12/31/14 - excluding service wells)

Oil wells	37,528	31%
Gas wells	52,564	43%
Dry holes	31,371	26%
Total	121,463	100%

Cumulative crude oil wellhead value
(as of 12/31/14 - thous. $) $104,876,122

Cumulative production & new reserves
(as of 12/31/14)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	7,885	2,782	10,667	72,981
Production	7,145	1,620	8,765	47,970

Value of Oil and Gas

Average wellhead/City Gate price
(2014)

Crude oil ($/bbl.)	$80.54
Natural gas ($Mcf)*	$5.27

Wellhead/City Gate value of production
(2014 in thous. $)

Crude oil	$6,132,074
Natural gas*	$9,456,557
Total	$15,588,631

Average natural gas price
(2014 $/Mcf)

Residential consumers	$9.34
Commercial consumers	$7.69
Industrial consumers	$5.89
Electric utilities	NA
City Gate	$5.27

Severance taxes paid $1,396,264
(2014 in thous. $)

Top 10 producing counties
(2014 on a BOE basis)

County	% Production State	% Production US
Sublette	45.74	2.46
Sweetwater	10.28	0.55
Campbell	8.44	0.45
Johnson	8.15	0.44
Fremont	6.99	0.38
Carbon	4.36	0.23
Converse	3.50	0.19
Lincoln	2.38	0.13
Uinta	2.34	0.13
Natrona	2.03	0.11

*City Gate price used for natural gas.

2014 Industry Statistics

Number of wells drilled

	Exploratory	Development	Total
Oil	144	402	546
Gas	NA	637	637
Dry	28	99	127
Total	172	1,138	1,310

Total footage drilled
(thous. ft.)

	Exploratory	Development	Total
Oil	2,011.90	4,125.99	6,137.89
Gas	NA	6,634.07	6,634.07
Dry	218.71	551.20	769.91
Total	2,230.60	11,311.26	13,541.86

(Note: Totals may not add due to rounding.)

New-field wildcats drilled	91
Footage (thous. ft.)	1,144.36
Average rotary rigs active	54
Permits	3,388

Statewide rank

	Crude Oil	Natural Gas
Wells drilled	11th	3rd
Production	9th	5th
Reserves (2014)	9th	5th

Number of operators	405

Number of producing wells
(12/31/14)

Crude oil	12,298
Natural gas	25,016
Total	37,314

Average production

Crude oil (thous. b/d)	177.4
NGL (thous. b/d)	31.3
Natural gas (MMcf/day)	4,911.1

Total production

Crude oil (YTD bbls, in thous.)	64,743
Natural gas (YTD MMcf)	1,792,567

Natural gas marketed production

(MMcf)	1,794,413
Shale gas production	29 Bcf

Average output per producing well

Crude oil (bbls.)	5,265
Natural gas (Mcf)	71,657

Coalbed methane (YTD MMcf)

Coalbed methane (YTD MMcf)	258,058
Oil Wells	3
Gas Wells	9,928
Daily Average (MMcf) / Well	707.01

Heavy oil (YTD Bbls, in thous.)

Heavy oil (YTD Bbls, in thous.)	9,052
Wells	2,096
Av. bbls per day (in thous.)	24.80
Av. bbls per well	4,319

2014 Latest Available Data

Petroleum reserves
(as of 12/31/14) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	257	NA	257
Production	75	NA	75
Net annual change	182	NA	182
Proved reserves	1,137	NA	1,137

Natural gas reserves
(as of 12/31/14) (Bcf)

	Associated Dissolved	Non-Associated	Total Gas
New reserves	598	-4,592	-3,994
Production	120	1,675	1,795
Net annual change	478	-6,267	-5,789
Proved reserves	1,280	27,507	28,787

Marginal oil wells

Producing marginal wells	9,313
Crude oil production in Bbls. (thous.)	12,511
Crude oil production Bbls./d (thous.)	34

Marginal natural gas wells
(as of 12/31/14)

Producing marginal wells	12,854
Natural gas production (MMcf)	152,818

Mineral lease royalties, bonuses & rent

Oil	$468,484,012
Natural Gas	$497,649,144
Rent, Bonuses & Other	$79,814,765
Total Oil and Gas Revenues	$1,045,947,921
Total Federal Reported Revenues	$2,091,297,454
Oil and Gas Percent of Total	50%

Federal lands production shares

Oil	46%
Natural Gas	54%
Combined on BOE basis	53%

Horizontal wells drilled	452
Directional wells drilled	490
Vertical wells drilled	368

Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	26 Mmcf
CNG stations	11
LNG stations	0
LPG stations	18

Average number of employees

Oil and natural gas extraction	17,334
Refining	1,350
Transportation	994
Wholesale	719
Retail	3,703
Pipeline construction	3,838
Oilfield machinery	0
Total petroleum industry	27,938

Source: For specific methodology and source details, please see pages 13 and 140

Rotary Rigs Operating

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	3	5	5	5	4	5	7	5	5	6
Alaska	9	8	8	8	8	8	7	7	9	10
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	9	24	45	51	44	39	35	21	14	12
California	27	33	35	42	23	32	45	44	38	42
Colorado	74	89	107	114	50	58	72	65	63	68
Florida	2	0	0	1	0	1	1	1	2	2
Hawaii	1	0	0	0	1	1	0	0	0	0
Illinois	0	0	0	0	1	2	1	1	4	2
Indiana	0	0	0	2	2	3	1	1	1	2
Iowa	0	0	2	0	0	0	0	0	0	0
Kansas	7	10	14	11	20	20	28	30	27	29
Kentucky	5	7	9	10	10	6	5	3	1	3
Louisiana	182	188	177	167	150	192	165	124	108	111
Maryland	0	0	1	0	0	0	0	0	0	0
Michigan	3	2	2	1	0	0	2	2	0	0
Mississippi	10	10	14	13	10	11	9	11	11	13
Montana	24	22	17	11	3	7	9	20	12	8
Nebraska	0	0	0	0	0	2	1	1	1	2
Nevada	2	1	2	3	3	6	3	1	3	1
New Mexico	83	94	78	78	44	62	79	84	77	92
New York	4	6	6	6	2	1	0	0	0	0
North Dakota	21	32	39	68	50	114	168	188	173	176
Ohio	9	8	13	12	8	7	11	18	32	41
Oklahoma	152	179	188	200	94	128	180	196	179	199
Oregon	0	0	0	1	0	0	1	0	0	0
Pennsylvania	13	16	16	23	42	85	110	84	59	56
South Dakota	2	1	2	2	0	1	1	1	1	0
Tennessee	0	1	5	4	2	0	0	0	0	0
Texas	614	746	834	898	432	659	838	899	835	882
Utah	28	40	42	42	18	27	28	37	29	25
Virginia	2	1	3	5	4	2	1	1	1	0
Washington	0	1	0	1	1	0	0	0	0	0
West Virginia	17	27	32	27	22	23	21	26	28	29
Wyoming	78	99	74	74	40	40	48	47	48	54
TOTAL U.S.	**1,381**	**1,649**	**1,769**	**1,880**	**1,086**	**1,541**	**1,875**	**1,919**	**1,761**	**1,862**
ONSHORE	**1,287**	**1,559**	**1,696**	**1,814**	**1,041**	**1,509**	**1,842**	**1,871**	**1,704**	**1,805**
OFFSHORE	**94**	**90**	**73**	**66**	**45**	**32**	**33**	**48**	**57**	**57**

Source: Baker Hughes.
Note: Averages may not add up to total due to other states not listed.

NEW-FIELD WILDCAT WELLS DRILLED

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	17	26	35	24	32	50	43	47	29	31
Alaska	15	8	10	13	9	2	3	6	9	6
Arizona	4	1	1	0	0	0	0	0	0	0
Arkansas	10	34	39	30	11	11	0	3	2	5
California	29	18	17	18	8	7	2	10	7	5
Colorado	136	102	132	86	43	46	59	128	87	46
Florida	2	0	0	0	0	0	0	0	1	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	1	0	2	0	0	0	0
Illinois	34	31	22	20	12	12	17	24	32	25
Indiana	19	39	33	30	34	26	10	12	11	8
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	225	275	249	305	208	306	317	386	374	363
Kentucky	242	313	227	168	95	39	15	19	15	22
Louisiana	58	52	52	30	19	25	26	23	23	15
Michigan	18	28	21	34	15	33	34	32	47	48
Mississippi	33	30	42	25	17	12	18	12	14	8
Missouri	0	0	0	0	0	0	0	0	0	1
Montana	160	140	107	81	30	28	59	69	54	18
Nebraska	19	21	22	55	17	23	23	33	54	62
Nevada	6	1	5	5	2	3	0	2	3	3
New Mexico	46	67	46	44	38	52	68	90	104	121
New York	30	30	45	50	32	29	6	1	1	1
North Dakota	44	101	98	87	83	58	86	64	26	24
Ohio	16	21	41	34	12	7	7	7	8	6
Oklahoma	108	181	256	273	102	62	74	35	17	16
Oregon	0	0	0	0	0	0	0	0	0	0
Pennsylvania	188	224	349	293	185	374	145	85	110	42
South Dakota	7	4	13	16	6	1	5	2	7	2
Tennessee	37	82	62	28	12	8	2	2	2	3
Texas	468	392	315	383	233	244	189	139	117	117
Utah	32	50	49	49	27	33	39	66	47	9
Virginia	2	10	28	8	0	0	0	0	0	0
Washington	0	0	2	0	0	0	0	0	0	0
West Virginia	27	43	56	53	25	21	20	25	10	18
Wyoming	80	77	62	52	36	34	78	84	80	91
Federal Offshore	72	62	58	52	70	33	28	49	45	49
TOTAL U.S.	**2,184**	**2,463**	**2,494**	**2,346**	**1,383**	**1,581**	**1,373**	**1,455**	**1,336**	**1,165**

Source: IHS.
Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

Exploratory Wells Drilled

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	27	35	49	36	40	52	51	53	40	37
Alaska	19	14	18	14	10	3	3	8	13	9
Arizona	4	1	1	0	0	0	0	0	0	0
Arkansas	18	45	47	45	19	11	1	11	6	8
California	74	44	36	26	20	12	6	31	14	7
Colorado	206	159	177	124	56	62	97	153	134	79
Florida	2	0	0	0	0	0	0	2	1	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	NA	NA	NA	1	NA	2	0	0	0	0
Illinois	50	72	84	61	51	54	48	72	70	60
Indiana	40	58	69	79	80	57	18	24	23	22
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	418	457	479	608	423	557	587	841	788	661
Kentucky	448	598	464	353	286	101	26	42	36	54
Louisiana	70	65	67	56	33	30	35	30	33	23
Michigan	24	34	31	52	24	55	45	44	71	57
Mississippi	44	40	53	32	19	15	23	18	25	30
Missouri	0	0	0	0	0	0	0	0	0	1
Montana	278	254	188	145	48	43	76	92	72	23
Nebraska	30	32	34	71	25	39	40	45	72	82
Nevada	6	1	4	4	2	3	0	2	3	3
New Mexico	98	118	75	69	48	58	74	95	107	122
New York	41	30	78	49	40	45	12	2	3	2
North Dakota	72	165	236	217	135	182	163	146	42	27
Ohio	56	66	147	116	80	42	76	88	43	50
Oklahoma	278	334	601	672	302	217	226	116	55	32
Pennsylvania	513	657	993	765	402	513	254	152	191	76
South Dakota	9	4	13	19	7	1	5	2	7	2
Tennessee	75	120	143	105	45	21	11	4	12	8
Texas	743	696	618	702	385	333	261	227	196	225
Utah	68	123	83	86	44	56	71	109	65	20
Virginia	7	20	53	14	0	0	0	0	0	0
Washington	0	0	2	0	0	0	0	0	0	0
West Virginia	200	215	285	250	134	69	29	40	35	31
Wyoming	132	119	86	79	45	49	89	117	107	172
Federal Offshore	77	59	67	118	87	36	32	51	46	49
TOTAL U.S.	**4,136**	**4,623**	**5,187**	**4,974**	**3,065**	**2,718**	**2,359**	**2,617**	**2,310**	**1,972**

Source: IHS.
Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

Development Wells Drilled

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	416	407	505	131	250	201	165	111	120	116
Alaska	155	121	133	25	135	129	109	121	122	153
Arizona	0	0	1	0	0	0	0	0	0	0
Arkansas	299	417	470	1,048	1,107	1,120	1,029	919	788	724
California	2,234	2,464	2,343	2,640	1,603	1,965	2,447	2,714	3,039	2,708
Colorado	2,506	2,845	3,269	3,790	2,431	2,624	2,978	2,644	1,738	1,946
Florida	1	0	0	1	1	1	6	1	6	3
Illinois	379	411	353	434	232	334	421	500	463	439
Indiana	128	72	80	134	93	111	104	112	112	158
Kansas	1,867	2,709	2,770	3,634	2,011	2,382	3,071	3,641	3,596	3,839
Kentucky	680	805	850	885	712	694	674	623	520	503
Louisiana	1,381	1,569	1,565	1,714	1,138	1,342	1,655	1,533	1,183	1,172
Michigan	505	524	450	450	194	116	45	106	81	57
Mississippi	255	253	280	241	144	168	148	134	138	142
Missouri	0	0	0	0	0	35	0	11	15	8
Montana	682	863	672	427	209	230	148	250	192	219
Nebraska	46	34	132	163	49	60	95	66	73	111
Nevada	0	0	0	1	1	0	0	2	0	1
New Mexico	1,812	1,914	1,763	1,619	1,014	1,022	1,328	1,280	1,151	1,164
New York	133	227	288	339	203	281	216	167	147	155
North Dakota	227	322	278	500	473	997	1,572	2,188	2,441	2,725
Ohio	539	637	684	890	521	408	341	363	514	651
Oklahoma	3,248	3,671	2,992	3,507	1,813	2,068	2,360	2,990	3,168	3,447
Oregon	0	0	0	1	4	4	0	0	1	0
Pennsylvania	2,908	3,611	3,210	3,425	2,327	2,448	2,346	2,241	2,335	2,248
South Dakota	34	21	36	25	17	24	0	21	19	15
Tennessee	163	168	32	137	73	71	85	129	128	103
Texas	10,800	12,272	13,784	16,033	9,351	11,694	14,626	16,804	16,757	17,334
Utah	709	880	877	1,116	597	883	822	980	945	907
Virginia	318	531	654	621	522	414	389	164	107	117
Washington	0	0	0	0	0	0	0	0	0	0
West Virginia	1,212	1,584	1,562	1,576	860	582	468	477	457	499
Wyoming	4,330	4,024	2,977	2,941	1,841	1,837	1,477	971	1,111	1,138
Federal Offshore	551	483	415	370	253	46	177	199	212	230
TOTAL U.S.	**39,880**	**46,499**	**45,946**	**50,376**	**31,347**	**34,291**	**39,422**	**42,462**	**41,679**	**43,035**

Source: IHS.
Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

Total Wells Drilled

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	443	440	554	348	290	253	216	164	160	153
Alaska	173	132	148	145	145	132	112	129	135	162
Arizona	4	1	2	0	0	0	0	0	0	0
Arkansas	334	495	830	1,093	1,126	1,131	1,030	930	794	732
California	2,296	2,494	2,367	2,666	1,623	1,977	2,453	2,745	3,053	2,715
Colorado	2,710	3,003	3,440	3,914	2,487	2,686	3,075	2,797	1,872	2,025
Florida	3	0	0	1	1	1	6	3	7	3
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	2	0	1	0	0	0	3
Illinois	424	478	437	495	283	388	469	572	533	499
Indiana	163	117	113	213	173	168	122	136	135	180
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	2,283	3,161	3,249	4,242	2,434	2,939	3,658	4,482	4,384	4,500
Kentucky	949	1,294	1,269	1,238	998	795	700	665	556	557
Louisiana	1,451	1,633	1,630	1,770	1,171	1,372	1,690	1,563	1,216	1,195
Michigan	528	558	482	502	218	171	195	150	152	114
Mississippi	299	293	332	273	163	183	171	152	163	172
Missouri	0	0	0	0	0	35	0	11	15	9
Montana	969	1,118	862	572	257	273	224	342	264	242
Nebraska	75	65	165	234	74	99	135	111	145	193
Nevada	5	1	2	5	3	3	0	4	3	4
New Mexico	1,906	2,028	1,838	1,688	1,062	1,080	1,402	1,375	1,258	1,286
New York	160	242	350	388	243	326	228	169	150	157
North Dakota	300	487	519	717	608	1,179	1,735	2,334	2,483	2,752
Ohio	577	684	806	1,006	601	450	417	451	557	701
Oklahoma	3,524	3,995	3,588	4,179	2,115	2,285	2,586	3,106	3,223	3,479
Oregon	0	0	0	1	4	4	0	0	1	0
Pennsylvania	3,344	4,260	4,169	4,190	2,729	2,961	2,600	2,393	2,526	2,324
South Dakota	41	25	48	44	24	25	20	23	26	17
Tennessee	234	285	71	242	118	92	96	133	140	111
Texas	11,532	13,409	14,392	16,735	9,736	12,027	14,887	17,031	16,953	17,559
Utah	777	1,005	961	1,202	641	939	893	1,089	1,010	927
Virginia	324	545	705	635	522	414	389	164	107	117
Washington	0	0	2	0	0	0	0	0	0	0
West Virginia	1,408	1,791	1,824	1,826	994	651	497	517	492	530
Wyoming	4,460	4,134	3,061	3,020	1,886	1,886	1,566	1,088	1,218	1,310
Federal Offshore	716	638	555	488	340	248	209	250	258	279
TOTAL U.S.	**44,016**	**51,122**	**51,133**	**55,350**	**34,412**	**37,175**	**41,781**	**45,079**	**43,989**	**45,007**

Source: IHS.
Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	557	493	488	506	507	528	554	597	628	647
Alaska	2,505	2,465	2,402	2,479	2,518	2,498	2,477	2,420	2,469	2,697
Arizona	23	25	22	24	23	22	21	24	27	28
Arkansas	2,138	2,505	2,487	1,494	1,488	1,415	1,195	1,238	1,288	1,385
California	48,239	49,705	50,591	52,268	51,866	51,327	52,082	53,392	54,301	55,410
Colorado	5,088	5,049	4,999	5,038	4,942	5,029	5,727	7,085	7,895	8,990
Florida	76	65	64	66	59	73	79	75	78	82
Kansas	40,024	40,349	40,782	41,661	41,792	42,272	42,743	43,844	44,900	45,315
Louisiana	17,463	17,999	17,751	18,156	17,315	17,388	17,393	17,550	18,604	18,290
Michigan	3,887	3,847	3,875	3,755	3,774	3,885	4,092	4,097	4,128	4,008
Mississippi	1,647	1,788	1,937	2,082	3,872	2,418	2,442	2,459	2,543	2,563
Montana	4,052	4,272	4,873	5,033	4,535	4,563	4,624	4,838	4,950	5,011
Nebraska	1,211	1,229	1,211	1,234	1,199	1,202	1,289	1,323	1,406	1,492
Nevada	71	68	74	75	71	71	72	76	73	74
New Mexico	20,553	21,219	21,644	22,134	22,563	23,017	23,863	24,978	25,414	26,281
New York	3,270	2,767	3,190	2,816	2,632	2,890	3,011	2,857	2,723	3,009
North Dakota	3,506	3,512	4,841	4,198	4,565	5,315	6,522	8,336	10,287	12,492
Ohio	17,436	17,867	16,192	17,742	17,015	19,181	19,682	19,985	19,626	20,397
Oklahoma	51,869	54,408	51,160	41,382	38,502	38,325	40,134	40,153	42,532	31,086
Pennsylvania	NA	NA	NA	NA	5,390	11,018	8,590	13,382	12,136	18,020
South Dakota	162	153	163	151	145	147	156	161	180	179
Texas	152,045	153,455	154,569	158,433	160,173	162,417	169,174	178,530	189,014	196,717
Utah	2,685	2,953	3,107	3,351	3,548	3,885	4,146	4,692	5,148	5,583
West Virginia	2,115	2,107	2,613	2,485	2,284	2,633	2,671	3,071	2,714	3,013
Wyoming	12,147	12,813	12,094	12,011	11,798	11,533	11,479	11,711	12,037	12,298
Federal Offshore	3,631	3,146	3,554	3,574	3,289	3,358	3,417	3,439	3,431	3,446
TOTAL U.S.	**396,400**	**404,259**	**404,683**	**402,148**	**405,865**	**416,427**	**427,635**	**450,673**	**468,532**	**478,513**

Source: IHS. Total includes onshore and offshore counts.

Producing Natural Gas Wells

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	5,122	5,523	5,728	6,070	6,214	6,297	6,289	6,247	6,196	6,138
Alaska	NA	NA	NA	190	203	196	191	189	207	234
Arizona	4	5	5	5	4	4	3	3	3	4
Arkansas	4,298	4,481	4,955	5,913	6,652	7,412	8,124	8,699	9,001	9,610
California	1,579	1,715	1,806	1,840	1,841	1,748	1,745	1,645	1,550	1,573
Colorado	25,570	28,407	31,920	36,805	39,296	42,927	45,690	47,182	47,610	47,538
Kansas	18,417	19,891	20,978	21,908	22,140	21,849	21,910	21,800	21,628	21,718
Kentucky	11,754	12,771	16,140	13,727	13,622	12,941	12,941	13,029	14,902	6,552
Louisiana	9,385	10,679	11,245	11,879	12,859	13,288	13,701	14,277	13,769	19,763
Michigan	9,009	9,444	9,792	10,050	10,349	10,253	10,310	10,210	10,206	10,010
Mississippi	1,469	1,574	1,714	1,786	2,112	1,762	1,742	1,716	1,671	1,623
Montana	5,716	6,200	6,206	6,277	6,705	6,722	6,542	6,286	5,822	5,625
Nebraska	115	117	195	328	356	295	299	324	235	105
New Mexico	29,723	31,246	32,535	33,625	34,163	34,306	34,402	34,435	33,978	33,742
New York	6,661	6,764	7,138	7,391	7,401	7,509	7,544	7,838	7,571	7,613
North Dakota	208	371	303	347	350	350	343	336	306	316
Ohio	22,151	23,123	20,507	23,384	22,631	24,701	25,243	25,065	24,723	24,905
Oklahoma	34,081	36,358	38,164	39,800	39,817	39,443	39,339	38,842	37,791	36,969
Oregon	14	13	12	21	23	26	27	26	28	24
Pennsylvania	NA	NA	NA	NA	32,076	55,215	45,646	50,192	49,858	65,038
South Dakota	60	62	64	84	87	100	98	95	65	67
Texas	79,879	86,272	93,126	100,631	102,471	103,697	104,986	105,977	106,380	106,569
Utah	4,171	4,781	5,257	6,040	6,323	7,037	6,893	7,306	7,464	7,526
Virginia	4,238	5,007	5,748	6,322	7,068	7,454	7,747	7,857	7,949	8,063
West Virginia	44,172	41,364	47,476	44,974	47,569	50,765	49,682	52,888	51,450	54,230
Wyoming	26,475	29,875	31,747	33,628	33,294	31,253	30,595	29,026	26,313	25,016
Federal Offshore	3,878	3,367	3,487	3,255	2,756	2,635	2,350	1,967	1,649	1,440
TOTAL U.S.	**348,333**	**369,410**	**396,248**	**402,553**	**444,760**	**490,185**	**484,383**	**493,457**	**488,325**	**502,012**

Source: IHS. Data not available for certain states.
Note: Idaho had one producing well that was not included above.

(thous. Bbls.)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	5,197	5,276	4,951	5,560	5,054	5,275	6,552	7,781	8,720	8,508
Alaska	335,740	269,150	262,427	248,800	236,522	217,932	203,981	191,633	187,102	180,686
Arizona	48	53	41	50	45	38	36	51	59	55
Arkansas	5,388	5,292	5,249	5,791	5,202	4,246	3,926	4,508	4,580	4,805
California	228,811	222,874	217,986	214,120	206,195	198,675	193,113	196,885	198,508	204,711
Colorado	11,764	11,357	10,756	10,875	10,192	11,174	16,203	26,198	42,216	68,443
Florida	2,585	2,349	2,080	1,985	696	1,750	2,026	2,133	2,174	2,226
Illinois	8,899	10,324	9,609	9,430	9,099	9,067	9,158	9,733	9,539	9,547
Indiana	1,595	1,714	1,723	1,855	1,803	1,837	1,972	2,343	2,372	2,474
Kansas	33,897	35,621	36,434	39,575	39,448	40,320	41,355	43,596	46,692	49,324
Kentucky	1,215	1,181	2,618	1,034	1,004	936	920	1,031	1,005	931
Louisiana	50,835	49,443	52,528	48,626	47,487	49,388	52,127	55,011	56,448	54,836
Michigan	5,744	5,686	5,394	6,023	5,846	6,420	6,720	7,342	7,770	7,458
Mississippi	16,402	16,103	19,034	20,859	21,915	22,958	23,184	22,982	22,754	23,487
Montana	32,655	36,027	34,815	31,480	27,771	25,226	24,070	26,389	29,182	29,808
Nebraska	2,405	2,297	2,333	2,389	2,234	2,197	2,415	2,509	2,751	2,842
Nevada	446	426	410	436	455	425	408	368	336	316
New Mexico	54,530	53,661	53,300	54,648	56,133	60,917	67,308	81,503	97,578	119,735
New York	92	188	267	294	228	227	306	288	259	292
North Dakota	34,092	36,763	42,249	58,384	75,200	107,205	148,383	238,633	308,527	391,113
Ohio	4,250	4,372	3,958	4,175	3,572	4,078	3,894	4,242	5,944	11,253
Oklahoma	52,288	53,947	51,093	53,234	48,999	54,071	58,284	69,706	94,196	111,537
Oregon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pennsylvania	NA	NA	NA	NA	783	1,575	979	1,528	1,299	2,024
South Dakota	1,415	1,394	1,653	1,642	1,646	1,575	1,617	1,730	1,841	1,792
Texas	347,614	346,079	341,763	352,904	349,087	367,312	446,532	610,129	781,725	995,948
Utah	15,298	15,965	16,957	18,438	19,646	21,743	23,359	27,373	32,435	38,627
West Virginia	676	788	1,030	987	446	881	916	1,079	2,937	3,516
Wyoming	41,452	42,287	41,992	40,054	38,489	42,057	41,767	45,488	51,692	64,743
Federal Offshore	427,167	431,321	427,571	395,233	543,395	537,735	456,297	441,755	440,020	488,483
TOTAL U.S.	1,722,500	1,661,939	1,650,220	1,628,881	1,758,592	1,797,329	1,837,808	2,123,907	2,440,661	2,879,519
DAILY AVG.	4,719	4,553	4,521	4,450	4,818	4,924	5,035	5,819	6,687	7,889

Source: IHS.
Notes: Daily Average derived from IHS data.

Natural Gas Production

(MMcf)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	301,634	290,530	264,468	252,449	230,405	223,853	201,860	195,149	177,206	163,294
Alaska	NA	NA	NA	NA	149,289	139,299	126,570	116,854	101,476	125,403
Arizona	154	522	590	457	626	122	105	87	65	90
Arkansas	182,452	192,991	262,629	442,536	674,387	920,787	1,067,730	1,139,278	1,130,067	1,118,342
California	81,952	90,504	89,845	84,317	80,584	70,406	62,339	53,709	41,129	34,484
Colorado	1,120,614	1,217,865	1,273,254	1,476,152	1,536,385	1,620,565	1,656,713	1,616,953	1,475,051	1,404,323
Kansas	386,067	378,032	371,782	379,647	362,162	335,570	314,526	301,235	299,526	293,243
Kentucky	79,419	85,840	95,247	95,013	107,449	104,733	104,733	102,078	101,242	29,297
Louisiana	1,219,382	1,290,156	1,279,855	1,302,007	1,471,968	2,111,650	2,918,796	2,900,409	2,253,574	1,866,589
Michigan	161,614	159,295	151,701	145,875	137,571	132,173	126,172	118,972	112,580	104,383
Mississippi	183,103	206,269	268,328	331,699	336,382	389,751	458,783	438,112	399,324	357,732
Montana	91,456	93,199	88,833	78,197	78,366	69,893	59,104	44,970	38,718	35,153
Nebraska	939	898	1,282	2,814	2,713	2,093	1,819	1,221	868	334
New Mexico	1,358,029	1,352,226	1,294,420	1,243,420	1,176,047	1,081,223	1,013,359	958,442	874,277	828,799
New York	53,535	39,741	54,586	46,221	40,309	31,895	28,267	24,120	21,247	18,306
North Dakota	13,150	17,216	18,546	21,099	18,338	16,519	11,474	9,594	11,641	10,319
Ohio	60,451	62,021	55,657	61,208	57,949	61,602	64,020	65,318	124,347	401,009
Oklahoma	1,486,872	1,557,944	1,595,177	1,670,055	1,671,430	1,563,328	1,469,052	1,583,802	1,560,199	1,546,782
Oregon	457	624	371	663	818	1,459	1,343	809	770	585
Pennsylvania	NA	NA	NA	NA	226,017	535,986	1,213,565	2,226,666	3,287,492	4,245,819
South Dakota	428	438	453	1,222	1,752	1,536	1,035	747	296	263
Texas	5,319,815	5,647,050	6,214,058	7,075,389	6,913,702	6,715,482	6,856,592	6,873,426	6,718,469	6,595,953
Utah	281,368	321,626	348,601	403,310	408,665	393,587	411,516	434,145	407,634	377,592
Virginia	89,217	102,798	112,224	127,373	140,700	147,156	150,404	146,307	139,347	133,585
West Virginia	215,145	205,051	234,103	237,956	252,895	282,126	387,479	532,031	706,795	1,017,331
Wyoming	1,839,625	1,948,640	2,091,822	2,325,182	2,399,101	2,370,892	2,219,664	2,076,703	1,892,975	1,792,567
Fed. Offshore	2,594,879	2,376,086	2,292,279	1,905,309	1,914,239	1,731,131	1,373,902	1,083,891	877,507	772,240
TOTAL U.S.	17,121,757	17,637,562	18,460,111	19,709,570	20,282,800	21,054,798	22,300,922	23,045,028	22,753,822	23,273,829

Source: IHS. Data not available for certain states. Data are for dry natural gas production.
Note: Idaho had production of 13 Mmcf that was not included above.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	388	321	310	318	325	345	352	378	380	379
Alaska	143	153	163	177	161	182	198	168	214	193
Arizona	22	24	21	21	22	21	20	23	26	26
Arkansas	1,913	2,257	2,265	1,294	1,293	1,270	1,056	1,058	1,102	1,141
California	34,355	36,123	37,424	39,516	39,613	39,646	40,798	41,816	42,800	43,796
Colorado	4,421	4,441	4,428	4,446	4,386	4,405	4,897	5,812	6,110	6,135
Florida	15	8	12	12	38	17	16	11	14	13
Illinois	4,964	5,269	7,060	7,109	7,092	7,129	7,106	7,187	7,286	7,220
Indiana	995	1,061	1,790	1,792	1,796	1,825	1,806	1,825	1,803	1,741
Kansas	39,330	39,601	39,920	40,591	40,662	41,225	41,589	42,576	43,402	43,729
Kentucky	947	994	1,375	1,415	1,424	1,329	1,328	1,302	1,213	1,124
Louisiana	14,554	14,514	14,578	14,824	14,499	14,737	14,568	14,902	15,282	15,751
Michigan	3,675	3,683	3,723	3,718	3,838	3,879	3,869	3,850	3,886	3,869
Mississippi	882	964	1,032	1,125	1,139	1,334	1,400	1,450	1,371	1,364
Montana	2,851	2,930	2,938	3,062	3,078	3,121	3,214	3,315	3,390	3,382
Nebraska	1,157	1,182	1,152	1,179	1,131	1,142	1,210	1,241	1,309	1,387
Nevada	45	45	49	49	45	42	47	49	46	55
New Mexico	17,152	17,801	18,312	18,641	18,846	19,092	19,616	20,319	20,407	20,903
New York	2,070	2,276	2,270	2,513	2,340	2,563	2,715	2,455	2,394	2,673
North Dakota	2,140	2,183	2,252	2,328	2,352	2,477	2,598	2,582	2,594	2,745
Ohio	15,751	15,925	16,379	16,489	16,775	17,015	17,182	17,351	17,161	17,267
Oklahoma	48,552	48,274	46,948	35,121	34,293	34,897	34,085	35,003	32,065	22,005
Pennsylvania	8,397	7,619	1,071	9,402	4,833	12,329	13,321	13,946	13,993	16,121
South Dakota	78	70	73	54	49	54	60	60	64	67
Texas	137,751	140,217	141,901	145,133	146,253	148,622	154,634	157,870	164,574	169,018
Utah	1,759	1,975	2,113	2,386	2,549	2,777	2,955	3,324	3,567	3,605
West Virginia	1,480	1,689	1,973	2,122	1,949	2,196	2,248	2,483	2,191	2,239
Wyoming	9,887	10,542	9,742	9,678	9,404	9,264	9,110	9,283	9,448	9,313
Federal Offshore	757	623	611	675	586	574	582	600	611	659
TOTAL U.S.	**356,431**	**362,764**	**361,885**	**365,190**	**360,771**	**373,509**	**382,580**	**392,239**	**398,703**	**397,920**

Source: IHS.
Notes: A marginal oil well is defined as a well producing 15 barrels/day or less.

Marginal Oil Well Production

(thous. Bbls.)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	810	702	694	707	700	756	767	839	807	816
Alaska	191	322	287	364	350	348	398	315	429	351
Arizona	37	40	27	37	32	25	27	42	52	41
Arkansas	3,048	2,882	2,898	1,904	1,868	1,709	1,401	1,442	1,500	1,647
California	66,764	69,592	70,941	73,153	71,357	69,806	70,855	71,748	72,725	74,629
Colorado	4,053	4,028	3,750	3,883	3,771	3,680	4,400	6,687	6,430	5,778
Florida	25	20	37	28	26	34	34	29	27	34
Illinois	4,249	5,153	5,780	5,732	5,702	5,564	5,653	5,804	5,895	5,668
Indiana	916	1,085	1,372	1,272	1,308	1,355	1,304	1,312	1,260	1,168
Kansas	24,576	25,270	24,784	25,679	25,712	26,036	26,495	28,195	28,281	28,942
Kentucky	677	671	773	740	761	679	668	690	615	578
Louisiana	9,668	8,930	9,740	9,678	9,248	9,605	9,771	10,074	10,188	11,280
Michigan	3,475	3,429	3,289	3,491	3,493	3,421	3,354	3,275	3,281	3,132
Mississippi	2,121	2,202	2,323	2,520	2,514	2,830	2,861	2,947	2,812	2,835
Montana	3,510	3,520	3,535	3,672	3,669	3,868	3,960	4,299	4,286	4,474
Nebraska	1,711	1,676	1,575	1,620	1,568	1,564	1,592	1,676	1,627	1,753
Nevada	103	117	123	114	110	95	111	88	81	110
New Mexico	21,839	22,301	22,678	22,904	22,782	22,944	23,552	25,006	25,104	25,745
New York	94	193	270	294	228	277	306	288	259	292
North Dakota	4,566	4,803	4,945	5,226	5,139	5,393	5,484	5,617	5,722	5,920
Ohio	3,753	3,735	3,745	3,849	3,216	3,600	3,551	3,580	3,473	3,443
Oklahoma	35,722	34,904	34,275	24,305	22,471	23,097	21,743	21,590	21,346	21,372
Pennsylvania	1,083	1,121	314	1,538	783	1,439	944	1,491	1,039	1,664
South Dakota	240	210	179	141	140	154	161	171	158	192
Texas	142,891	145,630	147,437	151,431	151,242	154,419	159,106	167,898	176,172	184,376
Utah	3,912	4,157	4,809	5,344	5,533	5,878	6,255	6,700	7,146	7,471
West Virginia	422	463	581	581	421	633	623	632	653	689
Wyoming	13,466	13,325	13,374	13,382	12,725	12,785	12,725	13,053	12,901	12,511
Fed. Offshore	1,892	1,381	1,429	1,682	1,306	1,350	1,378	1,499	1,502	1,587
TOTAL U.S.	**355,814**	**361,862**	**365,964**	**365,271**	**358,175**	**363,344**	**369,479**	**386,987**	**395,771**	**408,498**

Source: IHS.
Notes: A marginal oil well is defined as a well producing 15 barrels/day or less.

Producing Marginal Natural Gas Wells

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	3,642	4,167	4,567	5,023	5,283	5,475	5,565	5,645	5,728	5,780
Arizona	2	2	2	2	1	2	1	1	3	3
Arkansas	2,728	2,890	2,992	3,401	3,478	3,538	3,613	3,775	3,754	3,844
California	777	838	906	996	1,024	963	991	973	957	959
Colorado	18,586	20,709	23,563	26,402	28,012	30,709	33,004	34,792	35,842	35,814
Kansas	15,096	17,205	18,786	20,007	20,543	20,600	20,878	20,888	20,740	20,741
Kentucky	11,616	12,617	8,443	13,496	13,505	12,480	12,579	13,142	14,562	6,512
Louisiana	10,560	10,749	11,134	11,360	11,342	11,640	11,687	11,782	11,659	11,961
Michigan	8,370	8,841	9,435	9,808	10,065	9,983	10,045	9,972	9,974	9,822
Mississippi	933	1,062	1,194	1,286	1,299	1,344	1,351	1,357	1,327	1,332
Montana	4,796	5,281	5,723	5,910	6,173	6,363	6,279	6,127	5,693	5,530
Nebraska	111	114	194	325	353	292	297	320	232	104
New Mexico	19,189	20,453	21,976	23,079	23,554	24,341	24,832	25,299	25,556	25,703
New York	6,429	6,645	6,976	7,076	7,086	7,178	7,229	7,194	6,784	6,787
North Dakota	101	150	174	196	204	225	246	272	253	267
Ohio	22,528	23,109	23,331	24,016	24,365	24,453	24,819	24,596	24,174	23,909
Oklahoma	23,415	25,025	26,760	28,178	28,767	29,120	29,747	29,076	28,328	27,498
Oregon	11	10	9	14	15	20	18	20	19	NA
Pennsylvania	40,069	42,989	38,895	51,027	31,501	56,297	55,784	56,740	56,336	58,161
South Dakota	61	63	64	72	68	88	89	92	65	66
Texas	47,329	50,953	54,388	58,196	60,502	62,669	64,992	66,578	66,952	67,368
Utah	2,103	2,396	2,658	2,950	3,025	3,139	3,486	3,690	4,000	4,069
Virginia	3,444	4,123	4,808	5,257	5,912	6,274	6,552	6,744	6,936	7,184
West Virginia	43,290	40,549	46,511	43,863	46,240	49,524	48,398	51,397	49,449	52,171
Wyoming	15,675	18,245	19,662	20,549	19,775	17,236	16,658	15,390	13,589	12,854
Federal Offshore	885	718	721	884	700	640	638	568	455	419
TOTAL U.S.*	**301,746**	**319,903**	**333,872**	**363,553**	**352,792**	**384,643**	**389,778**	**396,430**	**393,368**	**388,859**

Source: IHS.
Notes: A marginal natural gas well is defined as a well producing 90 thousand cubic feet per day or less.
**Totals may not add up due to rounding and inclusion of other areas such as Idaho and Pacific Coastal wells.*

Marginal Natural Gas Production

(Mmcf)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	53,500	60,278	66,360	71,331	73,111	72,991	72,293	72,375	71,057	68,668
Arizona	30	26	21	17	17	23	21	17	65	55
Arkansas	36,049	38,042	39,698	44,100	43,338	44,936	46,302	45,108	48,339	48,770
California	9,734	10,148	11,502	12,074	12,231	12,160	11,792	11,567	11,724	11,903
Colorado	219,626	247,868	270,287	300,106	310,684	334,047	352,351	348,066	331,231	317,229
Kansas	222,557	240,091	251,065	264,335	261,974	256,089	249,273	239,501	228,879	217,173
Kentucky	73,076	78,304	43,210	83,881	88,829	77,950	75,885	78,688	84,105	27,356
Louisiana	53,653	55,942	62,029	65,911	67,124	70,519	72,652	74,434	76,638	79,774
Michigan	125,368	124,859	129,108	126,809	120,191	114,548	109,676	103,813	97,573	92,285
Mississippi	13,051	14,679	16,053	16,358	15,122	14,643	13,472	12,531	12,151	11,694
Montana	40,730	43,644	46,763	51,653	53,042	52,159	47,660	39,414	35,378	32,716
Nebraska	745	809	1,282	2,740	2,713	2,093	1,819	1,221	868	334
New Mexico	247,378	261,790	274,893	287,976	293,143	300,885	306,842	309,615	312,012	314,015
New York	10,885	11,582	12,843	13,604	13,959	13,676	12,744	11,499	10,610	9,844
North Dakota	954	1,686	2,159	2,254	2,379	2,604	2,487	2,263	2,067	2,019
Ohio	50,933	52,549	51,742	53,881	53,553	52,404	50,945	47,150	44,859	40,258
Oklahoma	288,318	304,515	320,780	332,867	334,916	337,663	336,519	322,096	307,101	293,362
Oregon	138	158	134	257	233	305	214	188	198	NA
Pennsylvania	149,867	154,199	147,144	175,675	103,022	169,638	156,191	145,342	136,629	129,291
South Dakota	432	440	410	471	405	612	511	542	296	263
Texas	539,444	584,487	624,121	665,512	682,899	700,234	718,939	724,552	713,496	709,571
Utah	30,932	35,253	36,918	41,491	44,108	47,348	51,291	55,155	58,359	60,418
Virginia	44,011	53,288	61,605	70,138	78,646	84,473	86,291	88,552	88,626	89,833
West Virginia	175,398	167,503	189,740	185,886	188,580	190,107	176,358	178,963	167,388	163,882
Wyoming	175,149	188,603	195,848	191,354	167,510	158,228	156,891	152,195	153,456	152,818
Federal Offshore	10,964	8,786	8,980	10,072	7,521	7,591	7,322	6,395	5,274	5,017
TOTAL U.S.*	2,572,922	2,739,529	2,864,695	3,070,753	3,019,250	3,117,926	3,116,741	3,073,242	2,998,380	2,878,561

Source: IHS.
Notes: A marginal natural gas well is defined as a well producing 90 thousand cubic feet per day or less.
**Totals may not add up due to rounding and inclusion of other areas such as Idaho and Pacific Coastal wells.*

(thous. $)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	418,677	475,658	510,000	729,774	397,192	536,485	887,560	998,315	1,072,446	881,777
Alaska	14,890,978	15,425,817	16,819,997	22,536,136	12,813,555	15,879,039	20,235,057	18,986,722	18,004,114	15,655,332
Arizona	2,605	3,383	2,892	4,692	2,620	2,989	3,332	4,621	5,542	NA
Arkansas	322,656	358,122	387,492	552,642	306,798	407,100	514,884	584,253	617,387	583,399
California	11,113,988	12,240,536	14,032,040	19,354,014	11,620,044	15,005,196	19,853,328	20,529,665	20,396,088	18,860,966
Colorado	1,285,105	1,561,888	1,737,878	2,659,532	1,588,216	2,399,004	3,480,092	4,240,534	5,879,656	7,900,512
Florida	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Illinois	522,598	616,283	630,927	880,862	504,444	663,523	819,333	790,496	886,555	836,890
Indiana	88,112	102,666	113,067	170,787	100,393	133,625	175,154	208,257	223,203	220,315
Kansas	1,806,486	2,165,442	2,439,357	3,644,711	2,147,236	2,931,025	3,673,846	3,842,823	4,302,713	4,297,034
Kentucky	125,356	136,492	169,558	240,351	144,121	177,917	200,036	278,290	263,755	292,395
Louisiana	4,043,624	4,719,199	5,456,018	7,355,128	4,067,498	5,264,660	7,3224,083	7,486,039	7,565,177	6,473,979
Michigan	307,636	354,684	376,879	599,682	350,915	520,100	647,909	675,098	739,383	655,026
Mississippi	920,601	1,081,120	1,434,785	2,165,489	1,354,193	1,839,953	2,435,026	2,478,974	2,444,238	2,210,860
Missouri	4,239	4,989	4,862	8,312	5,001	10,290	9,963	14,564	17,277	16,146
Montana	1,730,144	2,055,693	2,251,347	2,837,788	1,474,142	1,779,320	2,140,375	2,198,555	2,598,813	2,408,065
Nebraska	126,550	133,564	146,591	210,648	114,032	162,354	217,461	256,974	245,532	252,601
Nevada	19,078	24,836	26,194	39,885	23,442	26,591	28,854	33,495	31,292	26,879
New Mexico	3,222,025	3,670,813	4,080,972	5,788,812	3,490,784	4,944,814	6,478,672	7,510,245	9,380,953	10,331,624
New York*	10,764	20,260	26,395	42,375	17,806	28,956	33,413	NA	30,815	32,310
North Dakota*	1,867,871	2,262,555	2,942,287	5,566,976	4,285,380	7,943,877	13,578,551	20,446,418	28,163,436	32,697,453
Ohio*	302,212	340,990	371,431	551,097	274,819	351,380	422,537	474,473	755,609	1,253,122
Oklahoma	3,384,253	3,965,896	4,224,583	6,159,850	3,790,538	5,091,941	6,973,370	8,366,130	11,213,582	12,981,770
Pennsylvania	134,242	165,748	195,160	289,796	176,715	225,873	301,835	380,517	471,301	547,759
South Dakota*	74,405	72,279	104,529	148,352	85,057	110,740	141,505	145,924	164,900	148,838
Tennessee	14,765	10,956	18,565	31,655	14,207	18,514	25,699	32,596	31,089	29,858
Texas	20,653,108	24,059,332	26,713,037	39,300,858	22,922,346	32,524,749	48,648,360	66,797,025	88,617,299	100,783,605
Utah	900,170	1,070,242	1,220,547	1,908,310	1,152,197	1,6780,053	2,197,322	2,504,072	2,969,091	3,232,341
Virginia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
West Virginia	91,160	108,859	134,002	202,119	83,711	130,303	185,758	224,263	633,071	625,212
Wyoming	2,362,448	2,820,972	3,157,769	4,567,132	2,695,176	3,669,977	4,562,212	4,666,881	5,401,367	6,132,074
TOTAL U.S.	95,169,783	110,863,550	123,267,281	172,069,387	110,121,480	149,314,136	196,974,814	224,023,175	213,168,490	230,368,142
Federal Offshore	24,807,599	30,083,818	33,000,716	43,996,966	34,400,894	45,178,168	52,689,530	50,814,627	49,008,572	49,083,643

*Source: * EIA price and production data used in addition to state data when EIA not available. Total does not include Federal Offshore.*
Note: U.S. data is based on national production and cost data.

Natural Gas Revenues

(thous. $)	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*
Alabama	2,751,780	2,166,685	2,011,828	2,488,581	1,019,645	994,277	1,134,370	1,117,378	912,916	892,626
Alaska***	2,314,590	2,574,952	2,440,521	2,944,486	1,163,436	1,186,296	2,326,149	2,156,730	2,035,856	2,189,265
Arizona	1,596	3,593	3,917	3,708	2,271	752	993	548	341	551
Arkansas	1,383,270	1,737,984	1,867,611	3,893,925	2,332,235	3,558,294	6,722,769	6,143,460	5,686,873	6,556,761
California	2,366,396	2,039,402	2,033,399	2,484,410	1,095,237	1,396,916	1,118,291	854,004	1,054,656	1,166,261
Colorado	8,418,829	7,361,265	5,678,549	2,702,429	4,812,015	6,250,381	8,089,625	7,281,942	7,639,134	8,907,700
Florida	NA	NA	NA	NA	NA	NA	76,684	3,038	1,296	2,505
Illinois	NA	NA	NA	NA	NA	NA	10,796	8,734	12,789	12,114
Indiana	28,560	17,555	20,843	35,634	19,954	28,092	45,103	37,283	34,768	37,248
Kansas	2,455761	2,081,557	2,081,840	2,564,024	1,120,030	1,373,566	1,709,456	1,404,457	1,456,486	1,747,528
Kentucky	634,718	841,676	701,462	960,857	NA	604,925	643,579	442,529	423,153	480,350
Louisiana	11,301,539	9,432,555	9,572,037	12,024,667	5,915,679	9,348,719	17,175,598	10,284,921	9,916,156	9,607,984
Maryland	342	366	NA	NA	NA	199	213	249	172	127
Michigan	1,383,894	NA	2,241,113	1,532,255	602,645	496,937	853,841	711,332	606,984	637,460
Mississippi	451,962	414,032	492,182	850,441	328,826	307,417	431,066	253,457	263,168	288,019
Missouri	NA	NA	NA	NA	NA	NA	NA	NA	45	17
Montana	709,021	624,033	668,371	843,968	310,454	318,642	381,329	283,215	266,249	297,575
Nebraska	4,922	NA	7,557	19,170	8,637	8,879	10,010	5,724	4,758	2,327
New Mexico	11,368,097	9,944,998	10,628,430	12,148,114	5,767,127	6,874,424	5,592,610	4,498,360	4,877,358	6,135,300
New York**	429,300	399,137	486,237	449,861	188,814	166,530	187,989	141,368	117,759	110,499
North Dakota	441,479	360,380	365,149	525,286	222,040	320,801	491,336	763,032	1,176,198	2,079,748
Ohio**	754,213	668,941	668,641	668,681	387,273	361,705	434,508	377,635	839,676	2,515,742
Oklahoma	11,819,425	10,674,385	10,885,012	14,462,499	6,557,953	8,606,715	10,709,893	10,117,305	10,183,995	12,471,310
Oregon	1,930	2,745	2,155	4,147	3,284	6,922	7,849	4,012	3,711	6,167
Pennsylvania	NA	NA	NA	NA	NA	NA	8,230,518	12,456,962	17,142,561	23,800,504
South Dakota	7,380	6,163	7,184	13,053	NA	NA	9,628	70,447	78,270	93,973
Tennessee	21,010	18,055	26,135	41,595	20,981	22,376	25,371	25,339	25,542	28,429
Texas	39,836,828	36,616,945	42,520,234	58,897,676	25,980,287	31,561,882	38,338,332	32,144,629	36,897,011	46,073,560
Utah	2,156,757	1,912,277	1,452,939	2,666,431	1,501,268	1,827,550	2,598,742	2,697,162	2,683,919	2,609,088
Virginia**	NA	NA	NA	NA	NA	NA	1,003,264	825,724	772,176	799,293
West Virginia	1,563,234	1,617,050	1,585,922	1,822,189	1,163,518	1,034,179	2,329,279	2,693,901	3,449,616	5,410,268
Wyoming	11,245,715	10,624,776	8,942,992	15,605,471	7,940,115	9,913,758	10,041,312	8,149,768	8,380,514	9,456,557
TOTAL U.S.	138,735,606	124,027,817	127,523,075	169,066,547	79,287,260	100,270,791	135,324,662	105,954,644	116,944,106	144,416,854
Federal Offshore	23,223,588	20,652,221	20,354,037	21,222,830	9,121,165	10,305,541	10,513,980	7,130,778	6,523,096	7,158,501

Source: Energy Information Administration wellhead price and marketed production data. Total does not include Federal Offshore.
**Post 2010, City Gate prices used due to the unavailability of wellhead prices*
***State data used when EIA not available.*
**** Alaska natural gas is reinjected.*
Note: U.S. data is based on national production and cost data.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	16	15	2	12	19	22	19	13	14	15
Alaska	133	114	106	101	100	101	89	94	109	121
Arkansas	17	123	465	691	963	910	826	723	571	527
California	139	165	220	263	151	207	309	346	370	358
Colorado	21	29	44	49	64	83	281	584	957	1,319
Florida	1	0	0	1	1	1	5	0	5	3
Georgia	0	0	0	0	0	0	0	0	0	0
Illinois	2	1	0	9	2	10	6	11	5	8
Indiana	16	23	48	40	46	70	8	5	9	19
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	2	25	29	5	7	7	20	163	223	223
Kentucky	11	9	44	229	268	225	142	47	91	137
Louisiana	34	37	36	96	390	738	901	465	238	258
Michigan	79	121	90	136	42	47	56	45	54	45
Mississippi	2	8	23	48	14	25	7	8	17	38
Missouri	0	0	0	0	0	0	0	0	0	1
Montana	348	358	312	130	31	76	129	251	196	164
Nebraska	0	0	1	0	0	0	0	2	3	2
Nevada	0	0	0	0	0	0	0	0	0	0
New Mexico	95	163	218	230	145	275	417	529	654	799
New York	7	5	16	27	19	9	14	0	4	0
North Dakota	248	397	469	724	609	1,121	1,661	2,239	2,398	2,653
Ohio	1	6	5	12	4	4	21	91	293	456
Oklahoma	526	673	761	1, 073	671	833	1,369	1,912	2,194	2,333
Oregon	0	0	0	0	0	0	0	0	0	0
Pennsylvania	0	6	9	55	310	978	1,240	1,381	1,423	1,223
South Dakota	35	23	50	24	11	9	14	21	21	14
Tennessee	1	0	0	9	32	27	22	10	11	0
Texas	1,641	2,254	3,392	4,237	2,771	3,703	5,376	6,581	7,657	8,889
Utah	11	6	18	28	13	22	27	53	57	38
Virginia	2	0	1	8	31	21	25	9	9	6
Washington	0	0	0	0	0	0	0	0	0	0
West Virginia	4	5	26	184	185	228	247	330	360	420
Wyoming	59	64	47	52	22	38	145	214	240	452
TOTAL U.S.	**3,451**	**4,630**	**5,432**	**8,473**	**6,921**	**9,752**	**13,376**	**16,127**	**18,183**	**20,521**

Source: IHS.

Directional Wells

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	11	12	17	23	5	18	22	20	48	44
Alaska	26	20	30	36	33	29	22	26	24	38
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	25	29	27	18	9	20	20	30	27	49
California	1,022	979	1,112	1,090	495	1,036	1,149	1,355	1,382	1,114
Colorado	833	1,205	1,649	2,395	1,729	1,800	2,169	1,740	737	514
Florida	2	0	0	0	1	0	1	2	0	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0	0	0	1
Illinois	1	2	1	3	0	1	1	3	4	1
Indiana	4	1	1	0	0	0	4	5	0	0
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	1	3	0	3	0	0	2	4	4	4
Kentucky	0	2	4	4	0	0	0	0	0	0
Louisiana	483	510	499	403	209	242	289	382	309	291
Michigan	64	71	59	60	28	46	40	37	51	15
Mississippi	53	37	44	48	24	59	50	48	45	48
Missouri	0	0	0	0	0	0	0	0	0	0
Montana	24	23	40	27	2	22	4	7	3	6
Nebraska	1	0	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	1	0	0	0	0
New Mexico	130	163	128	166	167	175	186	529	100	87
New York	19	12	29	23	1	0	0	0	0	2
North Dakota	4	10	13	2	4	21	38	41	25	30
Ohio	29	22	35	30	21	31	25	5	13	12
Oklahoma	248	272	217	217	111	77	108	99	64	113
Oregon	0	0	1	1	2	2	0	0	0	0
Pennsylvania	6	5	26	37	3	7	9	7	31	28
South Dakota	0	1	0	0	0	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0	0	0
Texas	899	877	946	1,031	612	683	611	733	680	662
Utah	34	105	150	250	214	404	566	720	653	654
Virginia	1	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0
West Virginia	3	5	10	10	1	1	0	14	13	6
Wyoming	368	444	500	642	588	689	703	490	523	490
TOTAL U.S.	**4,291**	**4,810**	**5,538**	**6,519**	**4,259**	**5,364**	**6,019**	**5,894**	**4,736**	**4,209**

Source: IHS.

Vertical Wells

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	436	437	541	312	271	218	175	131	98	94
Alaska	9	8	12	8	12	2	1	9	2	3
Arizona	5	1	2	1	0	0	0	0	0	0
Arkansas	308	399	382	423	191	202	184	177	196	155
California	1,219	1,524	1,317	1,471	1,021	756	995	1,044	1,301	1,243
Colorado	1,897	1,858	2,032	1,674	792	843	625	503	178	192
Florida	2	0	0	0	0	0	0	1	2	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	1	0	2	0	0	0	2
Illinois	443	514	468	504	301	378	462	558	524	490
Indiana	168	190	150	192	142	97	110	126	126	161
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	2,730	3,960	3,875	4,343	2,427	2,930	3,636	4,314	4,157	4,273
Kentucky	1,330	1,561	1,454	1,352	757	586	558	618	465	420
Louisiana	947	1,116	1,247	1,279	582	395	500	716	669	646
Michigan	413	435	375	387	165	104	99	68	47	54
Mississippi	251	258	272	182	125	100	114	96	101	86
Missouri	17	28	22	208	56	35	0	11	15	8
Montana	600	755	525	425	226	175	91	84	65	72
Nebraska	75	68	165	235	74	99	135	109	142	191
Nevada	8	1	5	8	4	2	0	4	3	4
New Mexico	1,708	1,742	1,521	1,330	766	639	799	680	504	400
New York	199	403	464	417	236	328	214	169	146	155
North Dakota	53	104	65	39	19	39	36	54	60	69
Ohio	721	949	1,025	1,002	590	421	371	355	251	233
Oklahoma	2,822	3,173	2,703	3,025	1,371	1,374	1,109	1,095	965	1,033
Oregon	0	0	0	1	2	2	0	0	1	0
Pennsylvania	3,952	4,689	4,847	4,696	2,729	2,033	1,346	1,005	1,070	1,073
South Dakota	7	7	12	23	16	16	6	2	5	3
Tennessee	254	332	324	243	93	66	74	123	129	111
Texas	9,361	10,620	10,472	11,632	6,453	7,683	8,900	9,717	8,616	8,008
Utah	730	900	793	936	421	514	300	316	300	235
Virginia	439	626	764	631	572	393	363	155	98	111
Washington	0	0	2	0	0	0	0	0	0	0
West Virginia	1,496	1,978	2,033	1,749	853	465	249	173	118	102
Wyoming	4,009	3,693	2,516	2,339	1,269	1,165	718	384	455	368
TOTAL U.S.	**36,609**	**42,329**	**40,385**	**41,068**	**22,536**	**22,062**	**22,170**	**22,797**	**20,809**	**19,995**

Source: IHS.

Well Summary*

Year	Horizontal Wells	Directional Wells	Vertical Wells
2005	3,492	4,832	36,808
2006	4,683	5,376	42,511
2007	6,512	6,022	40,532
2008	8,622	6,960	41,446
2009	6,957	4,605	22,875
2010	9,667	5,660	22,496
2011	13,421	6,375	22,968
2012	16,191	6,223	23,250
2013	18,189	4,938	20,857
2014	**20,521**	**4,209**	**19,995**

**Data in state and national tables may differ due to date tabulated. Source: IHS.*

Severance and Production Taxes

(thous. $)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	132,300	177,280	139,380	192,752	111,005	90,613	106,501	111,482	116,151	113,563
Alaska	863,000	1,199,500	2,208,400	6,879,000	3,112,000	2,871,000	4,552,901	6,928,241	4,760,714	3,191,719
Arkansas	15,078	15,078	14,928	21,427	28,209	70,455	74,060	75,022	76,212	104,580
Arizona	9,899	10,022	6,761	5,488	3,214	3,016	3,300	3,618	3,646	3,494
California	268,796	328,876	471,185	467,130	400,000*	400,000*	400,000*	400,000*	400,000*	400,000*
Colorado	134,050	196,668	126,244	139,551	273,028	63,702	137,589	163,046	136,084	235,200
Florida	8,278	9,527	9,288	13,386	7,995	3,928	10,055	12,206	12,299	11,054
Indiana	1,119	1,215	1,350	2,082	1,213	1,629	2,102	2,362	2,518	2,454
Kansas	148,855	148,855	131,217	421,100	388,600	330,700	385,900	381,500	396,000	389,800
Kentucky	28,630	42,586	38,538	55,036	30,878	35,001	35,162	28,343	80,365	87,065
Louisiana	714,729	885,402	981,229	1,017,654	895,855	744,867	722,828	873,022	820,711	847,757
Maryland	4	4	3	1	5	4	2	2	5	2
Michigan	66,749	88,143	67,796	103,928	62,369	61,385	68,843	64,628	68,752	75,422
Mississippi	84,409	6,809	8,364	129,821	109,514	93,463	113,491	113,044	103,170	76,654
Montana	180,077	204,129	242,776	327,932	172,189	204,985	213,770	210,644	213,229	232,259
Nebraska	2,926	2,796	2,894	5,855	2,874	3,660	5,149	5,350	5,647	6,751
Nevada	527	577	576	907	538	797	952	875	875	677
New Mexico	926,884	1,169,271	987,921	1,282,483	1,361,237	1,431,086	978,836	1,033,090	1,100,000	1,299,798
North Dakota	157,500	166,147	185,970	534,700	403,100	749,100	1,296,100	1,660,803	2,407,740	3,247,807
Ohio	2,615	2,554	2,452	2,501	2,569	2,555	2,583	2,516	2,838	3,973
Oklahoma	875,653	1,168,598	1,001,328	1,266,655	1,174,211	869,129	978,167	896,683	715,073	860,108
Oregon	79	90	117	364	305	390	370	126	83	76
South Dakota	2,507	3,256	3,153	5,527	5,894	4,746	5,558	6,988	6,584	7,053
Tennessee	813	1,041	1,838	1,952	1,342	1,532	1,495	1,531	1,555	1,433
Texas	2,338,380	3,200,807	2,730,513	4,121,527	2,292,249	1,775,739	2,677,552	3,778,160	4,618,125	5,773,652
Utah	57,116	77,074	70,178	70,919	77,831	60,392	65,640	71,974	59,035	96,981
West Virginia	53,557	84,947	80,294	87,606	91,505	70,507	72,947	99,234	115,015	232,000
Wyoming	713,456	660,461	595,031	947,880	488,568	635,511	657,802	522,039	597,120	1,396,264
TOTAL U.S.	7,787,983	9,851,714	10,109,721	18,105,161	11,543,172	10,579,894	13,569,657	17,446,529	16,819,543	18,921,095

Source: Various state and industry contacts.
Notes: Figures include all state and local tax revenues. States vary on the use of fiscal (Arizona) or calendar year data. West Virginia data switched to FY in 2001. Totals may not add due to rounding. Some taxes may include other commodities - for example Arizona's Transaction Privilege Tax includes taxes paid on coal, sand and gravel transactions in addition to oil and natural gas. Nevada's tax has been revised to include the Net Proceeds of Minerals Tax. Texas oil tax includes oil production tax, oil regulation tax and oil well service tax; gas tax includes natural gas production tax and gas utility pipeline tax. Pennsylvania has a 9.99% Corporate Net Income Tax.
**California data estimated post-2008*

Crude Oil Wellhead Prices

($/bbl.)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	53.26	63.16	71.10	96.71	55.25	75.54	105.99	104.81	103.10	89.73
Alaska	47.21	57.03	63.81	90.19	54.41	72.33	98.79	98.70	95.79	86.41
Arizona	52.09	61.51	67.26	90.24	56.96	74.72	90.06	88.87	92.37	NA
Arkansas	50.86	58.67	64.25	90.91	53.07	71.01	87.61	89.39	92.98	85.23
California	48.26	54.78	64.73	90.21	56.11	74.51	102.50	104.10	102.53	92.14
Colorado	55.34	63.80	67.04	90.80	52.33	72.75	88.26	85.78	90.10	82.48
Florida	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Illinois	51.20	59.70	65.66	93.48	55.47	73.18	88.73	88.74	92.94	87.66
Indiana	51.02	59.31	65.47	91.92	55.65	72.82	88.15	88.62	93.04	87.88
Kansas	53.41	60.74	66.85	92.08	54.41	72.43	88.52	87.85	91.85	86.80
Kentucky	49.45	58.33	63.60	90.87	55.24	70.63	86.00	87.02	91.17	86.61
Louisiana	53.57	63.88	71.18	100.74	59.10	78.25	106.20	105.97	105.18	94.13
Michigan	53.67	60.89	66.87	95.75	56.39	74.91	92.40	90.91	96.50	89.46
Mississippi	49.58	59.35	68.65	94.60	58.29	76.41	100.43	100.80	100.40	90.81
Missouri	49.87	57.34	60.77	83.96	53.20	70.48	84.43	83.22	86.82	82.38
Montana	52.66	56.69	64.64	89.96	52.96	70.24	88.61	82.98	88.73	80.54
Nebraska	52.38	57.77	62.78	87.99	50.93	69.65	85.48	84.95	87.44	82.82
Nevada	42.68	58.30	64.20	91.48	53.52	62.42	70.72	91.02	93.69	85.06
New Mexico	52.84	61.74	68.94	96.23	57.08	75.64	90.93	88.01	92.13	83.44
New York	54.64	63.51	69.46	109.78	53.47	76.00	89.10	NA	98.45	94.75
North Dakota	52.38	56.69	65.30	88.68	53.75	70.26	88.74	84.06	90.22	82.89
Ohio	53.47	62.89	68.09	96.43	56.35	73.68	90.79	92.87	94.89	83.95
Oklahoma	54.46	63.11	69.31	96.15	56.56	75.18	90.94	89.97	94.25	89.25
Pennsylvania	54.57	64.02	70.00	96.76	56.56	69.80	87.16	88.41	89.84	80.07
South Dakota	50.65	51.85	62.78	87.42	50.75	69.04	87.08	83.10	89.28	82.78
Tennessee	45.57	57.06	65.37	92.02	53.01	72.04	86.82	87.86	93.08	90.48
Texas	52.61	61.31	68.30	96.85	57.40	76.23	91.99	92.50	95.80	87.02
Utah	53.98	59.70	62.48	86.58	50.22	68.09	83.45	82.73	84.79	79.04
Virginia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
West Virginia	53.75	63.07	67.27	95.07	55.77	70.74	86.56	87.16	91.26	82.46
Wyoming	45.63	53.25	58.34	86.07	52.30	68.10	83.45	80.70	85.30	80.54
TOTAL U.S.	**50.28**	**59.69**	**66.52**	**94.04**	**56.35**	**74.71**	**95.73**	**94.52**	**95.99**	**87.39**

Source: Energy Information Administration and State Data.

NATURAL GAS WELLHEAD/CITY GATE PRICES

($/Mcf)	2005	2006	2007	2008	2009	2010	2011*	2012*	2013*	2014*
Alabama	9.28	7.57	7.44	9.65	4.32	4.46	5.80	5.18	4.65	4.93
Alaska	4.75	5.79	5.63	7.39	2.93	3.17	6.53	6.14	6.02	6.34
Arizona	6.86	5.70	5.98	7.09	3.19	4.11	5.91	4.68	4.73	5.20
Arkansas	7.26	6.43	6.61	8.72	3.43	3.84	6.27	5.36	4.99	5.84
California	7.45	6.47	6.62	8.38	3.96	4.87	4.47	3.46	4.18	4.88
Colorado	7.43	6.12	4.57	6.94	3.21	3.96	4.94	4.26	4.76	5.42
Florida	NA	NA	NA	NA	NA	NA	5.07	3.93	4.44	5.05
Illinois	NA	NA	NA	NA	NA	NA	5.09	4.11	4.43	6.28
Indiana	9.11	6.01	5.78	7.58	4.05	4.13	4.97	4.23	4.38	5.63
Kansas	6.51	5.61	5.69	6.85	3.16	4.23	5.53	4.74	4.98	6.10
Kentucky	6.84	8.83	7.35	8.42	NA	4.47	5.18	4.17	4.47	5.16
Louisiana	8.72	6.93	7.02	8.73	3.82	4.23	5.67	3.48	4.12	4.90
Maryland	7.43	7.63	NA	NA	NA	4.63	6.26	5.67	5.37	6.36
Michigan	5.30	NA	8.46	5.63	3.92	3.79	6.18	5.50	4.91	5.54
Mississippi	8.54	6.84	6.70	8.80	3.73	4.17	5.29	3.97	4.44	5.29
Missouri	8.67	8.53	NA	NA	NA	NA	5.85	5.27	4.99	5.76
Montana	6.57	5.53	5.72	7.50	3.16	3.64	5.11	4.23	4.21	5.03
Nebraska	4.29	NA	4.86	6.22	2.97	3.98	5.11	4.31	4.61	5.58
Nevada	8.50	8.64	8.72	9.44	7.93	7.19	6.77	5.13	5.16	5.90
New Mexico	6.91	6.18	6.88	8.40	4.17	5.32	4.52	3.70	4.08	4.99
New York	7.78	7.13	8.85	8.94	4.21	4.65	6.04	5.35	5.02	5.47
North Dakota	8.40	6.52	6.67	8.55	3.74	3.92	5.06	4.43	4.99	6.37
Ohio	9.03	7.75	7.59	7.88	4.36	4.63	5.51	4.47	4.51	4.91
Oklahoma	7.21	6.32	6.24	7.56	3.53	4.71	5.67	5.00	4.75	5.35
Oregon	4.25	4.42	5.27	5.33	4.00	4.92	5.84	5.21	4.82	5.40
Pennsylvania	NA	NA	NA	NA	NA	NA	6.28	5.52	5.26	5.59
South Dakota	7.44	6.40	7.22	7.94	NA	NA	5.21	4.67	4.83	6.14
Tennessee	9.55	6.78	6.63	8.85	3.83	4.35	5.23	4.35	4.73	5.37
Texas	7.55	6.60	6.98	8.51	3.81	4.70	5.39	4.30	4.89	5.77
Utah	7.16	5.49	3.86	6.15	3.38	4.23	5.68	5.50	5.70	5.74
Virginia	NA	NA	NA	NA	NA	NA	6.64	5.64	5.54	5.98
West Virginia	7.07	7.17	6.86	NA	4.40	3.90	5.91	4.99	4.65	5.07
Wyoming	6.86	5.85	4.65	6.86	3.40	4.30	4.65	4.03	4.51	5.27
TOTAL U.S.	**7.33**	**6.39**	**6.25**	**7.97**	**3.67**	**4.48**	**5.63**	**4.73**	**4.88**	**5.71**

Source: Energy Information Administration.
**City Gate price used for natural gas post 2010.*

Refiner Acquisition Cost of Crude Oil

($/bbl.)	Domestic	Imported	Composite
1989	17.87	18.08	17.97
1990	22.59	21.76	22.22
1991	19.33	18.70	19.06
1992	18.63	18.20	18.43
1993	16.67	16.14	16.41
1994	15.67	15.51	15.59
1995	17.33	17.14	17.23
1996	20.77	20.64	20.71
1997	19.61	18.53	19.04
1998	13.18	12.04	12.52
1999	17.90	17.26	17.51
2000	29.11	27.70	28.26
2001	24.33	22.00	22.95
2002	24.65	23.71	24.10
2003	29.82	27.71	28.53
2004	38.97	35.90	36.98
2005	52.94	48.86	50.24
2006	62.62	59.02	60.24
2007	69.65	67.04	67.94
2008	98.47	92.77	94.74
2009	59.49	59.17	59.29
2010	78.01	75.86	76.69
2011	100.71	102.63	101.87
2012	100.72	101.09	100.93
2013	102.91	98.11	100.49
2014	**94.05**	**89.56**	**92.02**

Source: Energy Information Administration.

Refiner Acquisition Cost of Crude Oil

Retail Gasoline Prices

(¢/gal.)	Excluding Taxes	Taxes	Pump Price
1989	75.6	26.5	102.1
1990	88.3	28.1	116.4
1991	79.7	34.3	114.0
1992	78.7	34.0	112.7
1993	75.9	34.9	110.8
1994	73.8	37.4	111.2
1995	76.5	38.2	114.7
1996	84.7	38.4	123.1
1997	83.9	39.5	123.4
1998	67.3	38.6	105.9
1999	78.1	38.4	116.5
2000	110.6	40.4	151.0
2001	103.2	42.9	146.1
2002	94.7	41.1	135.8
2003	115.6	43.5	159.1
2004	143.5	44.5	188.0
2005	182.9	46.6	229.5
2006	212.8	44.4	257.2
2007	234.5	45.1	279.6
2008	277.5	47.1	324.6
2009	188.8	46.5	235.3
2010	230.1	48.1	278.2
2011	305.0	47.1	352.7
2012	315.4	49.0	364.4
2013	304.9	47.7	352.6
2014	**285.5**	**51.2**	**336.7**

Source: Energy Information Administration. Pump price quoted for unleaded regular.

World Crude Oil Reserves

(mill. bbls.)	United States	Canada	Latin America	Middle East	Africa	Asia Pacific	Western Europe	Eastern Europe & FSU	Total World
1997	22,017	4,839	126,115	676,952	70,062	42,275	18,128	59,101	1,019,545
1998	22,546	4,931	136,867	673,647	75,442	43,013	18,719	59,053	1,034,265
1999	21,034	4,931	117,931	675,636	74,890	43,985	18,611	59,024	1,016,041
2000	21,765	4,706	122,809	683,516	74,889	43,957	17,185	59,024	1,027,852
2001	22,045	4,858	122,912	685,592	76,677	43,779	17,135	58,555	1,031,553
2002	22,446	180,021	111,173	685,642	77,429	38,712	18,098	79,360	1,212,881
2003	22,677	178,893	114,522	726,842	87,043	38,258	18,233	79,343	1,265,812
2004	21,891	178,800	115,195	729,341	100,784	36,246	16,102	79,343	1,277,702
2005	21,371	178,792	116,246	743,411	102,580	35,936	14,842	79,370	1,292,550
2006	21,757	179,210	115,150	739,205	114,073	33,366	14,695	99,992	1,317,447
2007	20,972	178,592	121,507	748,286	114,838	34,350	13,157	99,997	1,331,698
2008	21,317	178,092	133,188	745,998	117,064	34,006	12,546	99,997	1,342,207
2009	19,121	175,214	135,044	753,358	119,114	40,137	12,198	99,998	1,354,182
2010	19,121	175,214	247,532	752,918	123,609	40,251	10,974	99,996	1,469,615
2011	20,682	173,625	249,176	799,607	124,209	45,360	10,704	100,059	1,523,225
2012	28,950	173,105	336,193	797,157	127,739	45,356	10,875	120,030	1,639,405
2013	33,403	173,200	338,330	798,604	126,729	46,011	11,145	120,023	1,647,444
2014	**36,520**	**172,481**	**339,477**	**803,135**	**126,503**	**45,895**	**10,514**	**120,007**	**1,654,321**

Source: Oil & Gas Journal Worldwide Reserves & Production Report. Estimated proved reserves as of 1/1 of stated year. Totals may not add due to rounding. Canadian reserves include oil sands after 2001.

World Crude Oil Reserves

WHOLESALE PRICES—TOTAL U.S.

	Motor Gasoline	Kerosene	Jet Fuel *Distillate*	Fuel Oil *Residual*	Average *Of Four Products*		Crude Oil
		(¢/gal.)			*(¢/gal.)*	*($/bbl.)*	*($/bbl.)*
1963	11.35	11.51	9.18	4.61	9.01	3.79	2.89
1964	11.27	10.93	8.65	4.50	8.83	3.71	2.88
1965	11.52	11.28	9.04	4.81	9.12	3.83	2.86
1966	11.59	11.49	9.09	4.73	9.15	3.84	2.88
1967	11.84	11.96	9.71	4.53	9.33	3.92	2.92
1968	11.55	12.03	9.84	4.30	9.14	3.84	2.94
1969	11.80	11.98	10.06	4.20	9.27	3.89	3.09
1970	12.33	12.43	10.45	6.14	10.20	4.28	3.18
1971	12.70	12.90	10.75	7.76	10.94	4.59	3.39
1972	12.70	12.87	10.61	7.60	10.87	4.57	3.39
1973	14.72	14.08	12.61	8.45	12.49	5.25	3.89
1974	25.53	24.02	22.57	20.43	23.48	9.86	6.87
1975	30.27	27.41	26.09	22.03	27.03	11.35	7.67
1976	33.82	31.67	30.38	21.66	29.55	12.41	8.19
1977	36.99	35.81	34.41	25.87	33.21	13.95	8.57
1978	39.22	37.23	35.66	23.00	33.72	14.16	9.00
1979	56.84	56.60	54.47	33.63	49.50	20.79	12.64
1980	87.40	80.26	78.21	44.43	72.77	30.56	21.59
1981	101.63	101.03	97.20	61.17	88.75	37.28	31.77
1982	94.56	97.18	91.95	57.80	83.27	34.97	28.52
1983	86.97	85.12	80.05	57.30	76.94	32.31	26.19
1984	81.14	84.75	79.62	59.14	74.49	31.29	25.88
1985	81.11	81.69	76.66	56.41	73.06	30.69	24.09
1986	47.74	49.92	44.91	36.23	43.97	18.47	12.51
1987	53.22	56.75	52.25	45.36	50.89	21.37	15.40
1988	50.31	50.72	46.10	38.72	46.22	19.41	12.58
1989	59.15	60.78	56.02	40.87	53.28	22.38	15.86
1990	72.13	73.37	67.82	50.99	65.20	27.38	20.03
1991	64.24	64.79	59.81	40.94	56.61	23.78	16.54
1992	60.90	62.78	58.12	41.67	54.81	23.02	15.99
1993	54.85	59.98	55.54	40.22	50.82	21.34	14.25
1994	52.95	57.67	53.22	42.50	50.09	21.04	13.19
1995	55.51	58.15	53.74	47.41	51.63	21.68	14.62
1996	68.29	74.02	69.64	53.78	64.43	27.06	18.46
1997	66.21	62.26	66.81	54.69	62.19	26.12	17.23
1998	52.60	45.00	43.90	28.00	42.38	17.80	10.87
1999	64.50	53.30	53.60	35.40	51.70	21.71	15.56
2000	96.30	88.00	89.60	56.60	82.63	34.70	26.72
2001	88.60	76.30	77.90	47.60	72.60	30.49	21.84
2002	82.80	71.60	71.80	53.00	69.80	29.32	22.51
2003	100.20	87.10	88.20	66.10	85.40	35.87	27.56
2004	128.80	120.80	117.80	68.10	108.88	45.73	36.77
2005	167.00	172.30	172.00	97.10	152.10	63.93	50.28
2006	196.90	196.10	199.10	113.60	176.95	74.10	59.69
2007	218.20	217.10	219.00	135.00	197.00	82.87	66.52
2008	259.00	302.00	297.00	186.60	261.15	109.68	94.04
2009	176.70	171.90	170.70	134.20	163.38	68.62	56.35
2010	216.50	218.50	220.80	169.70	206.38	86.68	74.71
2011	286.70	301.40	302.50	233.60	281.05	118.04	95.73
2012	292.90	308.00	310.30	245.70	289.23	121.47	94.52
2013	281.20	295.30	302.50	227.80	276.70	116.21	95.99
2014	**261.80**	**276.30**	**280.90**	**204.40**	**255.85**	**107.46**	**87.39**

Sources: Petroleum product prices derived by IPAA from Platt's Oilgram Price Report thru 1997. EIA prices used thereafter. Crude oil wellhead prices from EIA.
Notes: Data reflect price trends only, not actual sale prices. Motor gasoline prices represent leaded fuel prior to 1982, and unleaded thereafter.

(mill. bbls.)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Alabama	111.0	112.2	111.6	106.6	101.0	104.5	104.0	102.3	99.8	97.9
Alaska	58.7	60.3	57.0	49.4	45.4	48.8	47.6	45.3	43.1	41.6
Arizona	108.3	110.4	109.5	105.4	97.4	97.2	97.6	95.4	97.2	97.4
Arkansas	66.2	66.3	66.9	66.8	63.7	65.2	63.7	61.2	61.9	63.2
California	698.3	706.7	711.1	672.6	652.0	654.9	639.2	619.2	628.7	629.5
Colorado	92.2	95.8	97.4	94.2	89.9	92.3	90.6	90.4	90.7	91.3
Connecticut	81.8	74.2	72.4	66.0	65.1	63.6	61.4	58.6	60.7	60.6
Delaware	24.5	22.8	22.5	21.2	17.1	17.2	19.3	18.8	18.5	18.8
Dist. of Columbia	5.3	4.3	4.2	3.6	3.6	4.0	3.7	3.1	3.0	3.8
Florida	387.1	370.3	358.4	328.7	307.0	323.1	305.9	294.2	300.9	304.4
Georgia	207.2	201.7	197.0	182.7	192.5	197.1	190.3	176.1	174.1	166.4
Hawaii	51.3	51.6	52.9	42.4	41.9	42.1	43.8	42.4	41.6	41.7
Idaho	29.5	30.6	30.6	28.9	28.0	30.4	30.4	29.9	30.8	30.8
Illinois	266.7	256.3	255.4	246.4	233.7	234.4	231.2	225.6	234.9	231.0
Indiana	159.6	160.1	157.4	149.0	146.0	145.2	144.5	138.8	146.2	147.0
Iowa	86.1	87.8	84.3	82.0	82.9	83.4	83.7	80.9	85.2	88.2
Kansas	62.5	64.4	80.5	77.9	79.1	71.4	79.7	79.6	82.6	68.1
Kentucky	131.0	131.5	130.8	124.0	123.0	120.5	117.0	118.7	111.4	113.0
Louisiana	366.6	396.2	396.2	374.5	339.5	364.9	357.5	329.4	330.4	431.3
Maine	47.6	42.9	43.0	38.2	38.2	36.5	36.3	32.9	35.8	36.9
Maryland	111.9	102.8	102.5	98.5	100.7	96.3	93.0	90.6	93.4	92.7
Massachusetts	135.0	122.6	124.1	119.5	109.6	111.5	109.8	103.0	108.0	107.6
Michigan	191.4	180.0	180.8	166.7	162.2	160.7	157.4	154.6	166.5	167.9
Minnesota	133.4	129.7	130.7	124.8	117.2	117.1	115.7	116.5	115.5	115.6
Mississippi	83.0	85.7	84.4	78.7	76.3	78.7	76.8	78.9	80.5	81.8
Missouri	141.0	139.6	140.8	133.2	128.5	128.9	124.0	120.1	121.0	121.4
Montana	33.5	35.4	38.1	35.9	33.3	31.1	32.0	31.3	31.8	31.8
Nebraska	43.0	43.1	43.5	42.3	41.7	46.0	44.2	44.3	45.0	45.5
Nevada	51.2	54.0	53.6	49.5	45.6	43.9	40.4	41.0	42.9	44.7
New Hampshire	35.4	32.1	32.0	31.6	30.3	29.1	29.1	27.5	23.9	31.0
New Jersey	222.2	216.6	230.2	225.0	196.4	198.1	204.4	183.5	185.0	186.6
New Mexico	47.1	49.6	53.2	49.1	47.3	47.7	49.0	49.3	49.9	45.9
New York	325.3	286.9	289.9	278.4	261.8	255.3	238.9	241.5	239.0	250.3
North Carolina	178.3	173.9	175.4	174.2	160.7	162.3	154.9	150.1	158.1	159.9
North Dakota	25.7	25.4	26.5	26.1	24.4	27.9	33.8	37.0	40.7	44.1
Ohio	240.3	242.1	242.2	235.2	221.5	222.7	219.3	214.5	218.2	215.0
Oklahoma	104.8	111.0	103.9	101.3	95.3	99.5	98.5	98.9	98.1	102.5
Oregon	69.0	70.3	69.8	67.8	67.9	66.5	64.9	63.2	63.4	63.6
Pennsylvania	273.5	264.0	261.4	261.9	239.9	240.4	232.9	224.1	227.5	230.8
Rhode Island	17.9	17.2	16.9	17.1	17.0	16.4	15.5	14.8	15.2	16.8
South Carolina	101.3	102.5	100.0	97.4	100.0	96.5	93.4	91.9	95.6	95.2
South Dakota	22.4	22.1	22.7	22.0	22.6	22.0	22.1	22.6	22.2	22.2
Tennessee	145.5	146.7	145.9	135.7	129.1	133.4	132.0	127.7	128.9	131.0
Texas	1,239.4	1,265.5	1,249.3	1,141.1	1,142.6	1,231.8	1,243.0	1,279.3	1,343.1	1,274.9
Utah	52.8	56.9	55.5	52.1	49.8	49.4	53.1	51.8	53.7	53.0
Vermont	17.2	17.0	16.7	15.4	16.3	15.6	15.3	14.6	15.3	15.9
Virginia	184.0	179.4	181.2	167.1	158.0	156.8	147.7	153.0	154.8	155.1
Washington	140.3	145.4	150.4	144.0	139.3	137.4	135.9	139.2	134.7	132.4
West Virginia	42.3	43.4	43.3	41.4	36.3	37.0	35.9	35.1	35.8	35.8
Wisconsin	114.8	113.2	113.7	109.7	103.4	104.3	101.4	99.0	101.0	108.2
Wyoming	27.9	30.0	30.7	30.9	29.3	39.6	29.9	30.6	29.3	31.5
Total U.S.	**7,592.8**	**7,550.9**	**7,548.3**	**7,136.3**	**6,851.6**	**7,000.7**	**6,892.0**	**6,767.4**	**6,920.8**	**6,973.5**

Source: Energy Information Administration.

Natural Gas Consumption

(MMcf.)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Alabama	353,193	391,103	420,399	410,269	462,414	541,134	604,495	666,712	615,407	635,323
Alaska	432,972	373,849	369,966	341,887	342,259	333,312	335,458	343,110	332,298	328,945
Arizona	321,584	358,068	392,954	399,188	369,739	330,913	288,802	332,068	332,073	306,715
Arkansas	213,609	233,869	226,440	234,900	244,192	271,515	284,077	296,132	282,120	268,444
California	2,248,256	2,315,720	2,395,674	2,405,264	2,328,504	2,273,129	2,153,188	2,403,494	2,415,571	2,339,392
Colorado	470,321	450,832	504,775	504,784	523,726	501,351	466,680	443,750	467,798	478,987
Connecticut	168,067	172,682	180,181	166,800	185,055	199,426	230,035	229,156	234,475	235,859
Delaware	46,904	43,190	48,155	48,162	50,148	54,826	79,717	101,676	95,978	101,379
Dist. of Columbia	32,085	29,049	32,966	31,881	33,178	33,251	32,863	28,561	32,743	33,848
Florida	778,209	891,611	917,245	942,700	1,055,341	1,158,451	1,217,688	1,328,463	1,225,676	1,214,531
Georgia	412,560	420,469	441,107	425,042	462,798	530,031	522,898	615,771	625,283	652,408
Hawaii	2,795	2,783	2,850	2,701	2,608	2,627	2,618	2,689	2,855	2,916
Idaho	74,540	75,709	81,937	88,515	85,198	83,326	82,544	89,004	104,783	92,046
Illinois	969,642	893,998	965,591	1,000,501	956,066	966,679	986,866	940,367	1,056,826	1,093,931
Indiana	531,111	496,303	535,795	551,423	506,943	573,866	630,669	649,921	672,751	713,416
Iowa	241,340	238,454	293,274	325,772	315,186	311,075	306,909	295,183	326,140	329,385
Kansas	255,123	264,253	286,538	282,904	286,972	275,184	279,724	262,316	283,177	284,651
Kentucky	234,080	211,048	229,798	225,295	206,833	232,099	223,034	225,924	229,983	255,434
Louisiana	1,309,728	1,292,761	1,376,700	1,313,717	1,265,911	1,436,835	1,496,694	1,482,343	1,396,261	1,423,424
Maine	61,673	64,035	63,183	70,145	70,333	77,575	71,691	68,266	64,091	60,663
Maryland	202,509	182,294	201,053	196,069	196,510	212,019	193,986	208,946	197,356	207,103
Massachusetts	378,068	370,664	408,704	406,719	395,852	432,298	449,195	416,350	421,001	421,671
Michigan	913,827	803,336	798,126	779,603	735,341	746,749	776,466	790,642	814,635	861,755
Minnesota	367,825	352,570	388,335	425,351	394,134	422,968	420,770	422,263	467,874	474,520
Mississippi	301,663	307,305	364,068	355,007	364,323	438,733	433,538	494,016	420,594	427,584
Missouri	268,040	252,697	272,536	296,059	264,867	280,180	272,583	255,875	276,967	297,087
Montana	68,355	73,879	73,822	76,422	75,801	72,024	78,218	73,399	79,670	78,110
Nebraska	119,070	129,885	150,809	171,005	163,474	168,944	171,777	158,757	173,376	172,837
Nevada	227,149	249,608	254,406	264,596	275,468	259,252	249,971	273,502	272,965	253,290
New Hampshire	70,484	62,549	62,132	71,178	59,951	60,378	69,979	72,032	54,028	57,018
New Jersey	602,388	547,206	618,965	614,908	620,789	654,458	660,743	652,060	682,247	773,221
New Mexico	220,717	223,635	234,236	246,665	241,194	241,137	246,417	243,961	245,502	247,637
New York	1,080,215	1,097,160	1,187,060	1,180,357	1,142,625	1,198,127	1,217,324	1,223,036	1,273,263	1,349,203
North Carolina	229,715	223,032	237,354	243,091	247,047	304,148	307,803	363,945	440,175	452,780
North Dakota	53,050	53,336	59,453	63,096	54,564	66,394	72,462	72,740	81,593	86,881
Ohio	825,961	742,360	806,350	792,246	740,925	784,293	823,546	842,959	912,403	1,002,345
Oklahoma	582,536	624,400	658,379	687,988	659,305	675,727	655,920	691,661	658,569	642,309
Oregon	232,562	222,608	251,927	268,484	248,864	239,324	199,419	215,830	240,418	220,090
Pennsylvania	691,591	659,754	752,401	749,883	809,706	879,365	965,743	1,037,979	1,121,696	1,244,371
Rhode Island	80,764	77,204	87,972	89,256	92,744	94,110	100,455	95,476	85,537	88,886
South Carolina	172,032	174,806	175,701	170,076	190,927	220,235	229,498	244,850	232,297	230,525
South Dakota	42,555	40,739	53,938	65,257	66,185	72,563	73,605	70,238	81,986	80,613
Tennessee	230,338	221,626	221,118	229,934	216,944	257,443	264,230	277,127	279,441	305,633
Texas	3,526,380	3,459,579	3,543,067	3,568,024	3,407,195	3,594,337	3,712,710	3,850,331	4,021,851	3,928,277
Utah	160,275	187,400	219,701	224,187	214,220	219,214	222,227	223,039	247,285	241,737
Vermont	8,372	8,056	8,867	8,624	8,638	8,443	8,610	8,191	9,602	10,677
Virginia	299,746	274,175	319,913	299,364	319,136	375,420	373,444	410,106	418,506	419,705
Washington	264,754	263,395	272,613	298,140	310,426	285,727	264,588	264,540	318,292	306,675
West Virginia	117,136	113,085	115,973	111,479	109,652	113,179	115,360	129,753	142,082	165,341
Wisconsin	410,250	372,462	398,370	409,378	387,066	372,898	393,734	402,656	442,544	463,186
Wyoming	108,314	108,481	140,912	142,705	142,794	150,106	156,457	153,333	149,820	136,796
Total U.S.	22,014,435	21,699,071	23,103,793	23,277,001	22,910,072	24,086,798	24,477,430	25,538,487	26,155,071	26,593,375

Source: Energy Information Administration. Total Consumption - includes Lease & Plant Fuel and Pipeline and Distribution Use.

ENERGY CONSUMPTION BY STATE 2014

(Trillion BTU)	Petroleum	Natural Gas	Coal	Nuclear	Renewable Energy	Other*	Total	% Petroleum and Natural Gas
Alabama	497.4	651.5	575.9	431.4	277.0	-475.0	1,958.2	58.67
Alaska	233.6	329.6	18.2	0.0	21.8	0.0	603.1	93.38
Arizona	493.3	315.4	447.8	338.0	141.3	-313.3	1,422.6	56.85
Arkansas	325.8	274.8	339.2	151.4	122.0	-98.8	1,114.4	53.89
California	3,245.5	2,417.5	39.5	177.7	876.8	863.3	7,620.1	74.32
Colorado	467.9	495.4	350.5	0.0	131.3	32.0	1,477.2	65.21
Connecticut	310.0	240.6	9.1	240.6	43.8	-19.2	750.0	73.41
Delaware	96.6	106.8	10.2	0.0	7.9	52.5	274.0	74.23
Dist. of Columbia	19.9	35.3	0.0	0.0	1.2	122.5	178.9	30.86
Florida	1,545.7	1,246.7	557.9	291.5	313.7	166.2	4,121.7	67.75
Georgia	836.3	666.1	482.7	340.7	284.8	240.5	2,851.0	52.70
Hawaii	233.4	0.2	17.2	0.0	30.4	0.0	281.2	83.07
Idaho	158.9	94.3	7.5	0.0	154.7	104.6	519.9	48.70
Illinois	1,180.8	1,105.5	1,017.9	1,023.5	240.7	-526.0	4,042.3	56.56
Indiana	763.6	724.7	1,221.5	0.0	155.6	66.3	2,931.6	50.77
Iowa	425.5	311.3	401.2	43.4	406.2	-45.7	1,541.9	47.79
Kansas	358.8	289.7	316.6	89.5	150.2	-72.4	1,132.4	57.27
Kentucky	579.5	261.2	913.5	0.0	90.0	-73.4	1,770.7	47.48
Louisiana	2,037.1	1,563.3	210.0	181.1	158.1	129.9	4,279.4	84.13
Maine	188.3	62.4	2.1	0.0	157.3	-15.0	410.5	61.07
Maryland	461.2	216.6	201.2	150.0	77.1	294.5	1,400.6	48.39
Massachusetts	547.9	433.2	29.9	60.3	87.7	278.6	1,437.6	68.25
Michigan	832.2	878.7	618.5	326.8	208.6	16.7	2,881.5	59.38
Minnesota	582.3	489.8	313.1	132.9	262.1	131.8	1,912.1	56.07
Mississippi	425.7	440.0	116.5	107.2	73.0	-6.9	1,155.5	74.92
Missouri	612.3	301.2	780.7	97.0	94.4	18.3	1,903.8	47.98
Montana	169.3	79.3	175.4	0.0	137.3	-157.7	403.4	61.63
Nebraska	236.3	179.2	276.5	105.7	140.7	-74.0	864.3	48.07
Nevada	229.5	259.4	79.2	0.0	77.3	14.7	660.3	74.04
New Hampshire	151.8	58.8	14.9	106.3	60.6	-82.3	310.1	67.91
New Jersey	970.4	798.0	30.7	329.5	94.0	117.5	2,340.2	75.57
New Mexico	239.9	256.1	215.3	0.0	46.8	-79.0	679.1	73.04
New York	1,296.4	1,386.6	64.7	450.1	430.2	114.9	3,742.9	71.68
North Carolina	798.8	460.9	501.6	428.5	200.7	164.3	2,554.8	49.31
North Dakota	238.5	85.5	399.2	0.0	110.8	-193.9	640.1	50.62
Ohio	1,106.4	1,044.3	1,057.4	170.3	151.3	280.0	3,809.6	56.45
Oklahoma	542.0	665.8	336.1	0.0	170.1	-34.1	1,679.9	71.90
Oregon	328.6	225.6	34.2	0.0	486.2	-87.5	987.1	56.14
Pennsylvania	1,190.5	1,257.1	1,039.2	823.3	214.9	-622.5	3,902.4	62.72
Rhode Island	87.5	91.3	0.0	0.0	7.5	18.2	204.5	87.43
South Carolina	480.2	235.9	305.7	548.2	147.6	-85.4	1,632.1	43.88
South Dakota	113.9	83.5	33.1	0.0	139.1	22.3	391.9	50.37
Tennessee	672.2	312.0	427.5	289.4	187.6	305.9	2,194.5	44.85
Texas	5,947.6	4,219.1	1,586.0	410.9	606.8	129.2	12,899.5	78.81
Utah	278.6	252.7	344.1	0.0	29.2	-106.6	798.0	66.58
Vermont	79.5	10.8	0.0	52.9	35.4	-38.8	139.9	64.55
Virginia	785.1	437.0	278.2	316.1	162.4	451.5	2,430.2	50.29
Washington	696.0	319.8	76.5	99.3	947.9	-127.6	2,011.9	50.49
West Virginia	185.2	161.7	816.5	0.0	55.9	-466.2	752.9	46.08
Wisconsin	542.7	477.9	417.1	98.8	177.2	155.2	1,868.9	54.61
Wyoming	172.9	141.8	489.3	0.0	55.4	-323.7	535.6	58.76
Total U.S.	**34,999.1**	**27,451.7**	**17,996.6**	**8,337.6**	**9,440.3**	**181.6**	**98,385.2**	**63.48**

Source: Energy Information Administration.
Note: Totals may not equal sum of components due to independent rounding. Renewable Energy includes conventional hydroelectric power, biomass (wood and biomass waste, fuel ethanol, and losses and co-products from fuel ethanol production), geothermal, solar thermal and photo voltaic, and wind energy. Other includes Net Interstate Flow of Electricity/Losses and Net Electricity Imports.*

INDUSTRY EMPLOYMENT—2014

	Mining	Refining		Transportation			Wholesale	Retail	Total
	Oil & Gas Extraction	*Petroleum Refining*	*Oils & Greases*	*Pipelines, Except Gas*	*Pipeline Construction*	*Gas Distribution*	*Petroleum Products*	*Gasoline Stations*	*Industry*
Alabama	1,734	0	1,431	524	1,429	2,385	2,739	17,925	28,167
Alaska	15,015	0	0	0	1,166	271	459	1,809	18,720
Arizona	550	0	200	271	671	0	1,858	16,463	20,013
Arkansas	5,041	0	1,087	507	738	1,368	2,371	12,185	23,297
California	23,709	10,602	2,241	2,956	10,865	0	12,919	54,796	118,088
Colorado	30,014	0	729	1,094	5,204	817	2,611	12,915	53,572
Connecticut	25	0	292	163	329	1,113	4,840	6,097	12,859
Delaware	11	0	654	0	183	0	755	2,333	3,936
Dist. of Columbia	0	0	0	0	0	0	0	414	414
Florida	977	43	2,447	301	691	1,618	5,604	41,750	53,431
Georgia	222	0	946	362	902	1,912	3,753	28,256	36,353
Hawaii	12	0	475	0	71	0	611	2,168	3,337
Idaho	124	0	36	0	168	0	684	6,242	7,254
Illinois	2,885	2,958	2,624	1,117	1,671	4,280	4,307	28,327	48,169
Indiana	721	0	3,538	506	1,494	1,821	3,646	22,341	34,067
Iowa	18	39	331	371	965	570	1,698	19,953	23,945
Kansas	9,586	1,465	740	915	2,690	1,748	1,862	10,702	29,708
Kentucky	1,612	0	1,435	908	737	910	2,722	16,491	24,815
Louisiana	50,387	9,672	2,357	2,976	14,864	1,629	3,302	19,057	104,244
Maine	0	0	350	91	95	164	3,316	7,390	11,406
Maryland	419	254	598	0	789	522	2,808	11,492	16,882
Massachusetts	186	0	825	146	402	2,576	6,471	12,298	22,904
Michigan	2,902	575	837	1,020	1,961	2,382	4,414	25,425	39,516
Minnesota	113	1,635	649	619	1,575	1,562	3,270	24,021	33,444
Mississippi	4,001	0	2,404	948	1,650	656	2,158	14,322	26,139
Missouri	190	32	1,170	299	916	2,749	2,936	26,812	35,104
Montana	3,756	1,117	25	418	1,065	366	882	5,367	12,996
Nebraska	216	0	14	153	187	1,044	947	9,116	11,677
Nevada	213	70	155	0	545	0	704	7,912	9,599
New Hampshire	34	0	258	0	9	205	2,577	4,521	7,604
New Jersey	347	1,466	1,450	515	1,293	4,021	4,842	17,258	31,192
New Mexico	22,719	0	787	215	2,541	1,149	1,527	7,936	36,874
New York	1,230	34	1,791	372	1,757	6,532	11,827	28,436	51,979
North Carolina	478	32	716	229	1,401	2,077	5,539	29,001	39,473
North Dakota	27,612	0	0	842	4,002	0	2,351	5,790	40,597
Ohio	8,120	2,180	2,689	1,138	5,739	4,021	5,241	35,882	65,010
Oklahoma	60,101	1,382	1,008	2,803	4,862	5,002	13,540	16,411	105,109
Oregon	15	0	433	0	286	1,182	1,391	10,634	13,941
Pennsylvania	23,833	2,041	3,956	2,102	6,011	4,477	10,319	39,024	91,763
Rhode Island	25	0	0	0	140	0	959	1,807	2,931
South Carolina	235	28	315	85	193	895	2,152	17,875	21,778
South Dakota	136	0	0	71	52	197	1,167	6,309	7,932
Tennessee	358	0	1,110	616	857	1,807	3,158	21,932	29,838
Texas	303,533	19,500	3,294	17,476	41,194	8,266	75,810	79,820	548,893
Utah	6,743	1,146	332	277	1,000	764	1,319	9,528	21,109
Vermont	0	0	0	0	30	0	1,437	3,701	5,168
Virginia	1,243	79	520	441	2,113	1,477	4,221	28,658	38,752
Washington	355	1,918	1,013	0	905	1,164	2,868	13,097	21,320
West Virginia	7,466	0	632	1,324	3,109	751	958	9,973	24,213
Wisconsin	98	0	479	0	918	674	2,964	24,178	29,311
Wyoming	17,334	1,299	51	750	3,838	244	719	3,703	27,938
Total U.S.	**640,057**	**69,261**	**40,642**	**47,712**	**136,535**	**117,640**	**256,444**	**880,461**	**2,188,752**

Source: State Agencies & Bureau of Labor Statistics
Note: Reported data only. N.A.I.C. codes used. ND - Non-Disclosure or not available = not included in Total.
Note: State data differ from the Bureau of Labor Statistics national averages (Total US) due to confidentiality rules. Oilfield Machinery included in Wholesale Petroleum Products. Pipeline Construction and Oilfield Machinery separated out on state pages. State page Refining includes Oil and Greases.

Abandonments - The number of producing wells that have been abandoned during a given time period.

Artificial Lifting - Any method used to stimulate the production of crude oil and/or natural gas in excess of the flow resulting under natural reservoir pressures, e.g. pumping, secondary or tertiary recovery.

Associated Gas - The combined volume of natural gas which occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (dissolved).

Barrel - Standard volumetric measure for petroleum, equivalent to 42 U.S. gallons.

Condensate - A mixture of liquid hydrocarbons at atmospheric conditions which occur in a gaseous state underground, sometimes known as distillate or natural gasoline.

Crude Oil - Hydrocarbons in liquid unprocessed form that vary significantly in properties such as API gravity, viscosity, and sulfur content.

Development Well - A crude oil, natural gas or dry hole drilled within an area known to be productive.

Distillate Fuel Oil - A range of petroleum products heavier than gasoline or jet fuel that includes heating oil and diesel fuel.

Dry Hole - A completed well which is not productive of crude oil and/or natural gas in commercial quantities.

Dry Natural Gas - Natural gas that does not contain dissolved liquid hydrocarbons.

Exploratory Well - A crude oil, natural gas, or dry hole drilled to discover a petroleum formation or its limits.

Gas Well - An exploratory or development well completed for the production of natural gas.

Heavy Oil - A type of high-viscosity crude that may, or may not, naturally flow into a well bore. The limit for heavy oils has been set between 0.1 API gravity and 20.9 API gravity.

Liquefied Petroleum Gas *(LPG)* - Butane, propane, and other light products separated from natural gasoline or crude oil by fractionation or other processes. At atmospheric pressure, it reverts to the gaseous state.

Marginal Well - A producing well which pumps or “strips” less than 15 barrels of crude oil or 90 Mcf of natural gas per day.

Marginal Well Reserves - The estimated amount of additional crude oil or natural gas which can be recovered by primary means or secondary recovery methods.

Middle Distillates - A general classification of petroleum products that includes distillate fuel oil and kerosene.

Natural Gas - Hydrocarbons in gaseous form or mixed with crude oil.

Natural Gas Liquids *(NGL) or Natural Gas Plant Liquids* - Hydrocarbons, such as LPG or natural gasoline, found with natural gas that are recoverable by absorption, cryogenic expansion or other means.

Natural Gas Marketed Production - Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring, nonhydrocarbon gases removed in treating and processing operations, and quantities vented and flared.

Non-associated Gas - Natural gas not in contact with significant quantities of crude oil in a reservoir.

Oil Well - An exploratory or development well completed for the production of crude oil.

Petroleum - Includes in its broadest sense the entire spectrum of hydrocarbons - gaseous, liquid, and solid.

Pipeline - A line of tubes with pumping machinery that transports crude oil or natural gas from the wellhead to the storage tank or petroleum refinery.

Proved Reserves - The estimated quantity of crude oil, natural gas, or NGL that is shown with reasonable certainty to be recoverable from known fields under existing economic and operating conditions.

Residual Fuel Oil - The heavy, high-viscosity leftover from the refining process, used mainly for ship fuel and industrial purposes.

Rotary Drilling Rig - A derrick equipped with modern rotary equipment capable of drilling a bore hole with a bit attached to a rotating column of steel pipe, in contrast to a cable tool rig which drills on the percussion principle.

Seismic Exploration Activity -The search for geological structures which are potential petroleum-bearing formations by interpreting data from seismic shocks.

Severance Tax - A tax levied by some states on each barrel of crude oil or each thousand cubic feet of natural gas produced.

Strategic Petroleum Reserve - Crude oil inventories held in government underground storage for use during periods of supply interruptions.

Stratigraphic Test - A hole drilled to gather information about a stratigraphic formation such as the general permeability and porosity of the rocks; includes core tests.

Well - A hole drilled to find or produce hydrocarbons, or to provide services related to their production.

Wet Natural Gas - Volumes of natural gas remaining after removal of lease condensate, and after exclusion of nonhydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable.

Wildcat Well - A type of exploratory well drilled in an unproven area where there has been no previous production.

Data Sources & Notes

The editorial staff gratefully acknowledges the following sources of data that appear on the individual state pages.

Average Production (dry)	IHS
Average output per producing well	IHS
Cumulative production (marketed) & Reserves (wet after lease separation)	Energy Information Administration (EIA)
Cumulative wells drilled	IHS & State Data
Cumulative wellhead value	Energy Information Administration (EIA)
Coalbed methane and Heavy oil	IHS
Deepest wells drilled	IHS & State Data
End-use natural gas prices	Energy Information Administration (EIA)
Federal (Offshore) lease data	Bureau of Ocean Energy Management
Federal leases & royalties	Office of Natural Resources Revenue, Department of Interior
Federal production shares	Office of Natural Resources Revenue, Department of Interior
First and peak production years	EIA and IHS
Marginal wells	IHS
Mineral lease revenues, bonuses & rent	Office of Natural Resource Revenue, Department of Interior
Natural gas marketed production	Energy Information Administration (EIA)
Natural gas vehicle production and station data	Energy Information Administration (EIA) and National Renewable Energy Laboratory
Number of employees	IPAA survey & Bureau of Labor Statistics
Operator	IHS. Defined as a company or individual who last reported.
Petroleum reserve position	Energy Information Administration (EIA)
Permits and Horizontal wells	IHS
Producing wells	IHS & State Data
Rotary drilling rigs	Baker Hughes, Inc.
State maps	State data and IHS data for producing entities by county.
Severance and production taxes	IPAA survey
Shale Gas	Energy Information Administration (EIA)
Statewide rankings	Energy Information Administration (EIA) for production and reserves. IHS data for wells drilled.
Total Production (dry)	IHS
Wellhead and City Gate prices and value	Energy Information Administration (EIA) and IPAA, State Data
Wells and footage drilled	IHS & State Data
Well summary and wells by type	IHS
Worldwide rank	BP Statistical Energy review and Oil and Gas Journal

Abbreviations

bbl. = barrel

b/d = barrels per day

Mcf = thousand cubic feet

MMcf = million cubic feet

Bcf = billion cubic feet

Tcf = trillion cubic feet

BTU = British Thermal Unit

NGL = Natural Gas Liquid

LPG = Liquefied Petroleum Gases

NA = Data Not Available

ND = Not Disclosable

Energy Conversions

One barrel of crude oil:
- = 42 gallons
- = 5,800,000 BTU of energy
- = 5,631 cubic feet of natural gas
- = 0.22 ton of bituminous coal

One cubic foot of natural gas:
- = 1,030 BTU of energy
- = 0.000178 barrel of crude oil
- = 0.00004 ton of bituminous coal

One short ton of bituminous coal:
- = 2,000 pounds
- = 26,200,000 BTU of energy
- = 4.52 barrels of crude oil
- = 25,437 cubic feet of natural gas

One metric ton of crude oil:
- = 2,205 pounds
- = 7.46 barrels of domestic crude oil
- = 6.99 barrels of foreign crude oil

One cubic meter of natural gas:
- = 35.314 cubic feet