

PREPARED FOR AMERICAN PETROLEUM INSTITUTE

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9300 LEE HIGHWAY | FAIRFAX VA

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Benefits and Opportunities of Natural Gas Use, Transportation, and Production



Arkansas

Economic Impacts of Natural Gas

There were 40,546 jobs in Arkansas related to natural gas. These jobs represented 3.4 percent of total state jobs. The top three sectors with the greatest number of jobs were freight truck, crude petroleum and natural gas extraction, and natural gas distribution. The contribution to the Arkansas economy in terms of direct, indirect, and induced value added in 2015 was \$5.27 billion, of which \$2.23 billion was related to the end use segment, \$1.74 billion was from the infrastructure segment, and \$1.30 billion was from the production segment.

Natural Gas Consumers

In 2015, Arkansas consumed 274 Bcf of natural gas in all sectors. There were a total of 620,000 customers. The value of natural gas delivered to consumers was \$1.36 billion.

Arkansas has 550,000 residential customers who consumed 33 Bcf in 2015. Average consumption was 60 Mcf per household. Residential demand was 64 percent for space heating, 27 percent for water heating, 4 percent for cooking, and 5 percent for other uses.

Arkansas has 69,000 commercial customers who consumed 48 Bcf in 2015. Average consumption per commercial customer was 688 Mcf. Commercial demand was 38 percent for space heating, 21 percent for water heating, 9 percent for cooking, and 32 percent for other uses.

There are 1,023 industrial customers in Arkansas who consumed 85 Bcf in 2015. Average consumption per industrial customer was 83 MMcf. The top industries for gas consumption were Chemicals (NAICS Code 325), Mining (21), Primary Metals (331), Paper (322), Food (311), and Petroleum and Coal Products (324), representing 84 percent of industrial demand.

Arkansas has 26 power plants consuming natural gas. In 2015, gas consumption was 109 Bcf, representing 27 percent of power generation in the state. Average consumption per customer was 4,183 MMcf.

Natural Gas Infrastructure

In 2015, Arkansas had 7,698 producing oil wells and 9,965 producing gas wells. There were 4,874 miles of gas gathering lines and 2 gas processing plants in the state with a capacity of 37 MMcf/d. In addition, there were 7,211 miles of gas pipelines, 453 miles of crude oil pipelines, 947 miles of NGL pipelines, 406 miles of product pipelines, and no CO2 pipelines. There were 20,184 miles of gas distribution mains and 8,276 miles of service lines. There were 2 natural gas storage sites in the state with a working gas capacity of 12 Bcf.

Natural Gas and Oil Production

In 2015, Arkansas produced 1.01 Tcf of dry natural gas, 427,000 barrels of plant liquids, and 6.17 million barrels of crude. Arkansas is the location of the Fayetteville shale gas play, which is one of the top shale gas plays in the U.S.

Exhibit 7-5: Arkansas State Factsheet

| Arkansas | | | Employment (# of Workers) | | | Labor Income (\$ million) | | | Value Added (\$ million) | | | |
|---|---|-----------------------------------|---|---------------------------------|-----------------------------|---|-------------------------------|-----------------------|--------------------------|---------|-------|--|
| Summary | Segment | Category | Direct & Indirect | Induced | Total | Direct & Indirect | Induced | Total | Direct & Indirect | Induced | Total | |
| | End-Use | Power Generation | 1,500 | 2,273 | 3,773 | 116 | 113 | 229 | 363 | 200 | 563 | |
| | | Industrial | 2,498 | 4,452 | 6,951 | 166 | 205 | 371 | 642 | 393 | 1,035 | |
| | | Residential/ Commercial | 1,597 | 1,820 | 3,418 | 104 | 93 | 197 | 395 | 164 | 559 | |
| | | Export | 501 | 411 | 913 | 32 | 20 | 52 | 36 | 37 | 72 | |
| | | Transportation | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Infrastructure | Processing | 685 | 783 | 1,468 | 44 | 36 | 81 | 98 | 71 | 170 | |
| | | Pipelines | 3,008 | 2,414 | 5,422 | 218 | 118 | 336 | 584 | 221 | 805 | |
| | | Distribution | 3,563 | 2,652 | 6,215 | 221 | 122 | 344 | 507 | 240 | 747 | |
| | | Wholesalers, Marketers, Other | 95 | 72 | 167 | 6 | 3 | 10 | 15 | 7 | 22 | |
| | Production | Natural Gas/ NGLs | 7,935 | 4,283 | 12,219 | 621 | 195 | 816 | 918 | 382 | 1,300 | |
| | All Segments | Grand Total | 21,384 | 19,162 | 40,546 | 1,529 | 906 | 2,434 | 3,558 | 1,715 | 5,274 | |
| Jobs by Top Industries | Rank | NAICS | Industry Sector | | | | | | Direct and Indirect Jobs | | | |
| | 1 | 4841 | Freight Truck | | | | | | 1,361 | | | |
| | 2 | 211111 | Crude Petroleum & Natural Gas Extraction | | | | | | 1,305 | | | |
| | 3 | 221210 | Natural Gas Distribution | | | | | | 1,228 | | | |
| | 4 | 213112 | Support Activities for Oil & Gas Operations | | | | | | 1,099 | | | |
| | 5 | 331210 | Iron & Steel Pipe & Tube Manufacturing | | | | | | 1,061 | | | |
| | 6 | 325 | Chemical Manufacturing | | | | | | 985 | | | |
| | 7 | 237120 | Oil & Gas Pipeline Construction | | | | | | 872 | | | |
| | 8 | 811310 | Industrial Equip. & Machinery Repair & Maint. | | | | | | 662 | | | |
| | 9 | 45431NGL | NGL Retail | | | | | | 428 | | | |
| | 10 | 236210 | Industrial Construction | | | | | | 387 | | | |
| Customers | Sector | | Customer Count | Consumption Volume (MMcf/ year) | | Value of Natural Gas Delivered to Customers (\$million) | | | | | | |
| | Residential Sector | | 550,108 | 32,998 | | \$381 | | | | | | |
| | Commercial Sector | | 69,265 | 47,651 | | \$352 | | | | | | |
| | Industrial Sector | | 1,023 | 85,287 | | \$313 | | | | | | |
| | Transportation | | 18 | 36 | | \$0 | | | | | | |
| | Power Sector | | 26 | 108,755 | | \$313 | | | | | | |
| | All Sectors | | 620,440 | 274,727 | | \$1,359 | | | | | | |
| Infrastructure | Gas Distribution Main (miles) | Gas Distribution Services (miles) | Gas Gathering (miles) | Gas Pipelines (miles) | Crude Oil Pipelines (miles) | NGL Pipelines (miles) | Oil Product Pipelines (miles) | CO2 Pipelines (miles) | | | | |
| | 20,184 | 8,276 | 4,874 | 7,211 | 453 | 947 | 406 | 0 | | | | |
| Production | Product | | Annual Production | | Wells | Well Type | Operating Wells | New Wells Drilled | | | | |
| | Dry Natural Gas (mmcft) | | 1,009,723 | | | Oil Wells | 7,698 | 74 | | | | |
| | Gas Plant Liquids (barrels) | | 427,000 | | | Gas Wells | 9,965 | 293 | | | | |
| | Lease Condensate (barrels) | | 0 | | | All Wells | 17,663 | 367 | | | | |
| | Crude Oil (barrels) | | 6,165,000 | | | | | | | | | |
| | Annual Value Counted Toward Natural Gas Value Chain (\$million) | | \$2,167 | | | | | | | | | |
| | Annual Value of All Produced Oil, Gas, NGLs (\$million) | | \$2,433 | | | | | | | | | |
| Annual 2015 Data for Arkansas Natural Gas Value Chain Basis | | | | | | | | | | | | |