

PREPARED FOR **AMERICAN PETROLEUM INSTITUTE**

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JUNE 2017

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



West Virginia

Economic Impacts of Natural Gas

There were 35,800 jobs in West Virginia related to natural gas. These jobs represented 5.2 percent of total state jobs. The top three sectors with the greatest number of jobs were crude petroleum and natural gas extraction, chemical manufacturing, and oil and gas pipeline construction. The contribution to the West Virginia economy in terms of direct, indirect, and induced value added in 2015 was \$5.80 billion, of which \$2.13 billion was related to the end use segment, \$1.81 billion was from the infrastructure segment, and \$1.86 billion was from the production segment.

Natural Gas Consumers

In 2015, West Virginia consumed 87 Bcf of natural gas in all sectors. There were a total of 372,000 customers. The value of natural gas delivered to consumers was \$570 million.

West Virginia has 338,000 residential customers who consumed 25 Bcf in 2015. Average consumption 73 Mcf per household. Residential demand was 72 percent for space heating, 20 percent for water heating, 3 percent for cooking, and 5 percent for other uses.

West Virginia has 34,000 commercial customers who consumed 23 Bcf in 2015. Average consumption per commercial customer was 656 Mcf. Commercial demand was 42 percent for space heating, 26 percent for water heating, 11 percent for cooking, and 21 percent for other uses.

There are 101 industrial customers who consumed 26 Bcf in 2015. Average consumption per industrial customer was 256 MMcf. The top industries for gas consumption were Mining (NAICS Code 21), Primary Metals (331), Chemicals (325), Agriculture (11), and Non-metallic Mineral Products (327), representing 95 percent of industrial demand.

West Virginia has 10 power plants consuming natural gas. In 2015, gas consumed was 13 Bcf, representing 2 percent of power generation in the state. Average consumption per customer was 1,328 MMcf.

Natural Gas Infrastructure

In 2015, West Virginia had 3,903 producing oil wells and 47,938 producing gas wells. There were 22,825 miles of gas gathering lines and 16 gas processing plants in the state with a capacity of 4,077 MMcf/d. In addition, there were 3,520 miles of gas pipelines, 5 miles of crude oil pipelines, 411 miles of NGL pipelines, 40 miles of product pipelines, and 0 miles of CO₂ pipelines. There were 10,850 miles of gas distribution mains and 2,288 miles of service lines. There were 31 natural gas storage sites in the state with a working gas capacity of 259 Bcf.

Natural Gas and Oil Production

In 2015, West Virginia produced 1.24 Tcf of dry natural gas, 82 million barrels of gas plant liquids, 10 million barrels of lease condensate, and 2 million barrels of crude. West Virginia contains a large percentage of the Marcellus gas play area, and Marcellus production in the state has increased substantially in recent years. Efforts are underway to increase gas midstream infrastructure including gas transportation capacity.

Exhibit 7-50: West Virginia State Factsheet

West Virginia			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	340	789	1,129	25	39	64	49	69	119
		Industrial	3,877	4,887	8,764	320	249	569	1,357	430	1,787
		Residential/ Commercial	566	769	1,335	38	40	78	131	69	200
		Export	116	158	274	8	8	16	9	14	23
		Transportation	0	0	1	0	0	0	0	0	0
	Infrastructure	Processing	948	654	1,602	75	33	108	398	60	458
		Pipelines	3,117	2,023	5,140	264	110	374	634	186	820
		Distribution	2,491	1,670	4,161	179	84	263	363	151	514
		Wholesalers, Marketers, Other	77	51	129	6	3	9	13	5	18
Production	Natural Gas/ NGLs	9,248	3,992	13,240	904	210	1,114	1,508	356	1,864	
All Segments	Grand Total	20,780	14,994	35,774	1,819	776	2,595	4,463	1,340	5,803	

Jobs by Top Industries	Rank	NAICS	Industry Sector	Direct and Indirect Jobs
	1	211111	Crude Petroleum & Natural Gas Extraction	3,082
	2	325	Chemical Manufacturing	2,302
	3	237120	Oil & Gas Pipeline Construction	1,948
	4	213112	Support Activities for Oil & Gas Operations	1,724
	5	221210	Natural Gas Distribution	703
	6	4841	Freight Truck	657
	7	213111	Drilling Oil & Gas Wells	654
	8	811310	Industrial Equip. & Machinery Repair & Maint.	392
	9	236210	Industrial Construction	235
	10	4247NGL	NGL Wholesale	160

Customers	Sector	Customer Count	Consumption Volume (MMcf/ year)	Value of Natural Gas Delivered to Customers (\$million)
	Residential Sector	337,643	24,807	\$259
	Commercial Sector	34,448	22,598	\$180
	Industrial Sector	101	25,901	\$92
	Transportation	4	10	\$0
	Power Sector	10	13,277	\$39
	All Sectors	372,206	86,593	\$570

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)
	10,850	2,288	22,825	3,520	5	411	40	0

Production	Product	Annual Production
	Dry Natural Gas (mmcf)	1,241,283
	Gas Plant Liquids (barrels)	82,021,000
	Lease Condensate (barrels)	10,000,000
	Crude Oil (barrels)	1,970,000
	Annual Value Counted Toward Natural Gas Value Chain (\$million)	\$5,021
	Annual Value of All Produced Oil, Gas, NGLs (\$million)	\$5,087

Wells	Well Type	Operating Wells	New Wells Drilled
	Oil Wells	3,903	183
	Gas Wells	47,938	223
	All Wells	51,841	407

Annual 2015 Data for West Virginia
Natural Gas Value Chain Basis