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



Texas

Economic Impacts of Natural Gas

There were 784,900 jobs in Texas related to natural gas. These jobs represented 6.8 percent of total state jobs. The top three sectors with the greatest number of jobs were support activities for oil and gas, oil and gas extraction, and oil and gas pipeline construction. The contribution to the Texas economy in terms of direct, indirect, and induced value added in 2015 was \$114.0 billion, of which \$41.5 billion was related to the end use segment, \$33.6 billion was from the infrastructure segment, and \$39.0 billion was from the production segment.

Natural Gas Consumers

In 2015, Texas consumed 3.64 Tcf of natural gas in all sectors. There were a total of 4.85 million customers. The value of natural gas delivered to consumers was \$13.4 billion.

Texas has 4.52 million residential customers who consumed 211 Bcf in 2015. Average consumption was 47 Mcf per household. Residential demand was 42 percent for space heating, 41 percent for water heating, 7 percent for cooking, 1 percent for space cooling, and 9 percent for other uses.

Texas has 319,500 commercial customers who consumed 178 Bcf in 2015. Average consumption per commercial customer was 556 Mcf. Commercial demand was 36 percent for space heating, 20 percent for water heating, 9 percent for cooking, 3 percent for cogeneration and 32 percent for other uses.

There are 6,655 industrial customers in Texas who consumed 1.60 Tcf in 2015. Average consumption per industrial customer was 240 MMcf. The top industries for gas consumption were Chemicals (NAICS Code 325), Petroleum and Coal Products (324), Non-metallic mineral products (327), Primary Metals (331), and Food (311), representing 89 percent of industrial demand.

Texas has 185 power plants consuming natural gas. In 2015, gas consumed was 1.65 Tcf, representing 53 percent of power generation in the state. Average consumption per customer was 8,900 MMcf.

Natural Gas Infrastructure.

In 2015, Texas had 188,417 producing oil wells and 142,717 producing gas wells. There were 133,136 miles of gas gathering lines and 178 gas processing plants in the state with a capacity of 23,437 MMcf/d. In addition, there were 44,034 miles of gas pipelines, 21,737 miles of crude oil pipelines, 30,301 miles of NGL pipelines, 9,775 miles of product pipelines, and 1,808 miles of CO₂ pipelines. There were 106,234 miles of gas distribution mains and 45,459 miles of service lines. There were 36 natural gas storage sites in the state with a working gas capacity of 546 Bcf.

Natural Gas and Oil Production

In 2015, Texas produced 7.33 Tcf of dry natural gas, 572 million barrels of gas plant liquids, 181 million barrels of lease condensate, and 1.16 billion barrels of crude. Texas continues to be a major contributor to U.S. oil and gas production. The state has been the location of a large

fraction of horizontal shale gas and tight oil development. The Permian Basin of West Texas and Southeastern New Mexico has some of the best well recoveries and economics for tight oil of any basin in the U.S. and is experiencing a large amount of activity. Horizontal oil and gas plays in the state include the Fort Worth Barnett Shale, the Eagle Ford, Permian Midland Basin tight oil and Permian Delaware Basin tight oil. Other plays include the Texas portion of Haynesville shale gas and the Austin Chalk play. The Panhandle region has the Granite Wash and similar gas plays. In April of 2017, approximately 415 rigs were active in Texas. The majority of rig activity is in the Permian Basin.

Exhibit 7-45: Texas State Factsheet

Texas			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	17,871	28,571	46,442	1,397	1,434	2,831	6,261	2,512	8,773
		Industrial	55,666	81,276	136,942	5,580	4,803	10,383	18,410	7,169	25,579
		Residential/ Commercial	11,750	18,200	29,950	788	942	1,730	2,246	1,644	3,890
		Export	17,825	9,649	27,474	1,318	494	1,812	2,305	860	3,165
		Transportation	207	162	369	10	9	14	33	18	51
	Infrastructure	Processing	20,584	16,686	37,270	2,160	1,023	3,183	5,887	1,522	7,409
		Pipelines	64,389	43,686	108,074	6,136	2,547	8,683	13,789	4,006	17,795
		Distribution	35,866	30,164	66,030	3,135	1,691	4,831	5,284	2,730	8,014
		Wholesalers, Marketers, Other	1,333	1,004	2,337	122	57	180	244	91	336
	Production	Natural Gas/ NGLs	229,721	100,310	330,031	23,737	5,522	29,259	30,077	8,939	39,015
	All Segments	Grand Total	455,212	329,708	784,920	44,384	18,522	62,906	84,538	29,491	114,028

Jobs by Top Industries	Rank	NAICS	Industry Sector	Direct and Indirect Jobs
	1	213112	Support Activities for Oil & Gas Operations	59,296
	2	211111	Crude Petroleum & Natural Gas Extraction	40,278
	3	237120	Oil & Gas Pipeline Construction	26,722
	4	325	Chemical Manufacturing	25,932
	5	333132	Oil & Gas Field Machinery & Equipment Manufacturing	21,845
	6	213111	Drilling Oil & Gas Wells	17,661
	7	486210	Pipeline Transportation of Natural Gas	10,014
	8	4841	Freight Truck	9,795
	9	236210	Industrial Construction	9,551
	10	811310	Industrial Equip. & Machinery Repair & Maint.	8,912

Customers	Sector	Customer Count	Consumption Volume (MMcf/ year)	Value of Natural Gas Delivered to Customers (\$million)
	Residential Sector	4,523,977	211,370	\$2,235
	Commercial Sector	319,512	177,594	\$1,220
	Industrial Sector	6,655	1,599,279	\$5,303
	Transportation	143	4,645	\$35
	Power Sector	185	1,646,330	\$4,593
	All Sectors	4,850,472	3,639,217	\$13,388

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)
	106,234	45,459	133,136	44,034	21,737	30,301	9,775	1,808

Production	Product	Annual Production
	Dry Natural Gas (mmcf)	7,326,087
	Gas Plant Liquids (barrels)	572,423,000
	Lease Condensate (barrels)	181,000,000
	Crude Oil (barrels)	1,160,000,000
	Annual Value Counted Toward Natural Gas Value Chain (\$million)	\$37,251
	Annual Value of All Produced Oil, Gas, NGLs (\$million)	\$89,393

Wells	Well Type	Operating Wells	New Wells Drilled
	Oil Wells	188,417	7,931
	Gas Wells	142,717	1,978
	All Wells	331,134	9,909

Annual 2015 Data for Texas
Natural Gas Value Chain Basis