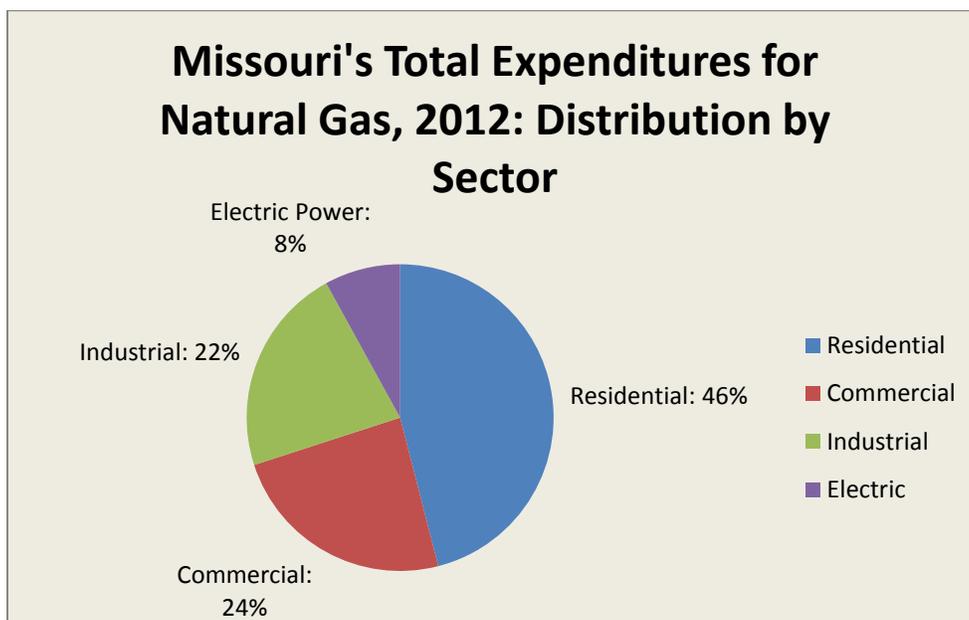




Missouri Natural Gas at a Glance

Figure 1¹



Missouri's Expenditures for and Consumption of Natural Gas in 2012

Roughly 70 percent of Missouri's natural gas bill is paid by residential and commercial users for applications such as space heating, water heating, and cooling (see figure 1).

¹ Data on Natural Gas Expenditures was obtained from EIA, "Primary Energy, Electricity, and Total Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_tot.pdf); EIA, "Total End-Use Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_tx.pdf); EIA, "Residential Sector Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_res.pdf); EIA, "Commercial Sector Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_com.pdf); EIA, "Industrial Sector Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_ind.pdf); and EIA, "Electric Power Sector Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_eu.pdf). All accessed on July 29th, 2014. Note that according to EIA, "Transportation Sector Energy Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_ex_tra.pdf), natural gas expenditures in the transportation sector were negligible (i.e., less than \$0.05 million) in Missouri in 2012.

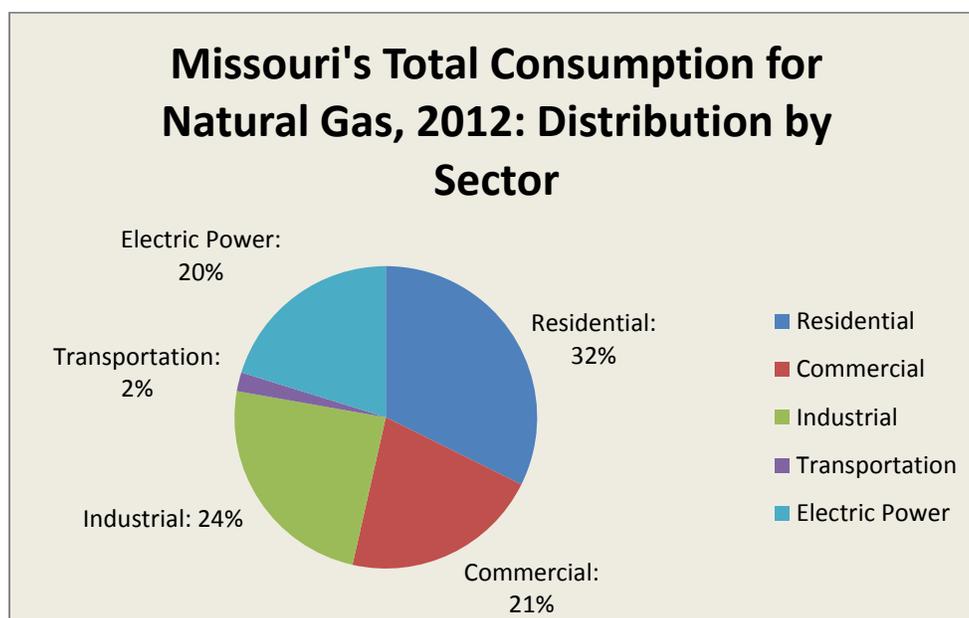
According to the Energy Administration (EIA), 53.1 percent of home heating in Missouri came from natural gas in 2012.²

In 2012, Missouri ranked 13th among all states in natural gas expenditures by the residential sector, 16th in expenditures by the commercial sector, 19th in expenditures by the industrial sector, and 34th in expenditures by the electric power sector. Missouri ranked 21st in total expenditures for natural gas in 2012.

The industrial and electric power sectors accounted for 30 percent of Missouri's natural gas expenditures in 2012; this compares to 48 percent on a national basis.³

Shifting to consumption (as measured in British thermal units, or Btu), figure 2 shows the distribution by sector. In terms of total natural gas consumption, Missouri was ranked 30th among all states in 2012. For residential natural gas consumption, the state was ranked 15th. And for commercial, industrial, transportation, and electric power natural gas consumption, Missouri was ranked 16th, 32nd, 37th, and 33rd, respectively.

Figure 2⁴



² EIA, "Missouri State Energy Profile" (<http://www.eia.gov/state/print.cfm?sid=MO>). Accessed July 29th, 2014.

³ National expenditure figures for 2012 were obtained from the same documents cited above.

⁴ Data on Natural Gas Consumption was obtained from EIA, "Primary Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_totcb.pdf); EIA, "Total End-Use Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_use_tx.pdf); EIA, "Residential Sector Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_res.pdf); EIA, "Commercial Sector Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_com.pdf); EIA, "Industrial Sector Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_ind.pdf); EIA, "Transportation Sector Energy Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_tra.pdf); EIA, "Electric Power Sector Consumption Estimates, 2012" (http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_eu.pdf). All sites accessed July 29th, 2014. Percentages do not equal 100 due to rounding.

Missouri's residential, commercial, and transportation sectors accounted for about 55 percent of natural gas consumption in 2012. The industrial and electric power sectors accounted for 44 percent of natural gas consumed in Missouri in 2012. Nationally, this figure was approximately 70 percent.⁵

Trends Since 1990

Figure 3

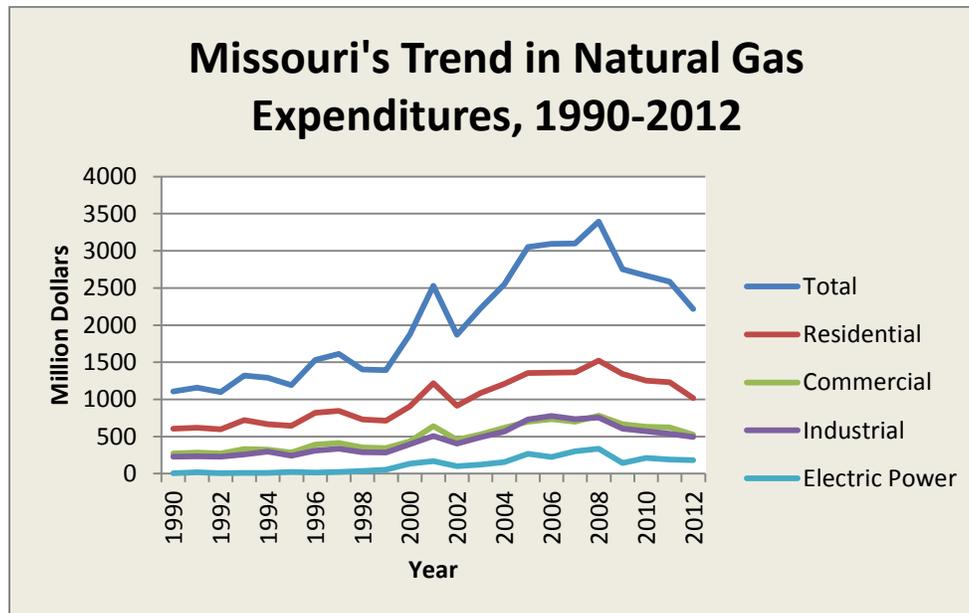


Figure 3 above illustrates natural gas expenditures in Missouri since 1990. Expenditures for natural gas, like those for electricity and transportation fuels, trended upward through the 1990s and most of the 2000s. Total natural gas expenditures peaked in 2008, when they reached 3,395.6 million dollars (over 200 percent higher than the figure in 1990, which was 1,107.5 million dollars). However, since 2008, they have steadily declined, reaching 2,215.5 million dollars in 2012. This represented a 35 percent decline since 2008.⁶

⁵ National consumption figures for 2012 were obtained from the same documents cited above.

⁶ Expenditure figures from 1990-2012 were obtained from EIA, "Primary Energy, Electricity, and Total Energy Price and Expenditure Estimates, 1970-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/total/pr_tot_MO.html&sid=MO); EIA, "Residential Sector Energy Price and Expenditure Estimates, 1970-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/res/pr_res_MO.html&sid=MO); EIA, "Commercial Sector Energy Price and Expenditure Estimates, 1970-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/com/pr_com_MO.html&sid=MO); EIA, "Industrial Sector Energy Price and Expenditure Estimates, 1970-2012, Missouri"

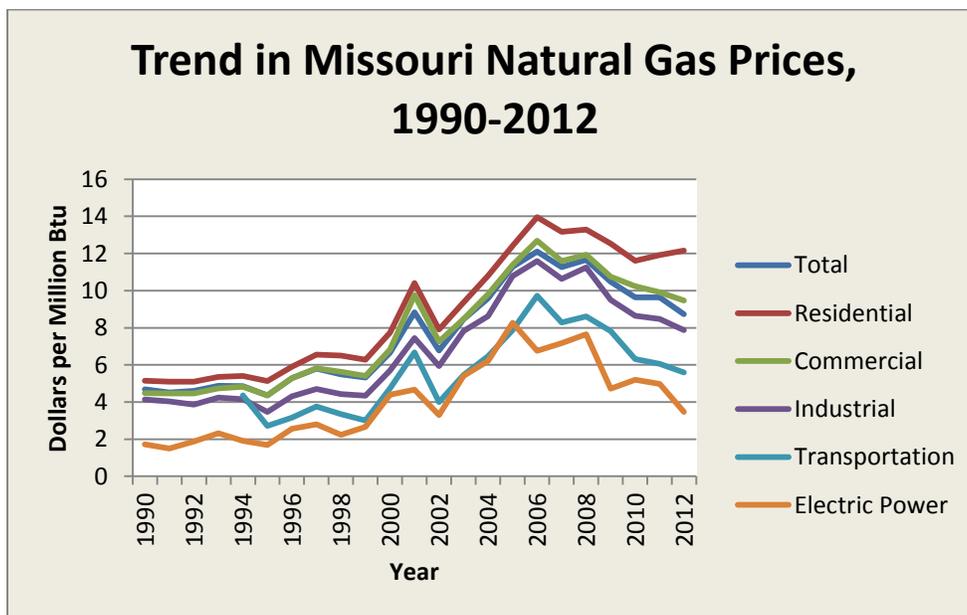
(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/ind/pr_ind_MO.html&sid=MO); and EIA, "Electric Power Sector Price and Expenditure Estimates, 1970-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/eu/pr_eu_MO.html&sid=MO). All accessed July 30th, 2014.

The EIA writes that lower wellhead prices in recent years are attributable to 1) “Record levels of production due to the development of gas and shale formations (plays)”, 2) “Growth in supply exceeding growth in demand”, and 3) “Few supply disruptions as a result of relatively calm hurricane seasons”. According to the EIA, the residential price of natural gas is comprised of 1) commodity costs and 2) transmission and distribution costs. In general, residential natural gas prices vary by state based on 1) “[T]he market’s proximity to the producing areas”, 2) “[T]he number of pipelines in the state”, 3) “[A]verage consumption per residence receiving service”, 4) “[T]ransportation charges associated with delivery”, 5) “[S]tate regulations”, and 6) “[D]egree of competition”.⁷ Weather patterns also influence natural gas demand, of which natural gas prices are a function.

Figure 4 below shows the trend in natural gas prices by sector (as measured by dollars per million Btu) over the 1990-2012 timeframe.⁸

Figure 4



From 2002 to 2006, natural gas prices trended upwards, but have since fallen significantly. As measured by compound annual growth rate, overall natural gas prices increased by 15.65 percent annually between 2002 and 2006. This figure for the

⁷ This paragraph was drawn from EIA, “Natural Gas Explained: Natural Gas Prices” (http://www.eia.gov/energyexplained/index.cfm?page=natural_gas_prices). Accessed July 30th, 2014.

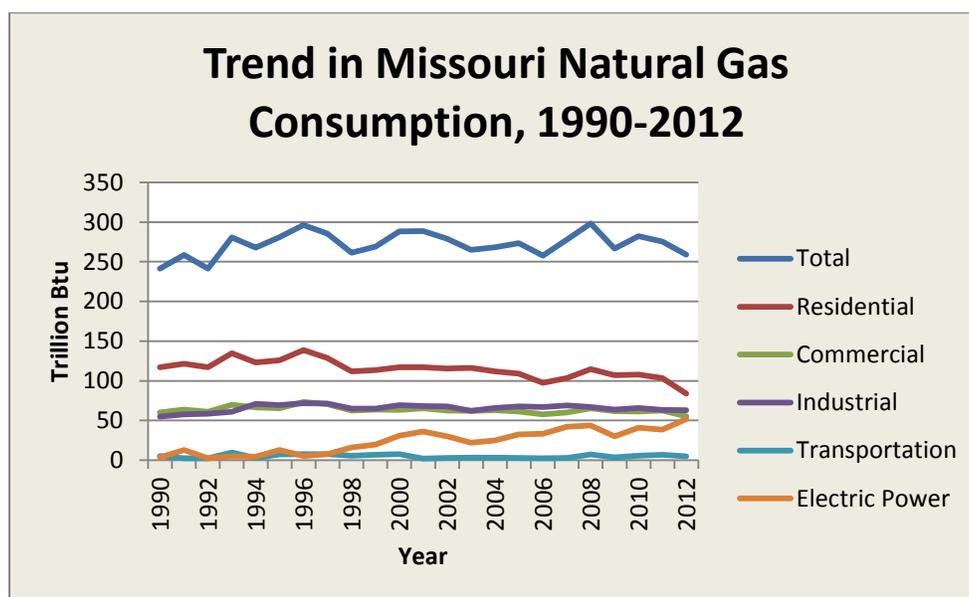
⁸ Prices were obtained from the same documents in footnote 6, with the addition of EIA, “Transportation Sector Energy Price and Expenditure Estimates, 1970-2012, Missouri” (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/tra/pr_tra_MO.html&sid=MO). Note that no transportation price data was available for 1990-1993.

residential, commercial, industrial, transportation, and electric power sectors was 15.30%, 15%, 18.19%, 24.96%, and 19.73%, respectively.

Between 2006 and 2012, overall natural gas prices fell by 5.33 percent annually. Prices declined in the residential, commercial, industrial, transportation, and electric power sectors by 2.29%, 4.77%, 6.25%, 8.82%, and 10.56%, respectively.⁹

Figure 5 below shows trends in Missouri's natural gas consumption by sector between 1990 and 2012.¹⁰

Figure 5



Total natural gas consumption in the state has remained relatively stable over the past two decades. The trend in commercial, industrial, and transportation natural gas consumption has not been particularly volatile. However, consumption for the electric power sector has increased gradually since the late 1990s: from 1996 to 2012, natural gas consumption by the electric power sector increased by almost 900 percent.

⁹ Annual growth rates are author's calculations from EIA data.

¹⁰ Consumption figures from 1990-2012 were obtained from EIA, "Primary Energy Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/total/use_tot_MOcb.html&sid=MO); EIA, "Residential Sector Energy Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/res/use_res_MO.html&sid=MO); EIA, "Commercial Sector Energy Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/com/use_com_MO.html&sid=MO); EIA, "Industrial Sector Energy Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/ind/use_ind_MO.html&sid=MO); EIA, "Transportation Sector Energy Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/tra/use_tra_MO.html&sid=MO); and EIA, "Electric Power Sector Consumption Estimates, 1960-2012, Missouri" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/eu/use_eu_MO.html&sid=MO). All accessed July 30th, 2014.

And consumption for the residential sector has trended downwards since the late 1990s. From 1996 to 2012, natural gas consumption in the residential sector fell by almost 40 percent.

Between 2011 and 2012, consumption fell in all sectors except electric power, leading to an overall consumption decline of 5.96 percent.

Data Sources

Statistics presented in this fact sheet are based on energy consumption, price, and expenditure data from the State Energy Data System (SEDS) provided by the U.S. Department of Energy's Energy Information Administration (EIA). In addition to the SEDS data, EIA also provides more recent data on average residential, commercial, and industrial natural gas prices.

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