



Missouri Electricity at a Glance

Missouri's Electricity Consumption and Expenditures in 2012: Distribution by Sector

In 2012, the latest year for which data is available from the Energy Information Administration (EIA), Missourians consumed 82,435 million kilowatt-hours (KWh) of electricity for which they paid a total of \$7,029.5 million.

In 2012, Missouri ranked 19th among all states in total electricity expenditures. For residential, commercial, and industrial electricity expenditures, Missouri ranked 15th, 16th, and 22nd, respectively. Missouri was the 18th largest consumer of electricity nationwide (as measured by million KWh) in 2012. For residential, commercial, and industrial electricity consumption, Missouri ranked 14th, 13th, and 19th, respectively.

In 2012, residential consumers in Missouri paid \$3,491.8 million for electricity, about 49.7 percent of the state's total electricity expenditures. In that same year, the residential sector consumed 34,337 million KWh, which represented 41.7 percent of total state consumption.

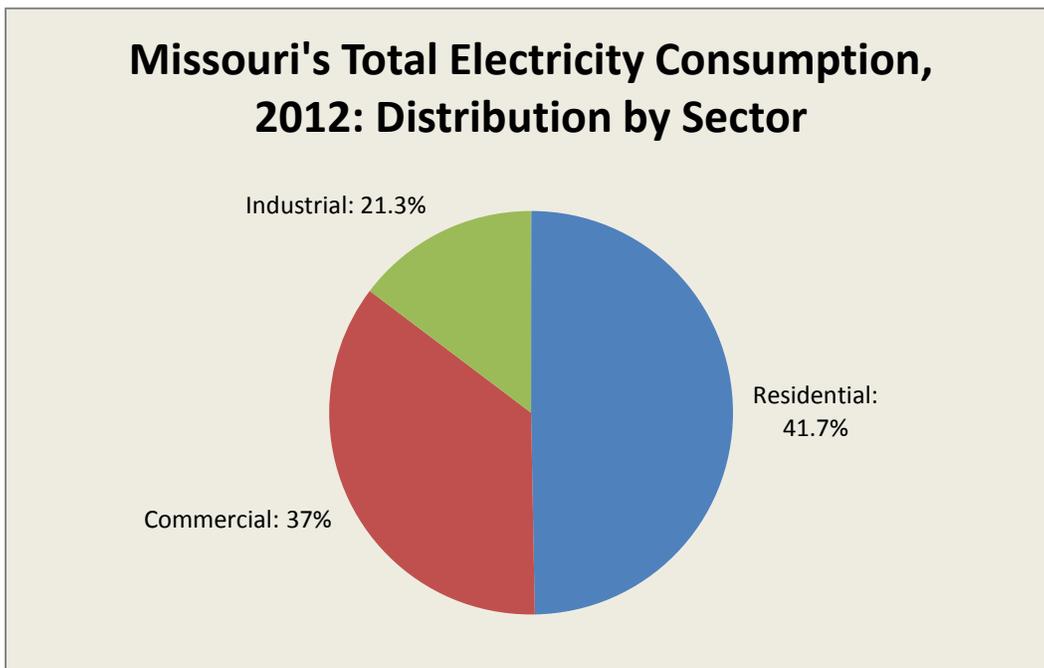
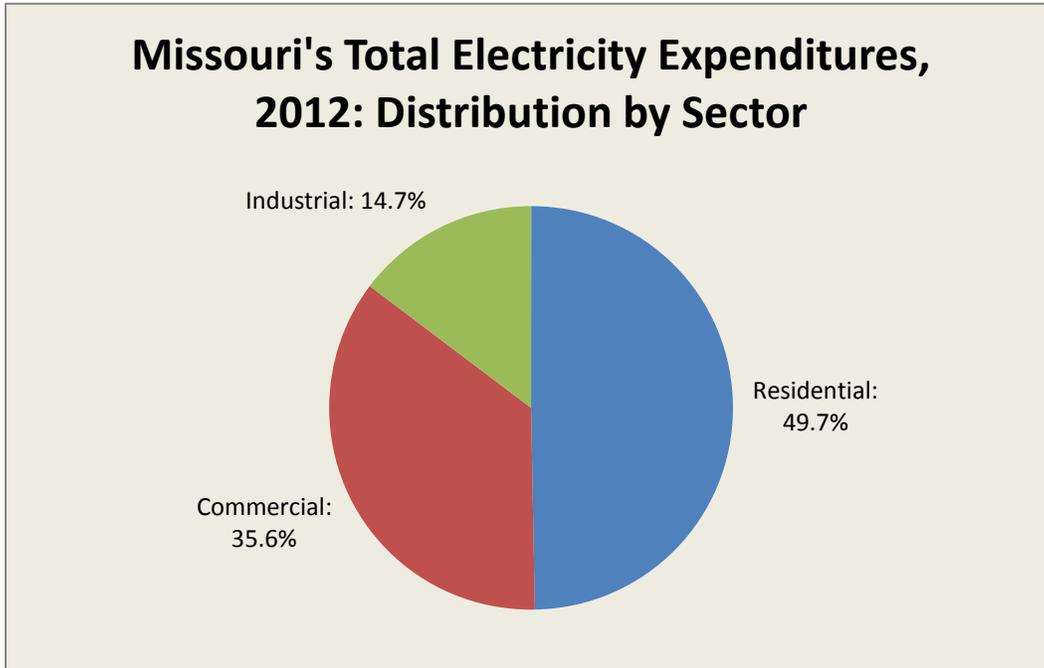
Commercial consumers paid \$2,499.4 million for electricity in 2012, or about 35.6 percent of the state's total electricity expenditures. Total usage for the commercial sector amounted to 30,483 million KWh, which represented 37 percent of total state consumption.

Industrial consumers paid \$1,036.8 million for electricity in 2012, or about 14.7 percent of Missouri's total electricity expenditures. Total industrial usage was 17,594 million KWh, or 21.3 percent of total state consumption.¹ Figures 1a and 1b below are

¹ 2012 data was obtained from 1) EIA, "Electricity Consumption Estimates, 2012" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_es.html&sid=US) and 2) EIA, "Electricity Price and Expenditure Estimates, 2012" (http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_pr_es.html&sid=US). Accessed July 24th, 2014.

graphical representations of electricity expenditure and consumption distribution by sector.

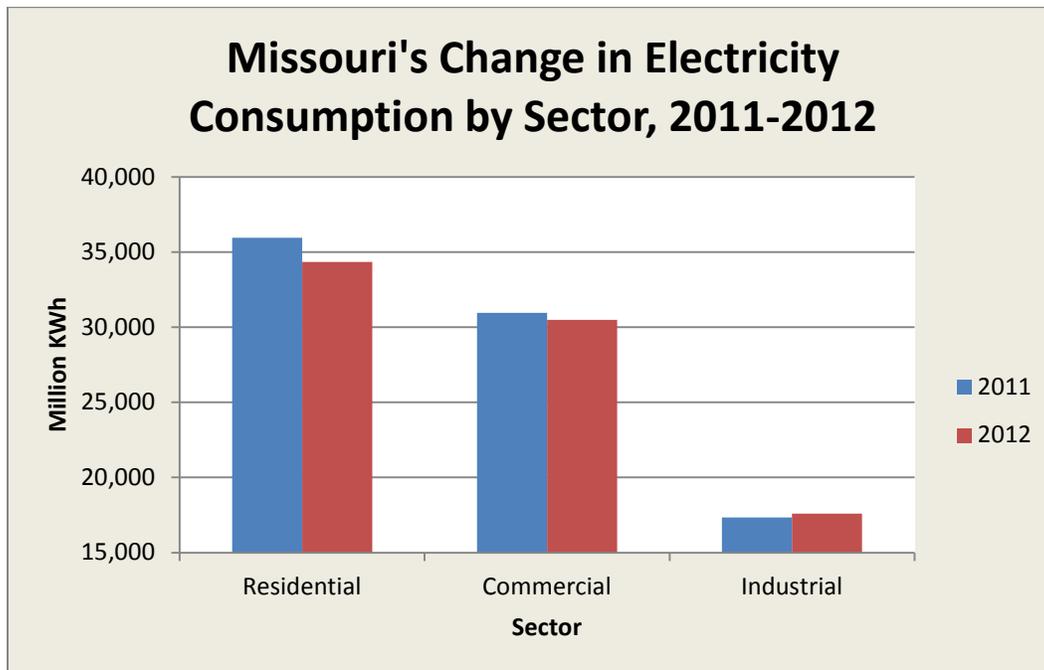
Figures 1a and 1b



Changes from 2011

Between 2011 and 2012, consumption of electricity decreased in the residential and commercial sectors and increased in the industrial sector (see figure 2). In the residential sector, consumption decreased by 4.5 percent. In the commercial sector, consumption decreased by 1.5 percent. And in the industrial sector, consumption increased by 1.5 percent.²

Figure 2



Total electricity consumption in 2012 was 82,435 million KWh, a decrease of 2.2 percent from the 2011 figure, which was 84,255 million KWh (see figure 3).³

² 2011 and prior (see below) consumption figures by sector were obtained from 1) 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=Missouri),

2) 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=Missouri), and

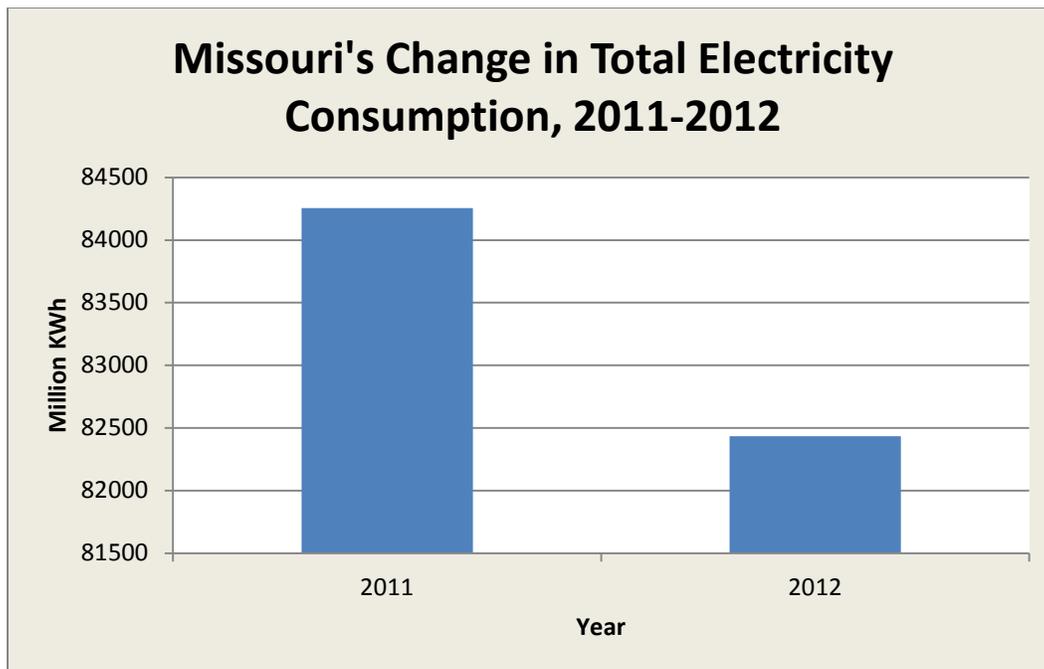
3) EIA, "Industrial Sector Energy Consumption Estimates, 1960-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/ind/use_ind_MO.html&sid=Missouri). Accessed July 24th, 2014.

³ The total consumption figure from 2011 and previous years (see below) was obtained from EIA, "Total End-Use Energy Consumption Estimates, 1960-2012, Missouri"

(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_use/tx/use_tx_MO.html&sid=MO). Accessed July 25th, 2014.

Figure 3



Between 2011 and 2012, expenditures on electricity in Missouri decreased in the residential sector, and increased in the commercial and industrial sectors (see figure 4). In the residential sector, expenditures decreased by 0.3 percent. In the commercial and industrial sectors, expenditures increased by 0.3 percent and 2.3 percent, respectively.⁴

Total electricity expenditures in 2012 amounted to \$7,029.5 million, an increase of 0.3 percent from the 2011 figure, which was \$7,008.5 million (see figure 5).⁵

In 2012, the overall average cost for electricity in Missouri was about 8.5 cents per KWh, a 2.4 percent increase over the 2011 figure, which was 8.3 cents per KWh. The average residential price amounted to 10.2 cents per KWh in 2012, a 5.2 percent increase over 2011, when the average residential price was 9.7 cents per KWh. The average commercial price was 8.2 cents per KWh in 2012, a 2.5 percent increase over 2011, when the average commercial price was 8 cents per KWh. The average price for

⁴ 2011 and prior (see below) expenditure figures by sector were obtained from 1) 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=Missouri),

2) 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=Missouri),

3) 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=Missouri). Accessed July 24th, 2014.

⁵ The total expenditure figure for 2011 and previous years (see below) was obtained from EIA, “Total End-Use Energy Price and Expenditure Estimates, 1970-2012, Missouri”

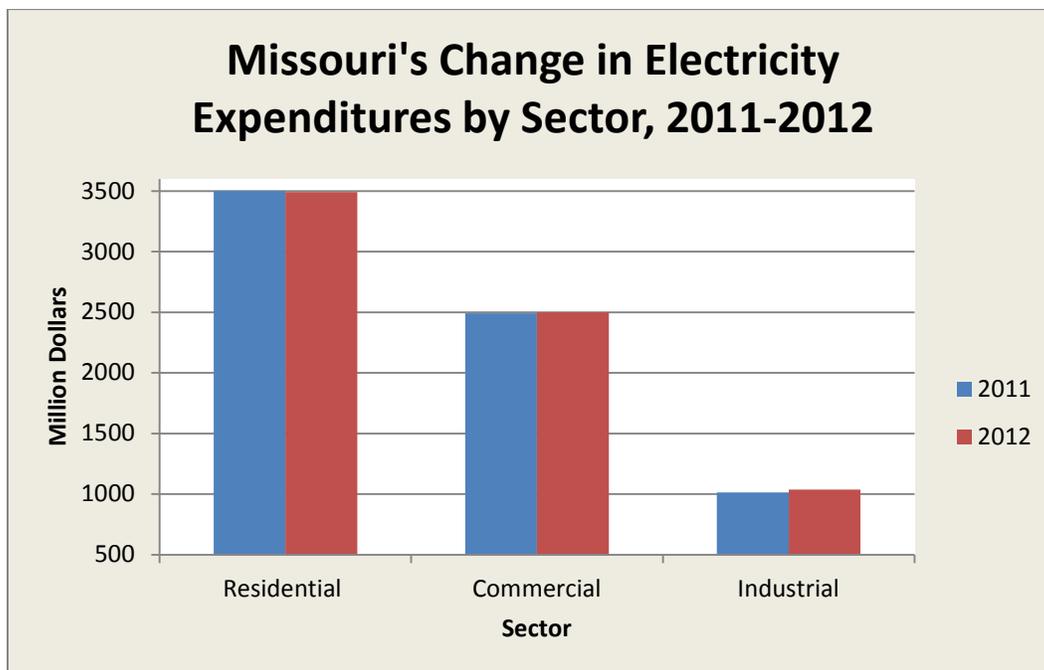
(http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_prices/tx/pr_tx_MO.html&sid=MO). Accessed July 25th, 2014.

industrial consumers in 2012 amounted to 5.9 cents per KWh, a 1.7 percent increase over 2011, when the average industrial price was 5.8 cents per KWh.⁶

Large purchasers such as industrial firms pay lower electric rates than small purchasers for a variety of reasons, including lower distribution costs and the ability of large customers to negotiate contractual arrangements and take advantage of special arrangements, such as interruptible load agreements.

There are a variety of interrelated factors that influence electricity consumption, prices, and expenditures. According to the EIA, “[e]lectricity demand fluctuates in the short term in response to business cycles, weather conditions, and prices.”⁷ And “[c]hanges in prices generally reflect variations in electricity demand, availability of different generation sources, fuel costs, and plant availability.”⁸ Taking a longer-term view, note that electricity consumption and expenditures in Missouri have trended upwards over the past few decades (see figure 6 and 7).

Figure 4

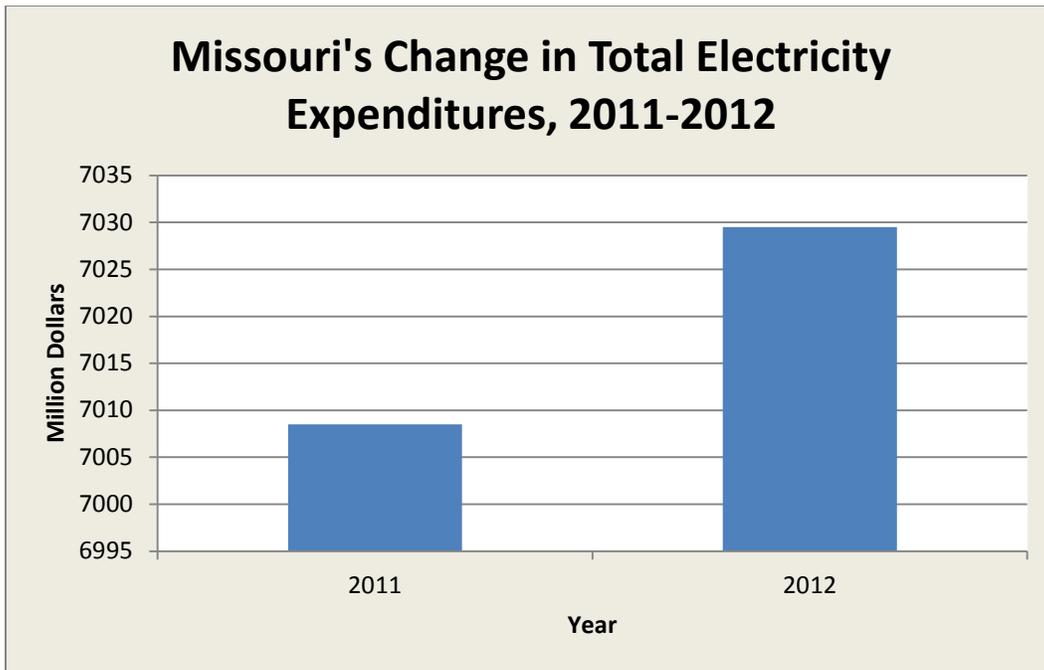


⁶ Author's calculations from EIA data.

⁷ EIA, "Electricity Explained: Use of Electricity" (http://www.eia.gov/energyexplained/index.cfm?page=electricity_use). Accessed July 25th, 2014.

⁸ EIA, "Electricity Explained: Factors Affecting Electricity Prices" (http://www.eia.gov/energyexplained/index.cfm?page=electricity_factors_affecting_prices). Accessed July 25th, 2014.

Figure 5



Trends Since 1990

Figure 6

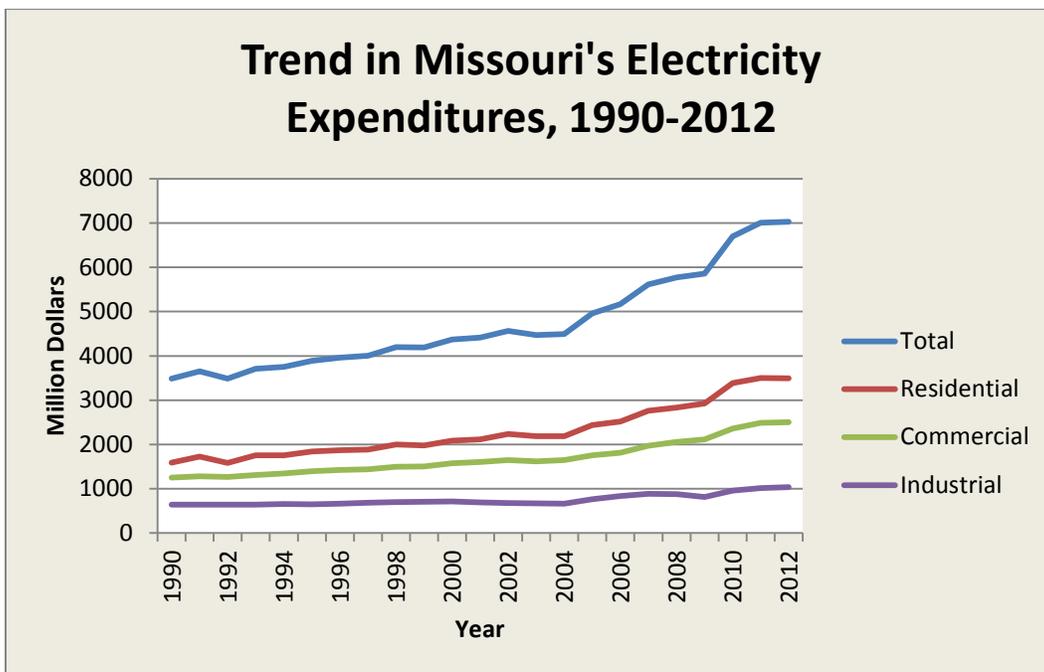
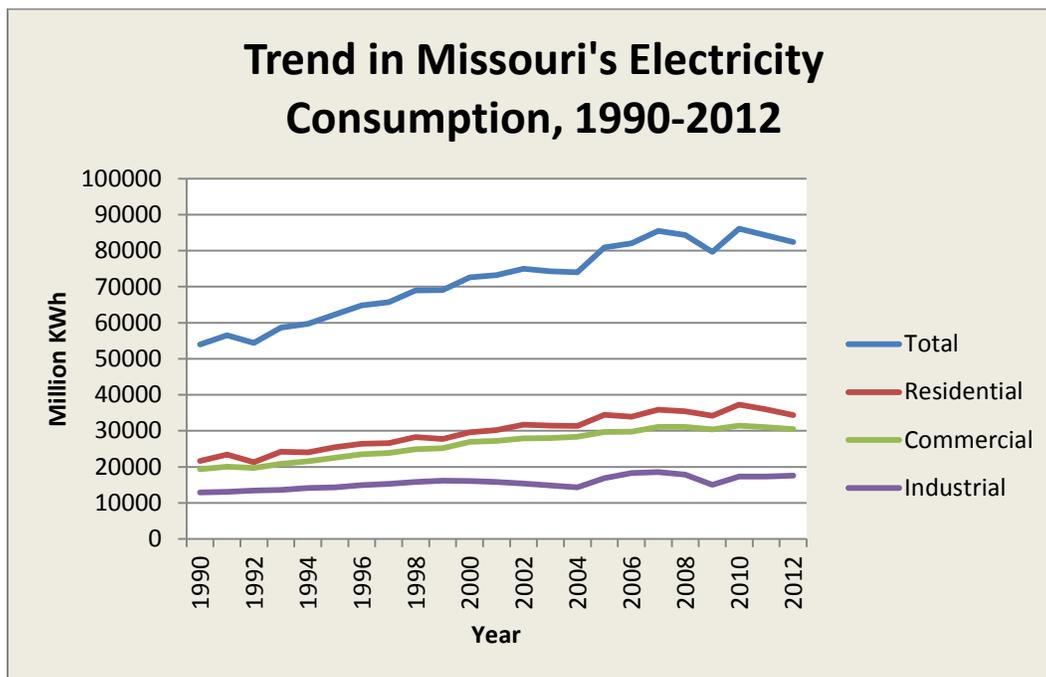


Figure 6 illustrates the trend in Missouri's electricity expenditures by sector since 1990. Total electricity expenditures increased by an annual average of 3.24 percent (as measured by the compound annual growth rate) between 1990 and 2012. Figure 7 illustrates electricity consumption by sector since 1990. Total consumption increased by an annual average of 1.95 percent (as measured by the compound annual growth rate).

Over the course of 1990-2012, electricity consumption fell between 1991-1992, 2002-2003, 2003-2004, 2007-2008, 2008-2009, 2010-2011, and 2011-2012. The largest increases over this time occurred between 2004-2005, 2009-2010, and 1992-1993.

Over this same time period, electricity expenditures decreased between 1991-1992, 1998-1999, and 2002-2003. The largest increases occurred between 2009-2010, 2004-2005, and 2006-2007.⁹

Figure 7



Figures 8 and 9 below show the trend in *per capita* total electricity expenditure and consumption in Missouri from 1990-2012.¹⁰

⁹ The statistics in the preceding three paragraphs are from author's calculations using the EIA data referenced above.

¹⁰ Population data for Missouri was obtained from the U.S. Census Bureau. Population data in non-census years are intercensal estimates.

Figure 8

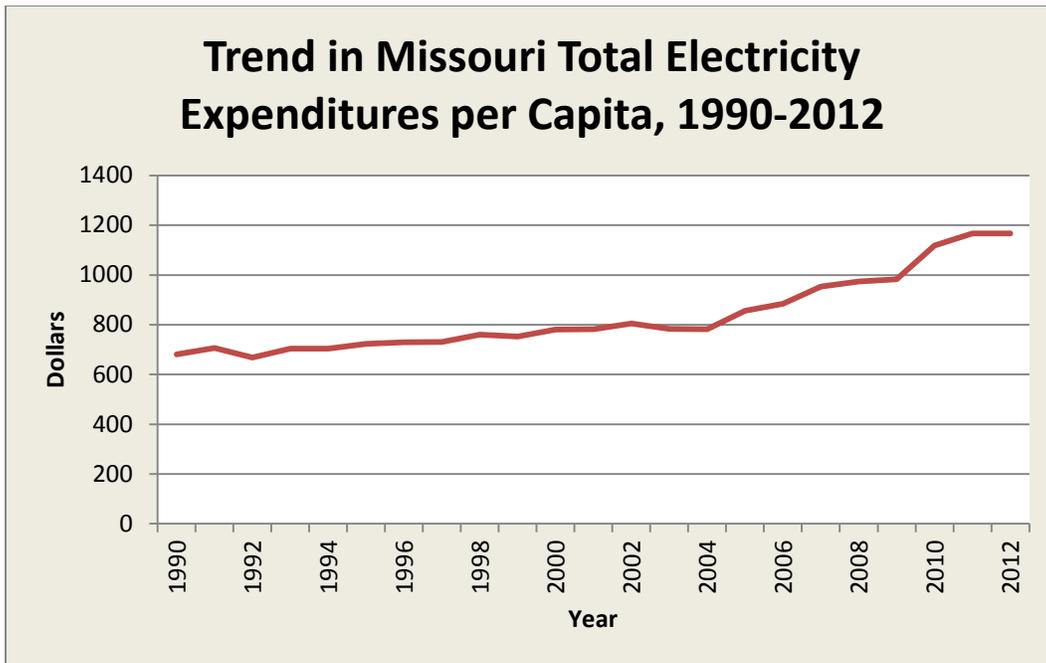
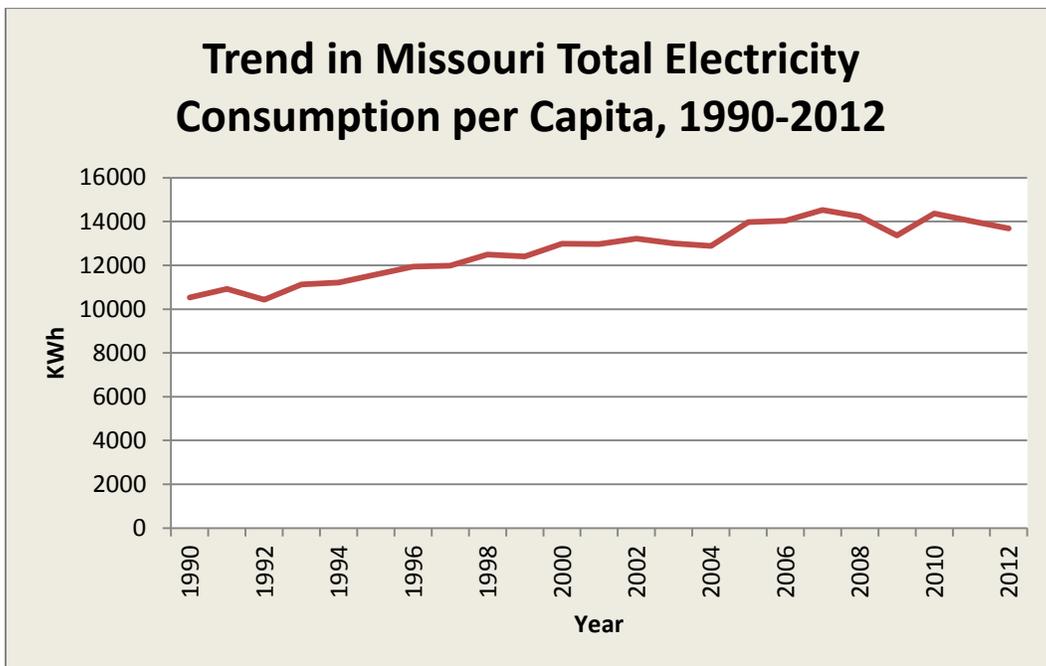


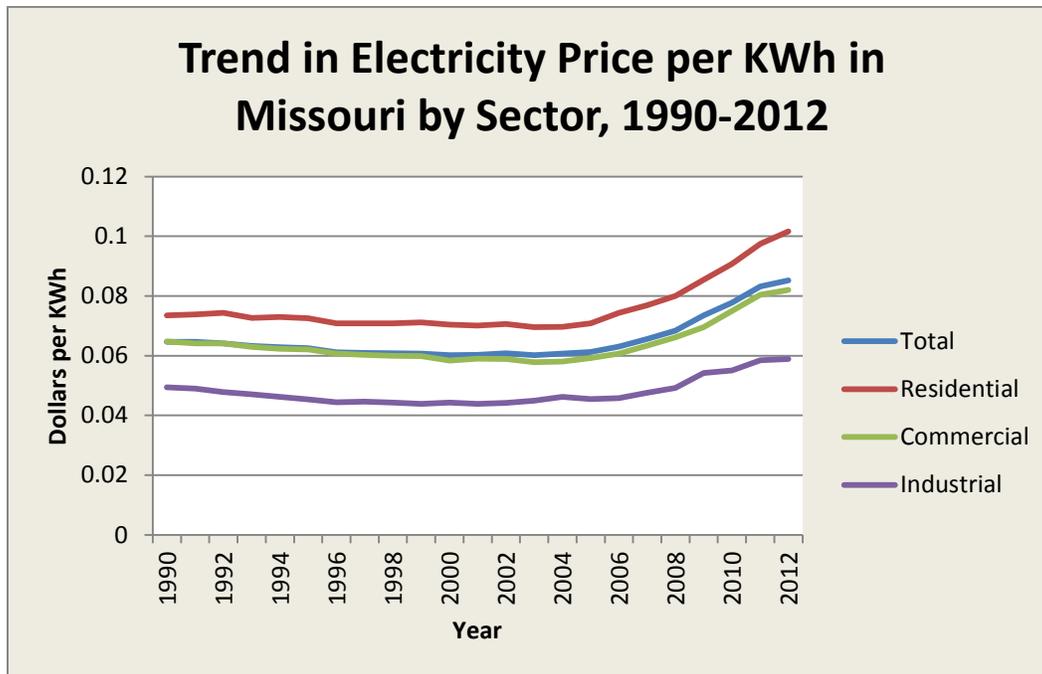
Figure 9



Per capita expenditures grew by an annual average of 2.48 percent and per capita consumption grew by an annual average of 1.20 percent (both measured by compound annual growth rate).¹¹

Figure 10 below shows the trend in electricity prices per KWh by sector over the course of 1990-2012.

Figure 10



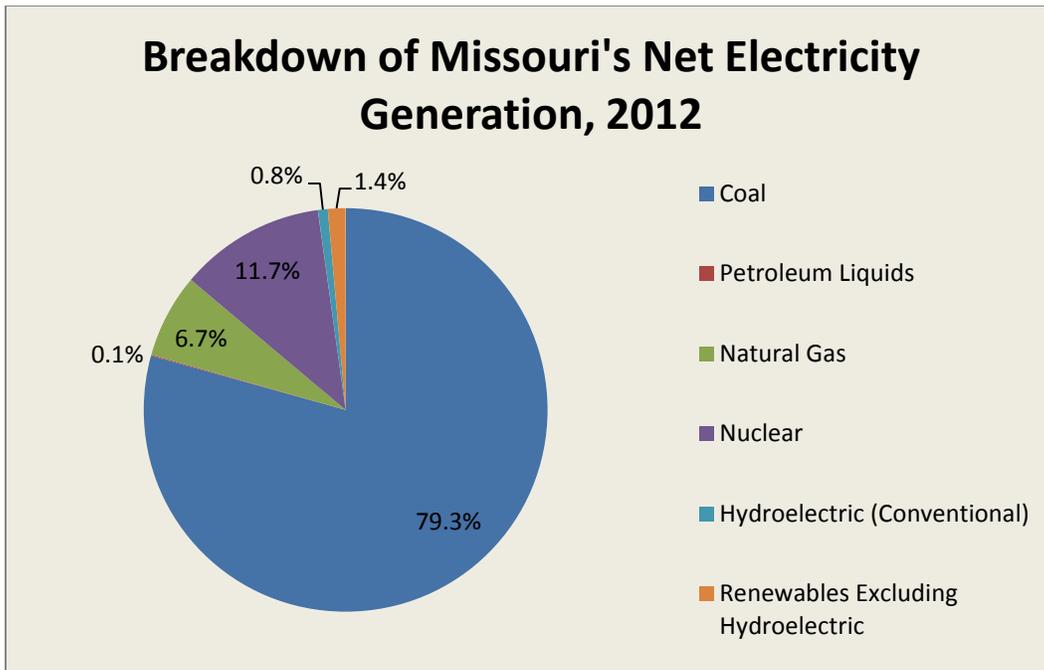
The average annual growth rate (as measured by the compound annual growth rate) in the price per KWh over the 1990-2012 period was 1.27 percent for electricity in aggregate, 1.48 percent for the residential sector, 1.08 percent for the commercial sector, and 0.80 percent for the industrial sector.¹²

Missouri’s electrical production comes primarily from fossil fuels, with almost 80 percent coming from coal alone (see figure 11). Missouri can expect continued increases in demand, variation in supply, and most likely, increases in electricity prices. The use of renewable energy sources from wind, biomass, and solar may provide an increasing share of the state’s electricity profile in the future.

¹¹ Author’s calculations.

¹² Author’s calculations.

Figure 11¹³



Data Sources

Statistics presented in this fact sheet are based on energy consumption, price, and expenditure data from the State Energy Data System of the U.S. Department of Energy's Energy Information Administration. Population data was obtained from the U.S. Census Bureau.

This document was last revised and updated on October 24th, 2014.

¹³ EIA, "Electric Power Monthly with Data for December 2013 (February 2014 release)" (<http://www.eia.gov/electricity/monthly/>). Accessed October 24th, 2014. Note that to view this particular release of the document, you must select February 2014 in the upper right-hand corner of this website. The 2012 annual data presented here was derived from the December 2012 YTD figures in this document.