WORLD RESOURCES INSTITUTE

MIDWEST MANUFACTURING SNAPSHOT: KANSAS

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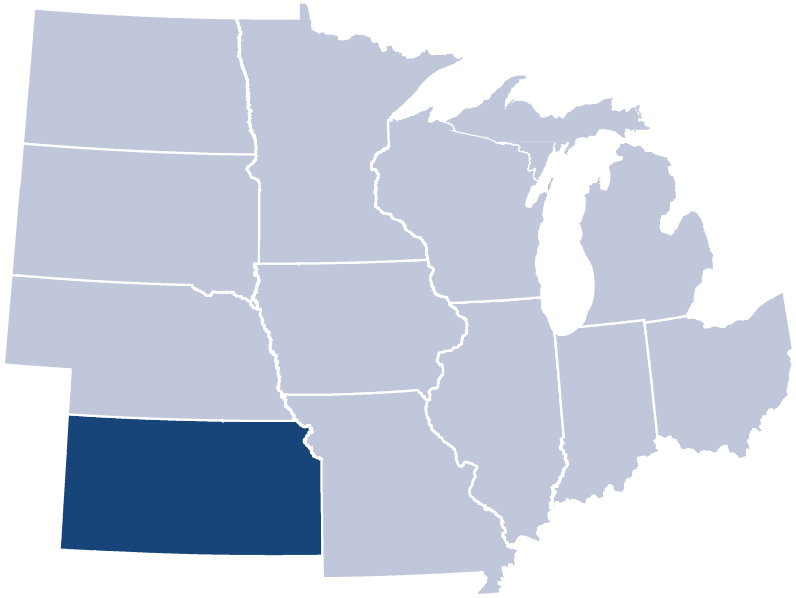

This state handout is an excerpt from the WRI working paper entitled "Midwest Manufacturing Snapshot: Energy Use and Efficiency Policies". The working paper presents comprehensive manufacturing energy-use and economic-activity data along with state-by-state policy summaries for the 10 member states of the Midwestern Governors Association (MGA).[1] For more information on Midwest region manufacturing, the methods used to derive the data, and policy background, please see the full working paper at: http://www.wri.org/publication/midwest-manufacturing-snapshot.

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1. Member states of the MGA are Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ohio, South Dakota, and Wisconsin.

KANSAS

In 2006 Kansas consumed 1.1 Quads of energy. Industry plays a central role in Kansas energy use, economic activity, and employment. Figure KS-1 shows the breakdown of statewide energy used for fuel and feedstock in 2006. Industry consumed more than one-third of total energy (including feedstocks) in Kansas—far more than any other end-use sector. Within industry, manufacturing accounted for 52% of Kansas industry energy use in the same year.

Petroleum and coal products and food manufacturing accounted for the largest share of Kansas manufacturing energy use in 2006, followed by nonmetallic minerals and chemicals.

Kansas has 134 MW of total installed CHP capacity[KS-1], which is equivalent to 1% of total installed electricity generation capacity, versus the national average of 8%. Within total CHP, the remaining technical potential for industry CHP in Kansas is estimated to be more than six times as large as currently installed industrial capacity (Hedman, 2010).

KS-1 This number is higher than the installed CHP capacity number in Figure 9 because it includes all CHP installations (i.e., industrial, commercial, and institutional).

Kansas manufacturing energy expenditures (shown by "cost of fuels & electricity" in Figure KS-2) followed the national trend of peaking in 2008. Between 2000 and 2010, the index of manufacturing energy costs rose more quickly than the value of shipments index (Figure KS-2). The average difference between these two series over the period is 16%. By 2010 Kansas manufacturing energy expenditures had increased by 51%, while the total value of shipments rose by 42%, relative to year 2000 levels. Over the same 10-year period, Kansas manufacturing employment dropped by 18%—from 204,000 to 167,000, compared to the national manufacturing employment decline of 37% over the same period (Figure 1).

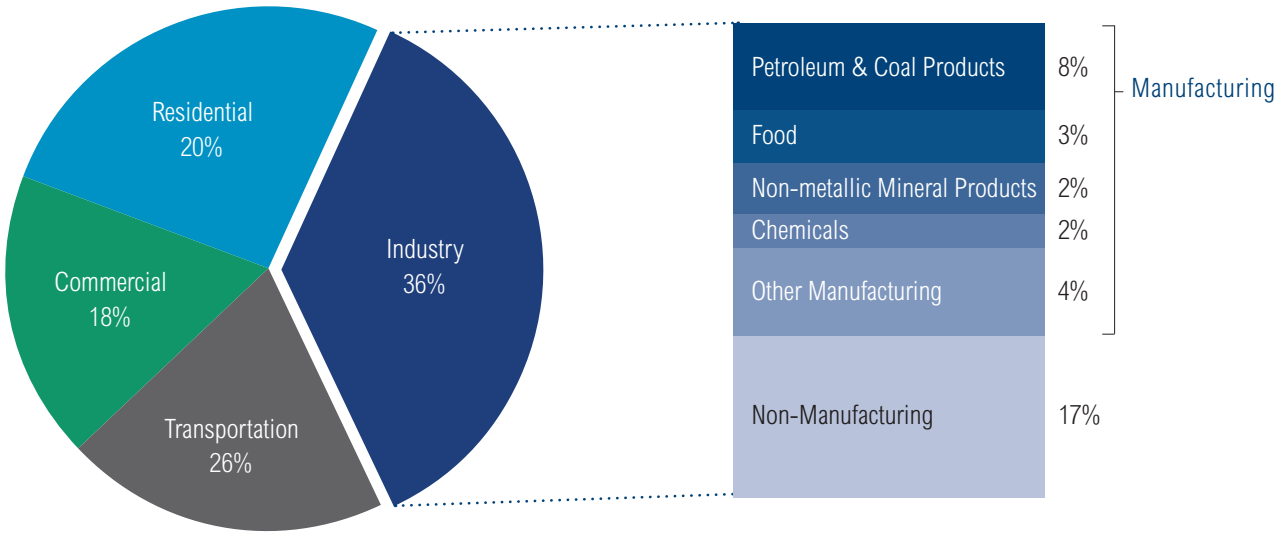
Table KS-1 | **Kansas Industry Delivered Energy Annual Average Prices (2010)**

	ELECTRICITY (cents/kWh)	NATURAL GAS ($/1,000 ft^3)	COAL[1] ($/short ton)
Kansas	6.23	5.50	25.88
Midwest average	6.19	6.66	33.00
U.S. average	6.77	5.49	44.29

SOURCE: U.S. Energy Information Administration; for details see Appendix.

1 Because the EIA withheld Kansas 2010 industry coal price data, electric utility coal price data are displayed in this table instead.

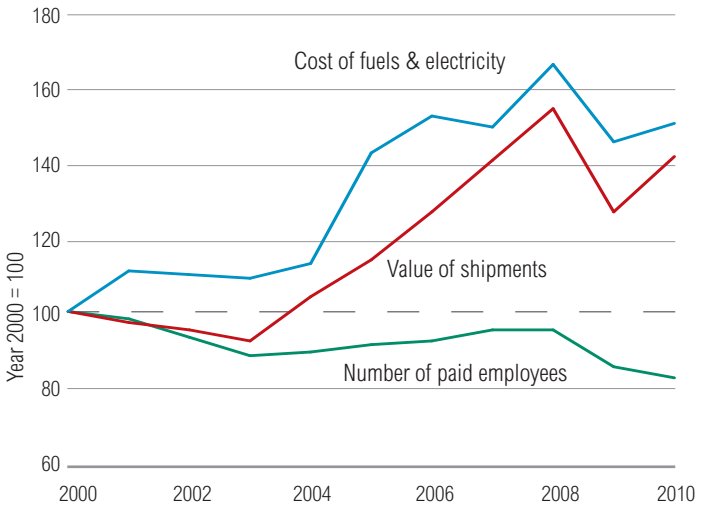
Figure KS-1 | **Kansas Total Energy Use, 2006**



Total Energy Use: 1.1 Quads

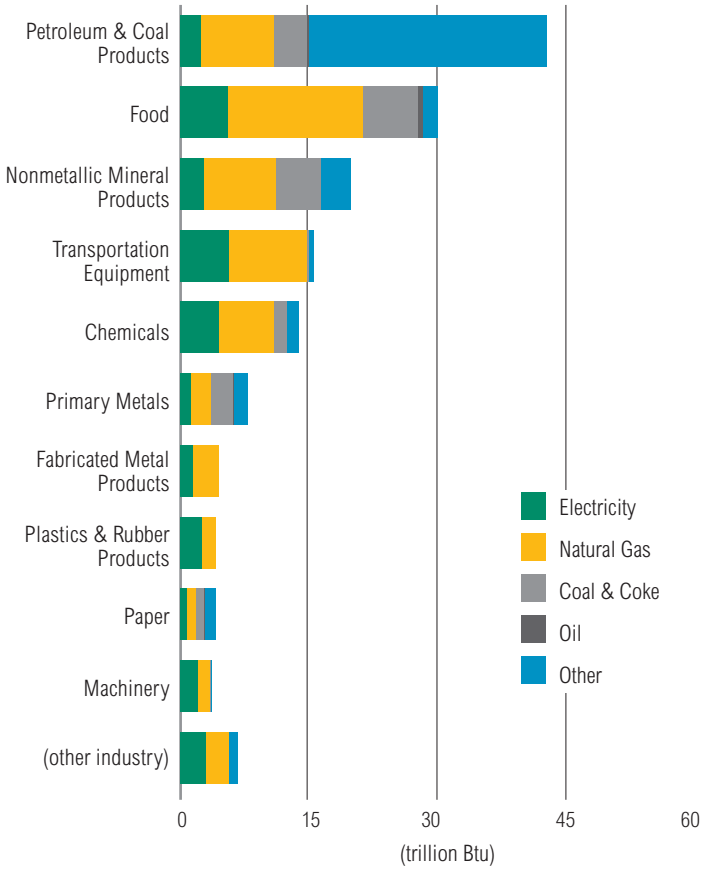
SOURCES: MECS; ASM; SEDS.

Figure KS-2 | **Index of Kansas Manufacturing Energy Cost, Value of Shipments, and Employment (2000-2010)**



SOURCE: ASM; BEA (employment)
NOTE: 2002 ASM values were linearly interpolated due to a gap in the published data.

Figure KS-3 | **Kansas Industry Fuel Use by Sector, 2006**



SOURCES: MECS; ASM.

Energy prices (Table KS-1) influence demand and end-use efficiency. Kansas has relatively cheap electricity and fuel. Reported coal prices were 42% lower than the national average, delivered electricity was 8% cheaper, and natural gas prices were equivalent to the national average in 2010. Prices vary by end user and time of use, but this snapshot of 2010 prices suggests that Kansas industry enjoys low energy prices.

In 2006 Kansas manufacturing consumed 150 trillion Btu[KS-2] of energy for fuel use. Figure KS-3 shows the breakdown of Kansas manufacturing fuel use by subsector (not including energy used as feedstocks). Petroleum and coal products and food manufacturing accounted for 48% of Kansas manufacturing fuel use in 2006.

Kansas does not require utilities to invest in energy efficiency programs, and its renewable portfolio standard does not explicitly include cogeneration and waste heat as eligible technologies. Several utilities offer incentives for commercial and industrial energy efficiency, and the state offers some incentives for cogeneration and waste heat utilization.

Petroleum and coal products and food manufacturing accounted for the largest share of Kansas manufacturing energy use in 2006, followed by nonmetallic minerals.

KS-2 For energy unit conversion, 1,000 trillion Btu is equivalent to 1 Quad of energy.

Table KS-2 | **Kansas Key Energy and Environmental Policies**

KANSAS	
REGULATORY ENVIRONMENT	
Renewable energy standard	The Kansas Renewable Portfolio Standard does not allow energy efficiency technologies to qualify for compliance (ACEEE; DSIRE).
Energy efficiency Resource standard	Kansas does not have an energy efficiency resource standard (DSIRE).
Emissions control programs	Kansas does not have output-based emission standards (ACEEE).
Alternative business models	The Kansas Corporation Commission will consider approving decoupling for electric and gas utilities, however no cases are currently in progress and none have been approved (ACEEE).
Grid access	In 2010, the Kansas Corporation Commission adopted interconnection standards for renewable energy generators up to 200 kW. Presumably these apply to CHP powered by an eligible renewable energy resource. The rules include IEEE and UL technical standards (ACEEE; DSIRE).
FINANCIAL AND TECHNICAL ASSISTANCE	
Grants, loans, or tax incentives	The Kansas Development Finance Authority is authorized to issue revenue bonds for waste heat utilization and cogeneration systems. Kansas also offers a property tax exemption and other tax incentives for these systems.[a] Efficiency Kansas offers energy efficiency loans of up to $30K for small businesses (DSIRE).
Technical assistance	The Kansas State University Pollution Prevention Institute provides environmental compliance and pollution prevention assistance to small businesses and also places interns with businesses to assist with pollution prevention.[b]
UTILITY PROGRAMS	
Customer EE programs, with cost-recovery	Kansas does not require utilities to offer customer energy efficiency programs, but the Kansas Commerce Commission has approved energy efficiency programs in a several cases (ACEEE).
EE as a resource	The Kansas Energy Council, a stakeholder advisory group, produced several annual energy plans that included energy efficiency and renewable energy resources (ACEEE). The Council was dissolved at the end of 2008.[c]

SOURCE: "ACEEE" refers to the American Council for an Energy Efficient Economy website: http://www.aceee.org/sector/state-policy; (February, 2012).). "DSIRE" refers to the Database of State Incentives for Renewables and Energy Efficiency website: http://www.dsireusa.org. (February, 2012).

a http://ks-kdoc.civicplus.com/index.aspx?NID=276. (February, 2012).

b http://www.sbeap.org/. (February, 2012).

c http://kec.kansas.gov/. (February, 2012).

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