

## Section 9.3: Commercial and Industrial Structures

### Topic/Issue Description

Electricity sales to commercial and industrial consumers in Kansas continue to grow, according to the latest data from the Energy Information Administration at the U.S. Department of Energy. The state's commercial sector consumed 12,786,614 Megawatthours (MWh) in 2001 and 14,786,349 MWh in 2006; the industrial sector's consumption grew from 10,569,144 MWh in 2001 to 11,462,282 MWh in 2006.<sup>1</sup>

Natural gas consumption in the commercial sector declined from 37,560 Mcf in 2001 to 27,461 Mcf in 2006. However, demand in the industrial sector for natural gas grew during the same interval, from 93,351 million cubic feet (Mcf) in 2001 to 103,870 Mcf in 2006.<sup>2</sup>

Throughout the commercial and industrial sector in Kansas, it is likely that there remain opportunities for the adoption of cost-effective energy conservation and efficiency measures. If energy costs continue trend upwards, it is also likely that Kansas businesses and industry will be increasingly interested in investing in such measures.

### Existing Policies and Programs

1. K.S.A. 66-1227, as amended by HB 2036, adopts the International Energy Conservation Code 2006 (IECC 2006) as the applicable energy efficiency standard for new commercial and industrial structures in Kansas.
2. The U.S. Department of Energy (DOE), through its Building Technologies Program, funds several initiatives to advance research and development of energy efficient buildings, improve building codes and appliance standards, and promote education. Energy Star, a joint program of the U.S. Environmental Protection Agency (EPA), is a voluntary labeling program designed to identify and promote energy-efficient products; the Energy Star label is now on major appliances, office equipment, lighting, and home electronics, and EPA has extended the label to cover new homes and commercial and industrial buildings. The Building Technologies Program also includes Rebuild America, and Zero Energy Buildings.
3. The DOE also administers the Industrial Technologies Program, which focuses on researching new methods, materials, and machinery to conserve energy as well as promoting best practices in industry.
4. The Leadership in Energy and Environmental Design (LEED) rating system evaluates the energy efficiency and overall "environmental friendliness" of buildings on a four-tier

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<sup>1</sup> U.S. Dept. of Energy, Energy Information Administration, 2007, State Historical Tables for 2006: [http://www.eia.doe.gov/cneaf/electricity/epa/sales\\_state.xls](http://www.eia.doe.gov/cneaf/electricity/epa/sales_state.xls) (accessed November 2007).

<sup>2</sup> U.S. Department of Energy, Energy Information Administration, 2007, Natural Gas Consumption by End Use tables: [http://tonto.eia.doe.gov/dnav/ng/ng\\_cons\\_sum\\_a\\_EPG0\\_vin\\_mmcfc\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_a_EPG0_vin_mmcfc_a.htm) (accessed November 2007).

scale: certified, silver, gold, and platinum. LEED is maintained by the U.S. Green Building Council (USGBC). Separate LEED evaluation standards are provided for existing buildings, new construction, major renovations, commercial interiors, core or shell buildings, homes, and neighborhoods. In order to receive a LEED rating, a building project must register with the USGBC and undergo an audit; achieving any of the four certification levels requires a minimum number of points and the inclusion of points from certain categories. Many construction and architecture firms now advertise as experts in achieving LEED accreditation, and firms will offer to build to LEED standards even if the customer does not wish to pay for the certification process. The USGBC now delegates certification to the Green Building Certification Institute (GBCI). Currently, LEED-based standards and incentives have been adopted by 90 U.S. municipalities and 24 states. Almost all standards are aimed at public buildings; however, a few municipalities are requiring some degree of LEED for all construction. Incentives for LEED attainment include reduced building and permitting fees and faster permit application turnaround times.<sup>3</sup>

5. The Green Globes System is an online assessment program for commercial buildings that was developed in Canada and introduced in the U.S. in 2004. Essentially, the Green Globes certification process is a self-administered interactive survey that rates and suggests design choices. At each stage of the design process, users are walked through a logical sequence of questions that guide their next steps and provide guidance for integrating important elements of sustainability. Third party verification is available through the Green Building Initiative (GBI).<sup>4</sup>

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<sup>3</sup> U.S. Green Building Council (USBC), 2007: <http://www.usgbc.org/> (accessed November 28, 2007)

<sup>4</sup> Green Building Initiative, 2007, Commercial—The Green Globes System: <http://www.thegbi.org/commercial> (accessed December 17, 2007).