

Section 10.1: Cars, Light Trucks

Topic/Issue Description

In 2006, personal vehicles, defined as cars and light trucks, consumed 16,796 trillion British thermal units (BTUs) worth of energy and accounted for 61 percent of energy consumption in the transportation sector.¹ Although average vehicle fuel economy standards have improved significantly since the early 1970's, energy consumption in the U.S. associated with personal vehicles has continued to grow because people are driving their vehicles more miles.²

Between 1980 and 1997, U.S. total Vehicle Miles Traveled (VMT) increased 63 percent, and was more than double what it was in 1970. Moreover, VMT growth has exceeded population growth and, between 1980 and 1997, was greater than the rate of U.S. economic growth.³ In the last decade, the rate of growth in VMT has slowed to 1.5 percent.⁴ In 2008, with the weakened global economy and higher gasoline prices during much of the year, VMT declined 4 percent from 2007.⁵ Nonetheless, according to the U.S. Department of Transportation, total VMT is expected to grow 60 percent by 2030.⁶

Total VMT in Kansas has increased consistent with the national average: every year the rate of VMT continues to increase. Factors such as greater work commutes and urban sprawl contribute to the state's VMT growth.⁷

This steady growth in VMT strains the existing roadway network and increases vehicle emissions and congestion, particularly in the urban areas. Strategies to reduce VMT are key to reducing the environmental impacts from emissions of carbon monoxide, nitrogen oxides, and hydrocarbons that produce ozone in the atmosphere, as well as carbon dioxide.

¹ EIA, 2008, Transportation Energy Data Book: Table 2.7: spreadsheet link from <http://cta.ornl.gov/data/chapter2.shtml> (accessed December 22, 2008).

² Energy Information Agency, June 2008, Annual Energy Review: Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates: <http://www.eia.doe.gov/emeu/aer/txt/stb0208.xls> (accessed December 22, 2008).

³ U.S. Department of Transportation, March 2006, Federal Highway Administration, Highway Statistics (Summary to 1995, and annual editions 1996 and 1997); linked to individual pages from <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm>.

⁴ Bureau of Transportation Statistics (BTS), May 2008, U.S. Highway Vehicle Miles Traveled: http://www.bts.gov/publications/white_house_economic_statistics_briefing_room/may_2008/html/highway_vehicle_miles_traveled_table.html (accessed December 19, 2008).

⁵ 4% is the average decline in monthly 2008 VMT totals compared to like-month 2007 VMT totals for the first 10 months of 2008; see Federal Highway Administration, December 2008, Traffic Volume Trends: <http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm> (accessed December 19, 2008).

⁶ U.S. Department of Transportation, January 2008, Transportation Vision for 2030: U.S. Population and Highway Vehicle Miles Traveled 2000-2030: http://www.rita.dot.gov/publications/transportation_vision_2030/html/figure_01.html (accessed December 19, 2008).

⁷ See Victoria Transport Policy Institute, December 2008, Generated Traffic and Induced Travel: <http://www.vtpi.org/gentraf.pdf> (accessed December 22, 2008).

Existing Policies and Programs

1. The Energy Policy Act of 2005 established federal income tax credits for the purchase of hybrid electric vehicles. The tax credit applies to vehicles purchased or placed in service on or after January 1, 2006. The amount of the credit for a given model varies, and the full credit diminishes once the manufacturer has sold 60,000 hybrid vehicles. According to the IRS, “consumers seeking the credit may want to buy early since the full credit is only available for a limited time.”⁸
2. The Energy Independence Act of 2007 sets a Renewable Fuel Standard (RFS) of 9 billion gallons in 2008, which increases to 36 billion gallons by 2022. Of the 36 billion gallons required by 2022, 21 billion must come from advanced biofuels, such as cellulosic ethanol. The Act also increases the Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon by model year 2020.
3. CAFE standards are regulated by the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA), and aims to reduce energy consumption by increasing the fuel economy of cars and light duty trucks by setting standards for the average fleet fuel economy.⁹
4. The U.S. Department of Energy (DOE) has a number of programs designed to increase energy efficiency within the transportation sector. The FreedomCAR and Fuel Initiative program works with the energy industry to develop and deploy advanced transportation technologies to reduce U.S. dependence on foreign oil reserves. The Clean Cities Program facilitates public-private partnerships to develop alternative-fueled vehicles and infrastructure in local communities. The Alternative Fuels Data Center website contains information on alternatively fueled vehicles locations for alternative-fuel fueling stations, and the Fueleconomy.gov web site provides tips and suggestions on reducing vehicle fuel consumption and information about tax credits for hybrids and other high fuel efficient vehicles.
5. The Kansas State Vanpool Program (K.S.A. 75-46a03) is a transportation program for state employees “to promote conservation of petroleum resources, reduce traffic and parking congestion, and diminish air pollution by facilitation the creation of self-supporting commuter vanpools in which state employees living and working in similar locations may ride to and from their places of employment.” The Secretary of Administration sets the passenger fee for each vanpool so that it is self-supporting. Currently, the program consists of 21 vehicles owned and registered by the state, transporting approximately 250 people daily.
6. Executive Directive 07-373, Energy Conservation and Management, directs the Kansas Department of Administration to ensure that state vehicles purchased in 2010 and beyond are at least 10% more efficient than 2007 average.

⁸ Internal Revenue Service, Hybrid Cars and Alternative Motor Vehicles: <http://www.irs.gov/newsroom/article/0,,id=157632,00.html> (updated November 22, 2006).

⁹ Congressional Research Service, December 2007, Energy Independence Act of 2007: A Summary of Major Provisions: <http://energy.senate.gov/public/ files/RL342941.pdf> (accessed December 19, 2008).

7. On August 18, 2008, Governor Sebelius announced the formation of the Transportation-Leveraging Investments in Kansas (T-LINK) task force to develop recommendations for a new strategic transportation approach in Kansas.
8. The Kansas Department of Transportation (KDOT) is funding a research venture by Amtrak into the possibility of connecting Amtrak's Southwest Chief and Heartland Flyer routes, providing Amtrak service between Kansas City and Oklahoma City. The study began in the summer of 2008 and is expected to be completed by the end of 2009. Additionally, KDOT has partnered with public and private researchers to investigate the potential of a system of Automated Small Vehicles Transports (ASVTs) to ease congestion near the Kansas Speedway in Wyandotte County. A similar system is currently being developed for England's Heathrow International Airport and scheduled to become operational in 2009.
9. The Kansas State Department of Education (KSDE), and the Kansas Department of Revenue (KDOR) established internal policies for telecommuting/teleworking in 2006.
10. The Kansas City Area Transit Authority (KCATA) operates 37 park-and-ride locations along various bus routes throughout Kansas City. Additionally, the University of Kansas operates a park-and-ride facility at the edge of campus in Lawrence to provide for connection to a campus circulator service and potentially as a transfer point for regular city service and for bus service between Johnson County and Lawrence.
11. California Governor Arnold Schwarzenegger and Colorado Governor Bill Ritter teamed up with The Alliance of Automobile Manufacturers—an automotive trade group representing General Motors, Toyota, Ford, and seven other automakers—to create the EcoDriving campaign. The campaign seeks to educate both individuals and state/local lawmakers on simple steps to reduce fuel consumption and carbon dioxide emissions.¹⁰

¹⁰ The Alliance of Automobile Manufacturers, 2008, EcoDriving: www.ecodrivingusa.com