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## Transportation and Land Use (TLU) Technical Work Group

### Summary List of Pending Priority Policy Options for Analysis

Policy No.	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total (2010–2025)			
TLU-1	Enforce Speed Limits	<i>Not Yet Quantified</i>					Pending
TLU-2	Support Stronger CAFE Standards and GHG Emission Regulations	<i>Not Yet Quantified</i>					Pending
TLU-3	Low-GHG Fuel Standard	<i>Not Yet Quantified</i>					Pending
TLU-4	Improve and Expand Transit	<i>Not Yet Quantified</i>					Pending
TLU-5	Van Pooling and Car Pooling	<i>Not Yet Quantified</i>					Pending
TLU-6	Improve and Increase Rail Freight Movements	<i>Not Yet Quantified</i>					Pending
TLU-7	Smart Growth	<i>Not Yet Quantified</i>					Pending
TLU-8	Telecommuting	<i>Not Yet Quantified</i>					Pending
TLU-9	Efficient Vehicle Incentives	<i>Not Yet Quantified</i>					Pending
TLU-10	Improved Passenger Rail Service	<i>Not Yet Quantified</i>					Pending
TLU-11	Improved Transportation System Management	<i>Not Yet Quantified</i>					Pending

CAFE = corporate average fuel economy; GHG = greenhouse gas; MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; \$/tCO<sub>2</sub>e = dollars per metric ton of carbon dioxide equivalent.

Note: The numbering used to denote the above pending priority policy options is for reference purposes only; it does not reflect prioritization among these important draft policy options.

## TLU-1. Enforce Speed Limits

### Policy Description

Kansas highways have been, currently are, and will most likely be for the foreseeable future the major transportation lifeline for personal and business purposes. As we look to the future and evaluate how to reduce emissions of greenhouse gases (GHGs) produced by internal combustion engines, one of the most cost-effective strategies is to step up enforcement of posted speed limits.

Kansas speed laws are set by the legislature taking many factors into consideration, including safety, efficiency, and convenience. Studies indicate vehicles have an optimum speed at which they operate most efficiently that correlates with the lowest GHG emissions. Vehicles operated at or below the speed limit generally will attain the lowest level of GHG emissions if they are operated sensibly.

The lead Kansas agency for speed enforcement is the Kansas Highway Patrol (KHP). The main purpose of speed enforcement is to save lives. Enforcement efforts are focused on areas of the highest crash occurrence. KHP evaluates crash causes and develops strategies to reduce the severity of and eliminate those crashes.

The focus of KHP, to reduce crashes, has the potential to place enforcement efforts in areas that may not necessarily correlate with as great an impact on reduction of GHG emissions. Enforcement efforts in the future should include emphasizing compliance with speed laws for the purpose of reducing GHG emissions. Considering the preceding factors, another area of focus that has the potential to help reduce GHGs is educating motorists about how to drive responsibly.

### Policy Design

Strict stepped-up enforcement of current speed laws has the potential to reduce GHG emissions in Kansas. Slowing down by even 5 miles per hour can make a difference. According to the U.S. Department of Energy, "each 5 MPH [miles per hour] you drive over 60 MPH can reduce your fuel economy by 7–8%."<sup>1</sup> The effectiveness of speed laws depends on the compliance of the motoring public and the enforcement capabilities of KHP and other enforcement agencies. The increased fines (i.e., higher fine amounts and/or higher volume of fine collection).resulting from the stepped-up enforcement have the potential to generate the funds necessary to maintain the program.

#### Goals:

- Determine what the average mph is in all areas of Kansas. Increase speed law enforcement to reduce the average speed of vehicles on the Kansas highways by 5 mph.

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<sup>1</sup> U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, U.S. Environmental Protection Agency, *Fuel Economy Guide*, 2009. Available at: <http://www.fueleconomy.gov/feg/FEG2009.pdf>.

- Develop programs to educate motorists on the importance of driving safely and responsibly to increase safety on the highways as well as reduce GHG emissions.

**Timing:** Immediate action that will have long-term effects as the motoring public changes driving habits.

**Parties Involved:** The recommendation for stepped-up enforcement of speed limits would be made to the KHP, which would determine how to facilitate the implementation of the increased enforcement, along with local chiefs of police and the Kansas Corporation Commission (KCC). The courts would need to adjudicate penalties uniformly to emphasize the importance of the program. The biggest benefit will come from the motorists who comply with the speed laws.

**Other:** None identified.

## TLU-2. Support Stronger CAFE Standards and GHG Emission Regulations

### Policy Description

Passenger vehicles and light-duty trucks contribute significantly to GHG emissions. Kansas could considerably reduce its emissions by advocating for the adoption of federal GHG emission standards that are at least as stringent as the California GHG emission standards for new vehicles.

Congress enacted federal corporate average fuel economy (CAFE) standards in the Energy Independence and Security Act of 2007 Energy Bill, which requires vehicle manufacturers to achieve an average fleet-wide fuel economy standard of 35 mpg for new light-duty vehicles sold in 2020 and beyond. The CAFE standards are aimed primarily at reducing the nation's fuel consumption, but they also reduce GHG emissions by increasing the average fuel economy of the vehicle fleet (less fuel consumed, less GHGs emitted). If Congress took additional action to further strengthen CAFE standards, it could enhance the GHG reduction benefits.

The federal Clean Air Act authorizes states to opt into the California Clean Cars Program with prior approval from the U.S. Environmental Protection Agency (EPA). To date, 12 states have adopted the program, and 4–6 more have expressed their intent to do so. The Clean Cars Program achieves greater GHG reductions compared with the current CAFE standards because it specifically regulates carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide emissions resulting directly from the operation of new vehicles, as well as CO<sub>2</sub> and hydrofluorocarbons (refrigerants) from the vehicles' air conditioning system. California has estimated that by 2020, the program will reduce GHG emissions in the 12 states that have adopted the standards by 59 million metric tons (MMt) of CO<sub>2</sub>—a 59% improvement over the what existing federal CAFE standards will achieve in 2020.

This policy option calls for EPA to adopt GHG emission standards under the Clean Air Act that are at least as stringent as those standards already developed by California. This option would avoid the need for two tiers of vehicles for sale in states that have and have not adopted the Clean Cars Program. As this option would be administered by EPA, Kansas could also avoid costs associated with implementing and enforcing state GHG emission standards.

This option would reduce transportation fuel consumption and, therefore, reduce the operating cost of the vehicles to consumers. Evidence suggests that these operational cost savings exceed any initial sticker price increases associated with the vehicle technology improvements needed to meet the standards. Evidence also suggests that the technology to implement all three options is widely available and in use both in the United States and other countries.

### Policy Design

**Goals:** Advocate for adoption of nationwide, federal GHG standards for new vehicles that are at least as stringent as the California standards

**Timing:** This would require EPA to adopt new regulations under the Clean Air Act after public review and comment. Therefore, the soonest that this could be implemented would probably be 2013.

**Parties Involved:** Vehicle manufacturers; car and truck dealers; consumers; various federal, state, and local agencies.

**Other:** This policy option may reduce transportation fuel consumption, which could reduce tax revenue for various transportation-related activities and projects.

### TLU-3. Low-GHG Fuel Standard

#### Policy Description

GHG reduction goals for the state of Kansas cannot be achieved without reducing emissions from transportation fuels. The first priority is to establish a low-GHG fuel standard, also known as a low-carbon fuel standard.

A low-carbon fuel standard requires providers, refiners, importers, and blenders to ensure the fuels they provide to the Kansas market meet an average declining standard of “carbon intensity.” To determine carbon intensity, the sum of GHG emissions associated with the production, transportation, and consumption of different fuels are examined to measure their “greenness.” Carbon intensity is being defined here as the relative amount of carbon emitted per unit of energy or fuels consumed.

The state of Kansas will provide initiatives to assist in the early development and deployment of the most promising low-carbon fuels to encourage and enhance private-sector and federal investment in alternative-fuel production and distribution.

Furthermore, as the state phases in low-carbon fuel standard, it must give immediate attention to second-priority options in this arena that establish and implement tailpipe standards and reductions in vehicle miles traveled (VMT). To meet the overall requirement of implementing a low-carbon fuel standard, Kansas must maximize benefits from both tailpipe standards and VMT reductions, given the current concerns about biofuels, unconventional fuels, and the technical capability to reflect land-use impacts in quantitative analysis. However, cellulosic ethanol and second-generation biodiesel (e.g., algae) have great promise at this time. Strong achievements in tailpipe standards and VMT reductions may be able to reduce the overall need for a 20% low-carbon fuel standard requirement.

#### Policy Design

**Goals:** Establish a low-carbon fuel standard for transportation fuels (gasoline and diesel) sold in Kansas that would reduce the carbon intensity of on-road vehicle fuels by at least 20% by 2020.

**Timing:** Phasing in low-carbon transportation fuels is ripe for Kansas. There is no technical or administrative reason to delay implementation. This initiative is designed to increase the use of alternative fuels by reducing the carbon intensity of on-road vehicle fuels by at least 20% by 2020, including electricity, biofuels, hydrogen, compressed natural gas (CNG) and other clean alternative options.

By 2012, the state or appropriate agency will:

- Initiate a low-carbon fuel standard for the private sector and for state fleets.
- Establish an average declining standard of carbon intensity.
- Establish legislation to set a low-carbon fuel standard for the private sector and for state fleets.

- Provide initiatives to assist in the early development and deployment of the most promising low-carbon fuels to encourage and enhance private-sector and federal investment in alternative-fuel production and distribution.

By 2018, the state or appropriate agency will:

- Phase in low-carbon transportation fuels to meet demand.
- Establish an initiative that is designed to increase the use of alternative fuels, including electricity, biofuels, hydrogen, CNG, and other clean alternative options.
- Develop a marketing program as an educational proponent of this policy and its implementation.

**Parties Involved:** Federal, state, and local government agencies, Kansas legislature, fuel producers, the business community, and others in the private sector.

**Other:** None identified.

## TLU-4. Improve and Expand Transit

### Policy Description

Transit reduces U.S. travel by an estimated 102.2 billion VMT each year, equal to 3.4% of the annual U.S. VMT in 2007. By reducing VMT, public transportation reduces energy use and associated GHG emissions. The total energy saved, less the energy used by public transportation and adding fuel savings from reduced congestion, is equivalent to 4.2 billion gallons of gasoline. The total effects reduce GHG emissions from automobile travel by 37 MMt. To achieve parallel CO<sub>2</sub> savings by planting new forests, one would have to plant a forest larger than the state of Indiana.<sup>2</sup>

Transit is not only essential to an ongoing effort to reduce VMT, which, in turn, reduces GHGs, it is also critical in supporting smart growth initiatives (as referenced in TLU-7). This policy option includes six components needed to ultimately reduce GHG emissions via transit: (1) Improved Transit Service (Frequency, Convenience, and Quality); (2) Expanded Transit Infrastructure (Light Rail, Bus, Bus Rapid Transit); (3) Transit Pricing Incentives; (4) Regional Multimodal Passenger Transportation Centers; (5) Transit Prioritization (Signal Prioritization, high-occupancy vehicle [HOV] Lanes); and (6) Increased Public Education. None of these components is implementable without establishing a diversified, long-term funding strategy.

### Policy Design

**Goals:** Double transit use in Kansas by 2020, and generate a consequential reduction in automobile travel by doing the following:

- Improve existing transit service by focusing on:
  - Frequency.
  - Convenience.
  - Quality.
  - Safety and security.
  - Reliability.
  - Coordination among service providers and municipalities.
- Expand transit service by focusing on:
  - Range of transit options, e.g., bus, bus rapid transit, light rail.
  - Connectivity within and between communities.
  - Local, community-based transit services.
  - Access to major destinations, including employment centers and activity centers.

<sup>2</sup> Bailey, Linda, P.L. Mokhtarian, and Andrew Little, *The Broader Connection between Public Transportation, Energy Conservation and Greenhouse Gas Reduction*, Produced by ICF International for the American Public Transportation Association, February 2008. Available at: [http://www.apta.com/research/info/online/documents/land\\_use.pdf](http://www.apta.com/research/info/online/documents/land_use.pdf).

- Supportive, compatible land uses.
- Develop transit pricing incentives, including subsidies for transit agencies and universities to reduce transit fares.
- Include multimodal terminals in centralized location(s) where various forms of passenger transportation, such as rail, bus, and bikeways, interconnect.
- Support transit prioritization, i.e., signal prioritization and HOV lanes.
- Increase public education regarding transit options.

**Timing:** 1–20+ years.

**Parties Involved:** Transit agencies, municipal planning organizations (MPOs), Kansas Department of Transportation (KDOT), local governments, the business community, and others.

**Other:** None identified.

## TLU-5. Van Pooling and Car Pooling

### Policy Description

Kansas will be a leader in ensuring the development of state facilities and funding programs that are designed to help meet GHG-reduction goals. An important strategy in reducing GHG emissions from transportation sources is reducing the per capita growth rate of VMT. By providing alternatives to single-occupant vehicles, the state can reduce the number of vehicle trips on interstates, state highways, and local roads and per capita VMT. Ridesharing alternatives, such as those outlined in this policy, have been found to be effective tools in reducing travel demand and increasing mobility, while reducing the growth rate of VMT. By utilizing ridesharing alternatives, the state will be able to take steps toward achieving these GHG reduction goals.

This policy includes the following ridesharing alternatives:

- Van pooling and car pooling,
- Park-and-ride lots,
- Car-sharing programs,
- Reserve parking spaces for HOV and car-sharing programs, and
- Free downtown parking for car poolers.

The following examples illustrate the impact that these alternatives have on GHG reduction goals. According to the Sound Policy Institute, it is estimated that if five new city van pools are created by 2012, each van pool will reduce CO<sub>2</sub> emissions by 40 tons, resulting in a 200-ton decrease in CO<sub>2</sub> emissions by 2012 (car pool, van pool, ridesharing).<sup>3</sup> Furthermore, the Institute estimates that by promoting online rideshare services, it is estimated that 350 new two-person car pools could be created by 2012, which could result in a 700-ton decrease in CO<sub>2</sub> emissions by 2012 (car pool, van pool, ridesharing). Similar effects could be attained with the implementation of this policy in Kansas. Currently within the state, there are several examples of how these VMT-reducing strategies have already begun to be implemented. For example, as of 2007, over 300 available spaces in park-and-ride lots provided by the Kansas Turnpike Authority (KTA) were dispersed among KTA's 21 exits.<sup>4</sup> KTA reports that the average daily use rate in these lots is 100%.<sup>5</sup> Also, there are more than two dozen formal and informal park-and-ride locations serving the Mid-America Regional Council's (MARC's) RideShare program, the JO, the Metro, and the K-10 Connector within the Kansas City metropolitan area. The state also operates a van

<sup>3</sup> Sound Policy Institute, "Carpool, Vanpool, Ridesharing" (n.d.). Retrieved March 4, 2009, from: <http://www.ups.edu/x19703.xml>.

<sup>4</sup> Paxson, S., Inventory of Kansas Park and Ride Facilities. Kansas Department of Transportation, 2007.

<sup>5</sup> Ibid.

pool program, enabled by Senate Bill 501 (2004), in which 300 state employees participated in as of 2007.<sup>6</sup> There are wait lists and standby riders on many of these van pool routes.

These are brief examples of how these ridesharing alternatives have been implemented in the state thus far. The state should continue to act as a facilitator of these beneficial strategies, while expanding the scope of projects and programs underway. In doing so, Kansas will position itself to influence environmentally and economically sustainable transportation practices. Achieving reductions in VMT through ridesharing alternatives will occur through:

- *Strategic Planning*—The state should explore the possibility of creating a strategic plan for locating and expanding state and local park-and-ride facilities. This strategic plan would also serve to outline the implementation of car pool/van pool programs in the public and private sectors. Funding mechanisms for such facilities and programs would be a necessary component of this plan.
- *Incentives and Funding Programs*—The state would explore alternative funding mechanisms that would best serve to implement these ridesharing alternatives. Additional funding would be required in order to implement the recommendations of the strategic plan. Funding would also be required to incentivize the programs and facilities as part of this policy. Incentives would be a key to implementation, as they increase the attractiveness of the programs and facilities to users, encourage local matching participation, and assist in the establishment of public-private partnerships.
- *Partnerships, Education, and Outreach*—The state would work toward implementation of these ridesharing alternatives through education and outreach campaigns, targeted marketing, and increased utilization of public-private partnerships.

## Policy Design

**Goals:** Possible goals of this policy include:

- Establish a funded statewide system for car pool and van pool operations, matching, and administration. This could be a statewide Web site for coordination of alternative transportation options similar to <http://www.rideshareonline.com/>.
- Add 1,000 parking spaces in local, state, and privately owned lots within the state.
- Increase the percentage of people who van pool/car pool to work by 300% throughout the state.
- Establish a reliable source of capital and operating maintenance funding for these ridesharing alternatives.
- Develop projects within the state highway system that would accommodate, as appropriate, the construction of park-and-ride facilities.
- Promote the implementation of van pool/car pool programs through education and outreach, marketing, and incentive programs.

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<sup>6</sup> Ibid.

- Foster partnerships between local and state agencies, nonprofit agencies, and employers in order to implement the alternatives found in this policy.
- Facilitate the development of Transportation Management Associations (TMAs) in and around the state. The following link provides further information on TMAs:  
<http://www.vtpi.org/tdm/tdm44.htm>.
- Develop a strategic master plan for implementing ridesharing alternatives in Kansas.

**Timing:** 1–30 years.

**Parties Involved:** All state agencies, local governments, KTA, MPOs, existing rideshare programs, local chambers of commerce, private employers, transit agencies, and nonprofit organizations.

**Other:** None identified.

## TLU-6. Improve and Increase Rail Freight Movements

### Policy Description

The movement of freight on Kansas's transportation system plays a critical role in the state's economy. Kansas also serves as a crossroad for the movement of freight across the country. In fact, an estimated 63% of all freight movement in Kansas is just passing through the state.<sup>7</sup>

Freight traffic in Kansas has grown significantly in the last 15 years, and is expected to grow by another 44% by 2030.<sup>8</sup> National freight forecasts estimate an 89% increase in tons of freight moved by 2035.<sup>9</sup> Meeting this increased demand while minimizing GHG emissions will require many actions.

This policy option focuses on infrastructure activities to support a greater increase in freight hauled on rail, while considering federal EPA emission reduction changes that are currently being implemented with over-the-road diesel truck engines. The use of rail to haul freight is more efficient from an energy consumption and GHG emission perspective. According to EPA data, freight railroads account for 2.6% of U.S. GHG emissions from transportation sources.<sup>10</sup> The Association of American Railroads (AAR) estimates that for every ton-mile of freight moved by rail instead of truck, two-thirds less GHG emissions are emitted.<sup>11</sup> AAR also estimates that if 10% of long-haul freight now moving by truck moved by rail instead, annual GHG emissions would fall by more than 12 million tons. KDOT and all other involved parties will support the most efficient movement of freight, while reducing GHG emissions. This also has the effect of delaying large investment needs to add capacity to the state highway system. With such large growth in freight forecast, it is unlikely that freight movements by truck could ever be reduced, but shifting more of the growth to rail would minimize the growth of GHG emissions. This effort will require activities within Kansas, within the Midwest, and nationally.

### Policy Design

**Goals:** Reduce overall GHG emissions generated by freight movement through a combination of the following actions:

**Timing:** By 2010, KDOT and other interested parties, will:

<sup>7</sup> Kansas Department of Transportation, *Kansas Statewide Freight Study Interim Report*, December 2008. Available at: [http://www.kansaslrtp.org/assets/kansaslrtp/documents/KS%20Freight%20Interim%20ReportFeb09\\_revfinal.pdf](http://www.kansaslrtp.org/assets/kansaslrtp/documents/KS%20Freight%20Interim%20ReportFeb09_revfinal.pdf).

<sup>8</sup> *Kansas Statewide Freight Study Interim Report*.

<sup>9</sup> American Association of State Highway and Transportation Officials, *Transportation Invest in our Future—America's Freight Challenge*, May 2007. Available at: <http://www.transportation1.org/tif3report/TIF3-1.pdf>.

<sup>10</sup> Association of American Railroads. *Freight Railroads Offer a Smart, Effective Way to Reduce Greenhouse Gas Emissions*, March 2009. Available at: <http://www.aar.org/~/media/AAR/BackgroundPapers/RRs%20and%20Greenhouse%20Gas%20Emissions%20%20March%202009.ashx>.

<sup>11</sup> Association of American Railroads, *Environment* section of their website (accessed April 2009). Available at: <http://www.aar.org/Environment/Environment.aspx>.

- Create a strategic plan that, through regional, statewide, and national planning activities, seeks to remove bottlenecks (both physical and operational) for the efficient movement of freight by all modes of transportation.
- Establish a Statewide Freight Advisory Committee of public and private parties to identify actions to support the efficient movement of freight and opportunities for intermodal freight movement.
- Support initiatives to encourage railroad capital investment to increase capacity and purchase of or retrofit to cleaner-burning locomotives (e.g., tax credits).
- Assist the identification of opportunities for increased intermodal freight movements (e.g., the BNSF Railway intermodal facility at Gardner, Kansas).
- Seek continued and increased legislative appropriations for the Rail Revolving Loan and Grant Program, which supports rail improvements, including the construction of rail spurs, to industry to encourage use of rail.
- Continue to utilize federal Congestion Mitigation and Air Quality (CMAQ) funding to support rail freight improvements.
- Seek opportunities to support truck stop electrification, including the utilization of federal CMAQ. and incentives (e.g., tax credits) to encourage installation of equipment.
- Provide incentives to trucking firms and truck owners to equip their vehicle(s) with devices that eliminate the need to idle, including battery-electric auxiliary power systems, vehicle battery systems, thermal energy storage systems, fueled auxiliary power systems, etc.
- Provide incentives to trucking firms and truck owners, including local and state municipalities, to invest in hybrid truck technology as it becomes available in class 7 and 8 trucks over the next 3 years and beyond.

**Parties Involved:** KDOT, local governments, Kansas legislature, regional and metropolitan planning organizations, Kansas Department of Commerce (KDOC), Kansas' Motor Truck Association, railroads, shippers, developers, U.S. Department of Transportation (DOT), and other state DOTs.

**Other:** None identified.

## TLU-7. Smart Growth

### Policy Description

The smart growth bundle includes policies that will align growth and development in Kansas with goals to reduce energy use and GHG emissions. Developing statewide policies to implement smart growth will have significant economic, social, and ecological benefits for communities across Kansas. This bundle of policies includes the following seven elements:

1. Transit-Oriented Development
2. Technical and Financial Support to Local Agencies
3. Smart Growth Planning, Modeling, and Tools
4. Targeted Open-Space Protection
5. Balance of Economic Development with Agriculture, Protection of Natural Resources, and Preservation of Rural Character
6. Bike and Pedestrian Infrastructure
7. Bicycle Transportation (e.g., Rails to Trails)

Smart growth policies that affect land use and transportation are proven to reduce VMT. These policies will enable more Kansans to conveniently travel via walking, biking, or transit, while also maintaining community character by preserving prime agricultural land and sensitive natural resources. Improving planning tools and software specifically designed for Kansas will enable accurate quantification of VMT reduction of various smart growth policies. The combination of these policies will ensure an impact that is greater than the sum of the individual parts.

Achieving reductions in VMT through smart growth policies will occur through several initiatives including:

- *Strategic Growth and Development*—Enabling local governments to improve community design by creating compact, walkable, mixed-use communities that are directed to locations that will result in reduced VMT is essential. The state will establish and maintain a land-use policy framework that ensures that local land-use planning satisfies both state goals and local interests. This framework will include strategies to achieve the following:
  - greater coordination among local governments and regional and state agencies;
  - focused redevelopment that ensures efficient use of land and existing infrastructure;
  - transit-oriented development;
  - integration of multimodal transportation options (biking, walking, and transit) into new and existing developments;
  - preservation of open space (including prime agricultural land and sensitive natural resources) and;
  - development that anticipates future needs, such as creating space for light rail along existing hike/bike trails, while preserving the existing recreational use.

- *Education and Technical Assistance*—Communities will be given flexibility and choices to achieve VMT reduction goals through their growth and development plans. Local governments and other stakeholders (e.g., engineers and architects) will be provided with tools and technical assistance, including model policies, ordinances, and incentives, for achieving VMT reductions through land-use and multimodal transportation options. Educational assistance will be provided to parties involved with the implementation of specific strategies (e.g., developers and private lending institutions), as well as to the general public in order to overcome resistance to accepting smart growth and encourage sustainable, healthy lifestyles that include biking, walking, and transit use.
- *Incentives and Funding Programs*—Existing incentives, funding, and loan programs administered by the state that are applicable to growth and development will be assessed and realigned to support the elements of this smart growth bundle of policies. Rating systems and prioritization of funding will be reviewed and improved to meet smart growth objectives. New programs will be developed and existing programs will be revised to fill in gaps where no program exists to meet needs that can't be achieved, or are far less likely to be achieved, without funding assistance (e.g., additional incentives and funding programs for redevelopment of brownfields, downtown revitalization, transit-oriented development, and open space protection).

## Policy Design

**Goals:** Achieve quantifiable VMT reduction of 10% per capita per decade.

- *Incorporate unique rural VMT reduction strategies*—Although rural areas of the state will have more limited opportunities to reduce reliance on the automobile, smart growth policies will still be implemented to reduce auto dependence within small communities and reduce the need to drive long distances for employment, retail goods, or services.
- *Integrate with transit policy whenever possible*—Land-use practices are a key component of reducing VMT with expanded and improved transit infrastructure. The efficient implementation of the smart growth bundle and transit policy (TLU-4) will be coordinated whenever applicable to achieve maximum reduction of GHGs.

### Timing:

- By 2020, the state or appropriate agency will require that communities with populations greater than 10,000 develop and implement plans to reduce VMT by 10% per capita from current levels.
- By 2030, the state or appropriate agency will require that communities reduce VMT by 20% of current levels.

**Parties Involved:** KDOT, state university system, local municipalities, MPOs and councils of government, transit providers, the business community, EPA, school districts, utility providers, nonprofit organizations (such as Kansas Land Trust), KDOC, and others.

**Other:** None identified.

## TLU-8. Telecommuting

### Policy Description

Telecommuting and other alternative work options are strongly encouraged to further enhance the reduction of GHG emission goals and to help protect ambient air quality in Kansas. This policy is designed to help managers and employees understand the telecommuting environment and other work alternatives, such as living near your work and a compressed work week. This policy should provide a general framework for such options to be encouraged in the private sector and required in government agencies. It does not attempt to address the special conditions and needs of all private-sector and government employees. When developing such a telecommuting and other work alternatives policy, private-sector companies and government agencies should consult with their legal counsel to determine if the language meets their specific needs.

This policy intends to allow the use of telecommuting and other work alternatives where they are viable management work options. It allows private-sector companies and government agencies to receive incentives for allowing their employees to work at home, on the road, or in a satellite location or for living near their work, for all or part of their regular work week. This policy recognizes the benefits of such work options for employees when both program and employee personal needs can be addressed. Participation is voluntary and subject to approval by appropriate management staff. Participation is not an employee right or benefit and may be discontinued at any time by either party. Work alternatives, such as telecommuting and a compressed work week, may not be appropriate to all areas of the private-sector workforce or of government agencies, especially those having limited staff.

### Policy Design

This policy provides the means for the government agencies to lead by example regarding alternative work options in order to reduce VMT and GHG emissions in Kansas. It further provides a model and template to encourage local area businesses to join this effort.

**Goals:** Establish voluntary work programs, support, and incentives for telecommuting and other alternative work options by 2015 that can be adopted by the private-sector workforce and government agencies.

**Timing:** By 2015, the state or appropriate government agency will:

- Design voluntary work program templates and agreements for employer accessibility covering work alternatives, such as telecommuting, compressed work week and live-near-your-work programs.
- Establish an initiative to obtain voluntary employer participants designed to encourage adoption of the Telecommuting and Other Alternative Work Options Policy.
- Develop and implement a marketing program as an educational proponent of this policy.

- Develop a statewide Web site to promote the implementation, education, and participation of employees and employers who adopt the Telecommuting and Other Alternative Work Options Policy.

By 2020, the state or appropriate government agency will:

- Establish neighborhood centers/telecommuting centers to provide work space for employees of different companies in one location.
- Establish legislation to award tax incentives for employer participation in the Telecommuting and Other Alternative Work Options Policy.

**Parties Involved:** All state agencies, local governments, private employers, and existing telecommuting and all other work alternative programs.

**Other:** None identified.

## TLU-9. Efficient Vehicle Incentives

### Policy Description

This policy is an initiative to further the goal of reducing GHG emissions in Kansas. It provides a strong promise of meeting applicable environmental compliance requirements and incorporating environmentally sustainable practices in all private and state government sectors. This policy also encourages the purchase and use of cleaner, more efficient vehicles through such incentives as tax credits, feebates, vehicle scrappage, procurement of efficient fleet vehicles, and retire or improve your ride programs. This policy provides a general framework for such options to be encouraged in the private sector and required in government agencies. Since the transportation sector contributes significantly to emissions of ozone-forming pollutants, air toxics and GHGs, it is necessary to act immediately to ensure energy efficiency contributes to energy security by reducing dependence on foreign oil and its contribution to GHGs in Kansas.

### Policy Design

This policy provides the means for government agencies to lead by example with Efficient Vehicle Incentives (EVIs) to enhance the reduction of GHG emission goals in Kansas. It further allows the public, private, and all other sectors to participate in these initiatives.

**Goals:** By 2015, establish EVI to include tax credits, feebates, vehicle scrappage, procurement of efficient fleet vehicles, retire or improve your ride programs, and all other alternatives, such as rebates and commute programs, that can be adopted by the private-sector workforce and required by government agencies to take advantage alike.

**Timing:** By 2015, the state or appropriate agency will:

- Establish initiatives that provide strong promises of meeting applicable environmental compliance requirements and incorporating environmentally sustainable practices in all private and state government sectors.
- Design incentives to include feebates, vehicle scrappage, procurement of efficient fleet vehicles, and retire or improve your ride programs.
- Establish auto rebate programs through the government that offer rebates from \$1,000 to \$2,000 to individuals who buy or sign a long-term lease (12 months or more) for a fuel-efficient vehicle that meets the required criteria according to the latest fuel-efficient guidelines.
- Establish an initiative called Cool Commute that awards points to employees who car pool or leave their cars at home and opt instead to walk, bike, or take public transportation to work.
- Establish an initiative designed to encourage employer participation in providing reward systems to all employees who either purchase a fuel-efficient vehicle or join Cool Commute or similar programs.

- Establish a Retire Your Ride voluntary initiative to encourage the accelerated retirement of older vehicles and, as such, operates without legislative authority but offers tax credits and a reward system.
- Develop a marketing program as an educational proponent of this policy and its implementation.
- Develop a statewide website to provide education about and participation in tax credits, feebates, vehicle scrappage, procurement of efficient fleet vehicles, retire or improve your ride programs, and other rebate and commute programs.

By 2015, the state or appropriate government agency will:

- Establish legislation or administrative orders that require all government agencies to adopt standards for procurement of efficient fleet vehicles.
- Establish legislation to provide (1) a \$1,000 Efficient Vehicle Tax Credit for vehicles meeting higher air quality and fuel efficiency standards, to include gas/electric hybrid vehicles; and (2) a tax credit for 50% of the cost for converting a vehicle to operate on propane, CNG, or electricity, with a \$2,500 cap on the credit.
- Establish legislation to allow for tax credits and reward systems.
- Establish specific feebates.
- Establish codes and rules for responsible vehicle recycling.

**Parties Involved:** State and local governments, Kansas legislature, auto industry, vehicle recycling industry, and others in the private sector.

**Other:** None identified.

## TLU-10. Improved Passenger Rail Service

### Policy Description

Improved passenger rail service can lead to increased rail ridership and can help reduce use of passenger vehicles as well as regional air travel. Increasing passenger rail ridership will reduce single-occupant vehicle travel, which reduces emissions of pollutants and GHGs:

“Traveling by public transportation is less carbon intensive than traveling in a single occupant vehicle. Partially or fully loaded rail coaches are more environmentally friendly than lower occupancy single vehicles. The average intercity passenger train produces 60 percent fewer CO<sub>2</sub> emissions per passenger-mile than the average auto and half the GHG emissions of an airplane.”<sup>12</sup>

Intercity train travel is attracting more attention in Kansas. Amtrak provides a two-way intercity passenger rail trip through Kansas each day. The Southwest Chief service from Los Angeles to Chicago has six stops in Kansas: Garden City, Dodge City, Hutchinson, Newton, Topeka, and Lawrence. The state’s Long-Range Transportation Planning process discovered growing interest among Kansans in a second intercity passenger rail line. That could happen if Amtrak’s Heartland Flyer service, which currently runs from Fort Worth, Texas, to Oklahoma City, Oklahoma, were extended to Wichita and Kansas City. The *Kansas Rail Feasibility Study* completed in 2000 concluded that this is the state’s most viable corridor for intercity passenger travel. The study projected the capital investment to establish that line could cost as much as \$220 million, assuming the passenger trains operate at 110 mph. By 2020, projected ridership could be as high as 240,000 people a year.<sup>13</sup>

In a new study, Amtrak is further examining a Kansas City to Fort Worth rail corridor. KDOT will monitor the issue and assess the interest of Kansans in such a service, as well as the costs and benefits associated with the service.

Kansas law prohibits the state from owning railroads or rolling stock. The Kansas legislature would have to approve any state involvement in funding operating expenses of passenger rail service.

### Policy Design

**Goals:** If feasible, establish expanded passenger rail service in Kansas that supplements existing long-distance service and provides connections to other modes of transportation.

**Timing:** By 2010, KDOT and other interested parties and agencies will:

<sup>12</sup> Passenger Rail Working Group, *Vision for the Future: U.S. Intercity Passenger Rail Network Through 2050*, prepared for the National Surface Transportation Policy and Revenue Study Commission, December 6, 2007. Available at: <http://www.dot.state.wi.us/projects/state/rail-vision-2050.htm>.

<sup>13</sup> Transportation economics & Management Systems, Inc., *Kansas Rail Feasibility Study: Executive Report*, prepared for the Kansas Department of Transportation, March 2000. Available at: <http://www.ksdot.org/burRail/rail/default.asp>.

- Develop and implement education, marketing, and promotion activities that support feasible passenger rail service.
- Identify and seek state funding for passenger rail capital and operating assistance.
- Seek federal funding to support passenger rail service.
- Develop a long-range passenger rail plan that identifies both short-term and long-term passenger rail service in Kansas, along with an implementation strategy.

By 2020, the KDOT and other interested parties and agencies will:

- Support implementation of regional rail service, if determined feasible, from Kansas City to Oklahoma City.
- Work with local governments through the planning process to link passenger rail service with other modes of transportation, including public transit, intercity bus service, bicycle, pedestrian, and aviation.

By 2030, KDOT, in coordination with other interested parties, will:

- Support full implementation of passenger rail service as envisioned in the passenger rail section of the Statewide Rail Plan.

**Parties Involved:** KDOT, Passenger Rail Advisory Committee (yet to be created), Kansas legislature, Amtrak, Midwest Interstate Passenger Rail Commission, local governments, regional and metropolitan planning organizations, KDOC, Kansas League of Municipalities, Kansas Chamber of Commerce, railroads, congressional delegation, and environmental organizations.

**Other:** None identified.

## TLU-11. Improved Transportation System Management

### Policy Description

Improved transportation system management can improve vehicle flow on the roadway system, which reduces fuel use and GHG emissions. Transportation management techniques fall into two general categories: (1) transportation system management (TSM) and (2) transportation demand management (TDM). TSM strategies are generally physical improvements in traffic flow, such as signalization, signal coordination, channelization, addition of turn lanes, ramp metering, contra-flow or reversible traffic lanes, and HOV lanes. TDM strategies are intended to reduce or shift the demand for travel, and include alternative work schedule programs, programs to encourage transit use or ridesharing, telecommunications, and congestion pricing. Other transportation management strategies include intelligent transportation system (ITS) techniques, such as motorist information systems and incident management programs that address non-recurrent congestion caused by accidents or disabled vehicles.<sup>14</sup> Several TDM strategies are included as separate transportation policy options and, therefore, are not discussed in detail under this policy option.

To achieve substantial GHG emission reductions through transportation management, strategies that maximize use of Kansas' existing infrastructure—such as signal coordination, ramp metering, and managed lanes—should be emphasized. Efforts to reduce system-wide demand through the coordination of land use and transportation planning, including smart growth initiatives (as referenced in TLU-7), should also be paired with TSM strategies.

Many routes throughout the state have congestion and travel demand issues. Though these issues are more common in metro areas, rural areas of the state also may experience forms of congestion. As TSM strategies to address these issues cannot be uniformly applied across the state, a regional approach to TSM would better serve the state as a whole. This approach would better enable metro areas to implement previously developed regional congestion management systems and regional ITS architecture plans, and to target regional employment centers and public transportation systems. It would also allow state and local governments to target issues at a more project-specific level especially in small urban and rural areas.

### Policy Design

**Goals:** Overall, the goal of this policy is to effectively implement a package of TSM strategies that relieve congestion and improve vehicle flow, thereby reducing GHG emissions. Specific goals of this TSM package are as follows:

- Support ramp metering to improve traffic flow in the Kansas City (KC) and Wichita regions.
- Develop region-wide “managed lane” strategies in the KC and Wichita regions.

<sup>14</sup> Mid-America Regional Council, "Transportation Management Element," in *Transportation Outlook 2030 Update*. Available at: [http://www.marc.org/outlook2030/update\\_chapter\\_9.pdf](http://www.marc.org/outlook2030/update_chapter_9.pdf).

- Support the KC SmartPort Trade Data Exchange and Federal Highway Administration Cross-Town Improvement projects as potential TSM strategies for freight transportation. Better synchronizing the flow of information about freight shipments with the actual physical movement of goods will result in less delay and idling emissions from the freight transportation sector.
- Analyze the feasibility of HOV lanes on congested freeway segments.
- Effectively implement congestion management plans in the KC and Wichita regions.
- Maintain and expand the MARC Operation Green Light, KC Scout, and Motorist Assist programs in the KC region.
- Work to develop performance measures and monitoring techniques associated with TSM strategies.

**Timing:** TSM strategies have a variety of implementation timeframes. Infrastructure improvements may take up to 20 years to implement.

- 2010: Administrative policies or actions that do not require new funding sources will begin.
- 2010: Policies that require state legislation will be considered during the legislative session.
- 2011–2030: Full implementation of TSM strategies.

**Parties Involved:** State government agencies, MPOs, local governments, KC Scout, Operation Green Light, local transit providers, private employers.

**Other:** None identified.