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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 (GHG) 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 Highway Patrol whose main goal is to enforce the speed laws of Kansas. The main purpose of speed law 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 emphasis on compliance with the current speed laws with the purpose of reducing GHG emissions. Considering the preceding factors, another area of focus that has the potential to help in the reduction of GHG is educating motorist how to drive responsibly.

### Policy Design

Strict stepped up enforcement of current speed laws has the potential to reduce GHG emissions by XXXXXXXX. The effectiveness of motorists observing current speed laws is dependent upon compliance of the motoring public and the enforcement capabilities of KHP and other enforcement agencies. The cost of the stepped up enforcement has the potential to generate the funds necessary maintain the program through the increased fines.

**Goals:** Determine what the average miles per hour are in all areas of Kansas. Increase speed law enforcement to reduce the average speed of vehicles on the Kansas highways by 5 mph.

Develop educational programs to educate motorist on the importance of driving safely and responsible 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 on Kansas highways would be made to the KHP. They would determine how to facilitate the

implementation of the increased enforcement. The courts would need to adjudicate penalties uniformly to emphasize the importance of the program. As compliance with the speed laws fall so do reductions in GHG emissions. The U.S. Department of Energy's Speed versus Fuel Economy study showed, "Slowing down even by 5 miles per hour will make a difference – the study showed an 8.2% fuel economy loss from 65-70 miles per hour."

The biggest benefit will come from those who follow the speed laws and there are always positive results.

**Other:** The solutions include actions such as carefully planning trips by combining errands, driving at the posted speed limits, driving defensively, avoiding jack rabbit starts and stops, maintaining proper tire pressure, use cruise control and make sure the vehicle is operating at its maximum efficiency by having a tune up and one of the easiest actions that motorists can take is avoiding unnecessary idling.

### **Implementation Mechanisms**

### **Related Policies/Programs in Place**

### **Type(s) of GHG Reductions**

### **Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

### **Key Uncertainties**

### **Additional Benefits and Costs**

### **Feasibility Issues**

### **Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

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

### Policy Description

Operation of passenger vehicles and light duty trucks are a significant contributor to GHG emissions. Kansas could significantly reduce its emissions by either 1) advocating for stronger federal fuel economy standards for new vehicles (known as CAFÉ standards), and/or 2) adopting the California GHG emission standards for new vehicles (known as the State Clean Cars Program), a regulatory option provided to states under the federal Clean Air Act, and/or 3) advocating for the adoption of federal GHG emission standards that are at least as stringent as the California GHG emission standards for new vehicles. These options are not necessarily mutually exclusive and could be pursued at the same time (to a point).

Congress enacted federal CAFÉ standards in the 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 CAFÉ 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 GHG emitted). If Congress took additional action to further strengthen CAFÉ standards, it could enhance the GHG reduction benefits.

The federal Clean Air Act authorizes states to opt into the California State Clean Cars Program with prior approval from the U.S. EPA. To date, 12 states have adopted the Program and 4 to 6 more have expressed intent to do so. The State Clean Cars Program achieves greater GHG reductions compared with the current CAFÉ standards because the Program specifically regulates carbon dioxide, methane and nitrogen oxide emissions resulting directly from the operation of new vehicles, as well as carbon dioxide and hydrofluorocarbons (refrigerants) from the vehicle's air conditioning system. California has estimated that their GHG emission standards will reduce GHG emissions in the 12 states that have adopted them by 59 million metric tons of carbon dioxide, a 59 percent improvement over the existing federal CAFÉ standards in 2020.

Option three would call for the U.S. EPA to adopt GHG emission standards under the Clean Air Act which should be at least as stringent as those standards already developed by California. This option would presumably result in similar GHG emission reductions in Kansas compared with option two, except it would be implemented at the federal level with a nation-wide scope and applicability. While it may take longer to implement, resulting in delayed emissions reductions, costs to vehicle manufacturers may be less because they could avoid the need for two tiers of vehicles, one for sale in states that have adopted the State Clean Cars Program and one for sale in states that have not. As this option would be administered by the U.S. EPA, Kansas could also avoid costs associated with implementing and enforcing state GHG emission standards.

All three policy options 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 U.S. and other countries.

## Policy Design

### Goals:

- 1) Advocate for passage of stronger federal CAFÉ standards that incentivize vehicle manufacturers to continuously improve fuel efficiency averages in their new vehicle fleets and that drive technological advances in fuel economy
- 2) Adopt the State Clean Cars Program GHG standards for new vehicles as authorized in the federal Clean Air Act
- 3) Advocate for adoption of nationwide, federal GHG standards for new vehicles that are at least as stringent as the California standards

**Timing:** Option 1 would require an act of Congress, so timing would be largely out of the state's control. Option 2 would require state adoption and subsequent federal EPA approval. Therefore, the soonest that Option 2 could be implemented would be with model year 2013 vehicles. It is not likely that the existing federal CAFÉ standards will produce significant GHG emission reductions from new vehicles until after 2013. Option 3 would require EPA to adopt new regulations under the Clean Air Act after public review and comment. Therefore, the soonest that Option 3 could be implemented would probably be 2013.

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

**Other:** Pending state legislation may prohibit KDHE from adopting air quality regulations that are stricter than federal law. It is not clear how such a prohibition would affect the state's ability to exercise the State Clean Cars Program option.

In 2007, EPA denied California's request under the Clean Air Act to implement the State Clean Cars Program, delaying some of the GHG emission benefits. Under the new administration, EPA has decided to reconsider their previous denial, and a decision is expected in the near future.

Both options may reduce transportation fuel consumption which could reduce revenue for various transportation-related activities and projects.

## Implementation Mechanisms

## Related Policies/Programs in Place

**Type(s) of GHG Reductions**

**Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

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

#### Policy Description

The greenhouse gas (GHG) reduction goals for the state of Kansas cannot be achieved without reducing emissions from transportation fuels. First priority is to establish a low carbon fuel standard. 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 replacing \_\_\_\_\_% (proposed 10%) of the fuel used by vehicles in Kansas with clean alternative fuels by 2020, including electricity, biofuels, hydrogen, CNG and other clean alternative options.

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 the fuel are examined in order to measure the “greenness” of different fuels. Carbon intensity is being defined here as the relative amount of carbon emitted per unit of energy or fuels consumed.

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

Furthermore, as we phase into a low carbon fuel standard, we must put our immediate attention to second priority options in this arena which establish and implement tailpipe standards and vehicle miles traveled (VMT) reductions. We must maximize benefits from both tailpipe standards and VMT reductions given the current concerns about biofuels, unconventional fuels and the technical capability to capture land use impacts in order to meet the overall requirement of implementing a low carbon fuel standard. 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 \_\_\_\_\_% (proposed 10%) low carbon fuel standard requirements.

#### Policy Design

**Goals:** Establish a low carbon fuel standard that replaces \_\_\_\_\_% (proposed 10%) of the fuel used by vehicles in Kansas with clean alternative fuels by 2020.

**Timing:** By 20\_\_\_\_, 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 early development and deployment of the most promising low carbon fuels to encourage and enhance private sector and federal investment into alternative fuel production and distribution.

By 20\_\_\_\_, the State or appropriate agency will:

- Phase in low carbon transportation fuels to meet demand.
- Establish an initiative which 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.

By 20\_\_\_\_, the State or appropriate agency will:

- Develop second priority options in this arena which establish and implement tailpipe standards and vehicle miles traveled (VMT) reductions.
- Set strong achievements in tailpipe standards and VMT reductions in order to meet the overall \_\_\_\_\_% (proposed 10%) low carbon fuel standard requirements.

**Parties Involved:**

**Other:**

**Implementation Mechanisms**

**Related Policies/Programs in Place**

**Type(s) of GHG Reductions**

**Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## TLU-4. Improve and Expand Transit

### Policy Description

Transit reduces U.S. travel by an estimated 102.2 billion vehicle miles traveled (VMT) each year. This is equal to 3.4 percent of the annual VMT in the U.S. in 2007. By reducing vehicle miles traveled, public transportation reduces energy use and associated greenhouse gas 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 greenhouse gas emissions from automobile travel by 37 million metric tons. To achieve parallel carbon dioxide (CO<sub>2</sub>) savings by planting new forests, one would have to plant a forest larger than the state of Indiana.<sup>1</sup>

Transit is not only essential to an ongoing effort to reduce VMT, which, in turn, reduces greenhouse gases, but it is also critical in supporting Smart Growth initiatives (as referenced in TLU-7). This policy option includes six components needed to ultimately reduce greenhouse gas 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, HOV Lanes), and 6) Increased Public Education. None of these components are implementable without establishing a diversified, long-term funding strategy.

### Policy Design

**Goals:** Generate greater use of public transit and a consequential reduction in automobile travel by doing the following *(Need a specific goal to measure here – double transit use by 2020 – triple by 2030?):*

- 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, i.e. 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.
  - Supportive, compatible land uses.
- Develop transit pricing incentives, including subsidies for transit agencies and universities to reduce transit fares.

<sup>1</sup> The Broader Connection between Public Transportation, Energy Conservation and Greenhouse Gas Reduction – February 2008, ICF International for American Public Transportation Association

- Include multimodal terminals in centralized location(s) where various forms of passenger transportation, such as rail, bus, and bikeways connect, to one another.
  - Support transit prioritization, i.e. signal prioritization and high-occupancy vehicle lanes.
- Increase public education regarding transit options.

**Timing:** 1 – 20+ years.

**Parties Involved:** Transit agencies, MPOs, KDOT, local governments, the business community, and others.

**Other:**

### Implementation Mechanisms

Long-term, sustainable funding sources are needed to implement the goals related to improved and increased transit service. Options include:

- Comment on the next Federal Transportation Authorization Bill r.e. the need for additional transit funding.
- Broaden state transportation funds to:
  - Provide additional funding for the operation of transit services and
  - Incentivize additional investment by local governments.

### Related Policies/Programs in Place

### Type(s) of GHG Reductions

### Estimated GHG Reductions and Net Costs or Cost Savings

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

### Key Uncertainties

### Additional Benefits and Costs

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## TLU-5. Van Pooling and Car Pooling

### Policy Description

The State of 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 growth rate of vehicle miles traveled per capita. By providing alternatives to single-occupant vehicles, the state can reduce the number of vehicle trips on interstates, state highways, and local roads and vehicle miles traveled per capita. Ridesharing alternatives, such as those outlined in this policy, have been found to be effective tools in reducing travel demand, increasing mobility, while reducing the growth rate in VMT. By utilizing ridesharing alternatives, the state will be able to take steps towards achieving these GHG-reduction goals.

This policy includes the following ridesharing alternatives:

1. Van Pooling and Car Pooling
2. Park-and-Ride-Lots
3. Car Sharing Programs
4. Reserve parking spaces for HOV and Car-Share Programs
5. Free Downtown Parking to Carpoolers

To illustrate the impact that these alternatives have on GHG-reduction goals, the following examples are offered. According to the Sound Policy Institute, it is estimated that if five new City vanpools are created by 2012, each vanpool will reduce CO<sub>2</sub> emissions by 40 tons, resulting in a 200 ton decrease in CO<sub>2</sub> emissions by 2012 (Carpool, Vanpool, Ridesharing). Furthermore, the Institute estimates that by promoting online rideshare services it is estimated that 350 new two-person carpools could be created by 2012 which could result in a 700 ton decrease in CO<sub>2</sub> emissions by 2012 (Carpool, Vanpool, 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, there were over 300 available spaces in park and ride lots provided by the Kansas Turnpike Authority (KTA) dispersed amongst their 21 exits (Paxson, 2007). The KTA reports that there is an average usage rate of 100% daily in these park and ride lots (Paxson, 2007). Also, there are more than two dozen formal and informal park and ride locations serving the Mid-America Regional Council's Rideshare program, the JO, the Metro, and K-10 Connector within the Kansas City Metro area. The state also operates a vanpool program, enabled by Senate Bill 501 (2004), in which 300 state employees participated in as of 2007 (Paxson, 2007). 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/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 assists in the establishment of public-private partnerships.

- **Partnerships, Education, and Outreach**

The state would work towards 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 statewide system for carpool and van pool operations, matching, and administration. This could be a statewide website for coordination of alternative transportation options similar to <http://www.rideshareonline.com/>.
- Addition of XXXX number of parking spaces around the state in local, state, and privately owned lots within the state.
- Establish funding mechanisms so that the state could fund up to X% of the gap between vanpool revenues and operating expenses in order to ensure that local governments and partnering agencies can meet the rapidly increasing demand for these programs.
- Increase percentage of people who van pool/car pool to work by X % throughout the state.
- To 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.
- Foster partnerships between local/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.vtppi.org/tdm/tdm44.htm>.
- Develop a strategic master plan for the implementation of Ridesharing alternatives for the State of Kansas.

**Timing:** 1-30 years

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

**Other:**

### Implementation Mechanisms

### Related Policies/Programs in Place

MARC Rideshare Program (in partnership with Lawrence-Douglas County and St. Joseph MPOs)-- <http://www.marc.org/rideshare/>

KCATA's AdVANtage Program--  
[http://www.kcata.org/rider\\_guide/advantage\\_vanpool\\_program/](http://www.kcata.org/rider_guide/advantage_vanpool_program/)

### Type(s) of GHG Reductions

NO<sub>x</sub>, VOC, CO, CO<sub>2</sub>, PM, hydrocarbons, other hazardous pollutants such as benzene

### Estimated GHG Reductions and Net Costs or Cost Savings

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

### Key Uncertainties

### Additional Benefits and Costs

## Feasibility Issues

## Status of Group Approval

## Level of Group Support

## Barriers to Consensus

### References:

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

Paxson, S. (2007). Inventory of Kansas Park and Ride Facilities. Kansas Department of Transportation.

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

### Policy Description

The movement of freight on Kansas's transportation system plays a critical role in our economy. Kansas also serves as a crossroad for the movement of freight across the country. In fact, it is estimated that 63 percent of all freight movement in Kansas is just passing through the state. There has been tremendous growth in freight traffic in Kansas in the last 15 years and expected to grow another 44 percent by 2030. National freight forecasts estimate an 89 percent increase in tons of freight by 2035 (AASHTO – Transportation Invest in our Future, America's Freight Challenge, May 2007). To meet this increased demand while minimizing greenhouse gas emissions (GHG) 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 emissions 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 just under two percent of U.S. GHG emissions from transportation sources. The American Association of Railroads (AAR) estimates that for every ton-mile of freight moved by rail instead of truck, two-thirds less GHG emissions are emitted. AAR also estimates that if 10 percent of long-haul freight now moving by truck moved by rail instead, annual GHG emissions would fall by more than 12 million tons. The Kansas Department of Transportation (DOT) 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 greenhouse gas emissions generated by freight movement through a combination of the following actions:

**Timing:** By 2010, the Kansas Department of Transportation and other interested parties, will:

- Through regional, statewide and national planning activities, seek 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 (e.g. tax credits).

- Assist the identification of opportunities for increased intermodal freight movements (e.g. the BNSF intermodal facility at Gardner, KS).
- Seek continued and increased legislative appropriations for the Rail Revolving Loan and Grant Program. This funding 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 Congestion Mitigation and Air Quality (CMAQ) funding. This could also include 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 three years and beyond.

**Parties Involved:** Kansas Department of Transportation, local governments, Kansas Legislature, regional/metropolitan planning organizations, Kansas Department of Commerce, Kansas's Motor Truck Association, railroads, shippers, developers, U.S. Department of Transportation, and other state DOTs.

**Other:**

### **Implementation Mechanisms**

### **Related Policies/Programs in Place**

### **Type(s) of GHG Reductions**

### **Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## 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 reduce greenhouse gas 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. Provide Technical and Financial Support to Local Agencies
3. Smart Growth Planning, Modeling, and Tools
4. Targeted Open-Space Projection
5. Balance 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 Vehicle Miles Traveled (VMT). These policies will enable more Kansans to conveniently travel on foot, by bicycle or public transit, or with shorter driving trips. 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 and direct growth 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.
- *Education and Technical Assistance* – Communities will be given flexibility and choices to achieve VMT reduction goals in their growth and development plans. Local governments and other stakeholders will be provided with tools and technical assistance that will include diverse strategies for communities to consider to reach VMT reduction goals. Educational assistance will be provided to parties involved with the implementation of specific strategies, as well as to the general public in order to

overcome resistance to accepting smart growth and encourage sustainable, healthy lifestyles that include biking and walking.

- *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.

## 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.

**Timing:** By 2020, the State or appropriate agency will require that communities reduce VMT by 10% of current levels.

By 2030, the State or appropriate agency will require that communities reduce VMT by 20% of current levels.

**Parties Involved:** Department of Natural Resources, Department of Transportation, State University System

**Other:**

## Implementation Mechanisms

## Related Policies/Programs in Place

## Type(s) of GHG Reductions

## Estimated GHG Reductions and Net Costs or Cost Savings

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## TLU-8. Telecommuting

### Policy Description

Telecommuting and other alternative work options are strongly encouraged to further enhance the reduction of greenhouse gas emission goals and to help protect ambient air quality in the state of 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 said 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 alternative work option policy, all private sector companies and government agencies should consult with its legal counsel to determine if the language meets their specific needs.

It is this policy's intent to allow the use of telecommuting and other work alternatives where it is a viable management work option. This policy allows private sector and government agencies to receive incentives for allowing their employees to work at home, on the road, in a satellite location or for living near their work, for all or part of their regular workweek. 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 the government agencies, especially those having limited staff.

### GENERAL FRAMEWORK:

Telecommuting Options: By definition, telecommuting is the partial or total substitution of telecommunications technology for the trip to and from the primary workplace, along with associated changes in policy, organization, management, and work structure. In other words, it is the act of moving work to the workers, rather than the workers to the work. Computers, cellular phones, fax, advanced communications links, and dial-up access have removed the physical barriers that required workers to be in their offices at all times.

There are a number of ways to establish a workplace for the remote employee:

- Work at home: Employees designate work space at home to conduct business.
- Satellite office: A remote office location usually placed within a concentration of employee residences, allowing employees from a single company to share office space and reduce the time and expense of traveling to and from the main office facility.

- Neighborhood work center/Telecommuting centers: Provides work space for employees of different companies in one location. Each company at a neighborhood work center is responsible for the administrative and technical requirements of its employees.
- Virtual office mobile worker: An airport, hotel, car, or other location can be a workplace for employees who use technology to link them to customers, the office, or suppliers.

Read more: "State of Minnesota Telecommuting Policy" -

<http://www.state.mn.us/portal/mn/jsp/content.do?contentid=536880859&contenttype=EDITORIAL&agency=OT>

Read more: "American Health Information Management Association" -

[http://library.ahima.org/xpedio/groups/public/documents/ahima/bok2\\_000130.hcsp?dDocName=bok2\\_000130](http://library.ahima.org/xpedio/groups/public/documents/ahima/bok2_000130.hcsp?dDocName=bok2_000130)

Compressed Workweek Options: may be the flexible work arrangement to choose as part of your work and family balance management strategy.

A compressed workweek has you working 40 hours in fewer than five days. The most widely used schedules are as follows:

- A 4-day work week, with 10 hour days.
- A 3-day work week, with 12-hour days.
- A 4-½ day work week, with 9 hours for four days and one 4-hour day.
- Another arrangement is called 5-4/9. This is a week of five nine-hour days followed by a week of four nine-hour days, and would give you a day off every other week.

Read more: "Compressed Work Week: Companies Offer Flexible Schedules To Accommodate Family Lifestyles" -

[http://smallhomebusiness.suite101.com/article.cfm/compressed\\_work\\_week#ixzz0ARsEhsWU](http://smallhomebusiness.suite101.com/article.cfm/compressed_work_week#ixzz0ARsEhsWU)

Read more: "Handbook on Alternative Work Schedules" -

[www.opm.gov/oca/aws/html/appendc.htm](http://www.opm.gov/oca/aws/html/appendc.htm)

Read more: "Flexible Work Alternatives - FWA Guidelines " -

<http://www.utc.flexwise.com/options.htm>

On the plus side, most employees appreciate having a full day off regularly, while still preserving full-time income. And, the commute to work may be outside the usual rush hour traffic times because of the extended work day, and thus less stressful.

Live Near Your Work Program: A program that provides a MINIMUM of \$2,000 cash grant to home buyers for a down payment and/or for settlement expenses. Participating partners: \$1,000 from employer, and \$1,000 from local government.

Employers and local government may contribute more than \$1,000 per grant.

The employee must:

- Contribute at least \$1,000 towards their home purchase.
- Purchase a home in the employer's LNYW designated neighborhood.
- Maintain the purchased home as the employee's primary residence.
- Employers may set additional eligibility requirements.
- Prospective homebuyers are encouraged to participate in homeownership counseling to further their knowledge of the home buying process.
- Eligible employees apply for LNYW cash grants through their employer by contacting their Human Resources or Benefits Coordinator.

Resource: "Live Near Your Work (LNYW) is a program of the Maryland Department of Housing and Community Development" -

<http://www.aboutwoodberry.com/webpages/livenrwork.html>

Read more: "Greater Circle Living – An Incentive to Live Near Work"-

<http://www.fairfaxrenaissance.org/gcl/index.html>

Read more: "Bridging the Gap Between Workplace and Home - Housing Programs and

Incentives for the Workforce"- <http://www.mwcog.org/commuter2/LNYW/housing-options.html>

## Policy Design

This policy provides the means for the government agencies to lead by example regarding alternative work options in order to enhance the reduction of greenhouse gas emission goals in the state of Kansas. This policy further provides a model and template to encourage the 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 20\_\_\_\_, the State or appropriate government agency will:

- Design voluntary work program templates and agreements for employer accessibility covering work alternatives such as telecommuting, compressed workweek 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 a marketing program as an educational proponent of this policy and its implementation.
- Develop a state-wide website to promote the implementation, education and participation of employees and employers who adopt the Telecommuting and Other Alternative Work Options Policy.

By 20\_\_\_\_, 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:**

**Other:**

**Implementation Mechanisms**

**Related Policies/Programs in Place**

**Type(s) of GHG Reductions**

**Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## TLU-9. Efficient Vehicle Incentives

### Policy Description

This policy is an initiative to further the goal of reducing greenhouse gas (GHG) emissions in the state of Kansas. This initiative provides a strong promise of meeting applicable environmental compliance requirements and to incorporate environmentally sustainable practices in all private and state government sectors; and to encourage the purchase and use of cleaner, more efficient vehicles through incentives to include tax credits, feebates, vehicle scrappage, procurement of efficient fleet vehicles and retire or improve your ride programs. This policy provides a general framework for said 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 toxic's and greenhouse gases, it is necessary to act immediately to ensure energy efficiency contributes to energy security by reducing dependence on foreign oil and its contribution to GHG's in our State.

### GENERAL FRAMEWORK:

#### Procurement:

This policy promotes procurement of clean, energy efficient vehicles which will beneficially impact air emissions, greenhouse gas emissions, and the promotion of new technologies. Local businesses and corporations should be encouraged and government agencies are required to lead by example with their procurement of their fleet by evaluating their current fleet needs in order to determine vehicle need, age, and efficiency, eliminate unnecessary vehicles and when replacement of existing vehicles is necessary, provide that replacement is cost effective and within resources, said replacement should be undertaken in accordance with the following proposed standards:

#### *Standards:*

- Evaluate to confirm that the appropriate number and type of vehicles are appropriately used for vehicle fuel efficiency in their fleets.
- Subcompact and compact sedans should be replaced with gasoline-electric hybrid technology vehicles.
- All other passenger vehicles shall meet a 30 miles per gallon or greater fuel efficiency (highway) rating and be certified as an ultra low emissions vehicle of cleaner.
- Appropriate agencies in consultation with the Department of Environmental Protection should evaluate heavier duty vehicles, such as trucks and sport utility vehicles, and recommend purchasing criteria for fuel efficiency and emissions standards.
- Establish fuel efficiency and emission standards.

- Promote the procurement of dedicated alternative fuel vehicles and dual-fuel vehicles and fueling infrastructures to support fuel efficient vehicles.
- Give preference to the purchase of vehicles with the lowest certified emissions.
- Ensure these practices are reflected in the administrative purchasing policies and procedures.
- Appropriate entity shall assist in identifying low emission and energy efficient vehicles.

Read more: "Considerations for discussion of 15 Climate Change Advisory Committee Recommendations"-

[http://leg.mt.gov/content/Committees/Interim/2007\\_2008/environmental\\_quality\\_council/climate\\_recs/tlu9.pdf](http://leg.mt.gov/content/Committees/Interim/2007_2008/environmental_quality_council/climate_recs/tlu9.pdf)

Read more: "AT&T Investments in Alternative-Fuel Vehicles for Corporate Fleet"-

[http://online.wsj.com/article/SB123676879729393589.html?mod=rss\\_whats\\_news\\_technology](http://online.wsj.com/article/SB123676879729393589.html?mod=rss_whats_news_technology)

#### Feebates:

Feebates are a market-based policy for encouraging GHG emission reductions from new passenger vehicles by levying fees on relatively high-emitting vehicles and refunding the revenue generated to purchasers of lower-emitting vehicles. Feebates serve as a complement to the other policies and standards by providing a continuing economic incentive for manufacturers to adopt technologies that reduce GHG emissions as well as a continuing economic incentive to consumers to purchase cleaner vehicles.

#### Feebates spread clean technologies:

"Feebates" are point-of-purchase incentives that charge a fee for less-efficient products and given a rebate for more-efficient ones. Best of all they create a snowball effect, systematically nudging the market toward cleaner designed vehicles, for example, vehicles more efficient than average come to the showroom carrying a rebate for their buyers. Those rebates are proportional to the efficiency of the vehicle, so superefficient vehicles come with whopping big rebates. As average efficiency increases, the feebates reset themselves around the new average, manufacturers raise their wares' efficiency to compete, and consumers set their sights still higher. Efficiency snowballs.

Just as other tax shifts leave government revenue unchanged, a feebate's fees pay for its rebates. And, like other tax shifts, feebates can be powerful: the cleaner the device, the bigger the rebate; the dirtier the device, the bigger the fee. The Clean Car Discount program creates a schedule of fees and rebates, collectively known as "feebates," based on the amount of global warming pollution different new vehicles produce.

A self-financing program should be implemented to provide one-time rebates for new passenger cars and trucks with low global warming pollution emissions, which are paid for by one-time point-of-purchase fees assessed on dirtier vehicles. Twenty-to-25 percent of cars and trucks,

representing all vehicle types, must be included in a "zero band" that would not qualify for rebates or surcharges, according to the proposed legislation.

Resources: <http://www.arb.ca.gov/research/econprog/feebates/proposal.pdf>  
[http://www.sightline.org/research/sust\\_toolkit/solutions/feebates](http://www.sightline.org/research/sust_toolkit/solutions/feebates)

Read more: "Feebates, rebates and gas guzzler taxes: a study for incentives for increased fuel economy"- [http://www-cta.ornl.gov/cta/Publications/Reports/FeebateEnergyPolicy\\_FINAL.pdf](http://www-cta.ornl.gov/cta/Publications/Reports/FeebateEnergyPolicy_FINAL.pdf)

### FeeBate Proposals:

FeeBates work best without discriminating as to which products, companies or technologies should get rebates. This respects consumer choice and lets market mechanisms sort out what works best in their area. Feebates are best applied locally, i.e. using the proceeds of fees collected in an area to support alternatives supplied in that area.

Fees are best calculated as a percentage of the price charged by the retailer to the consumer; as there are administration costs, It is proposed to initially start the fee at a minimum of 10%; especially when alternatives still have little marketshare, imposing a 10% fee on sales of popular items will create a huge pool of money to fund rebates from; rebates can then be high, say 50% or even more, to facilitate the swiftest shift to better alternatives. It is recommended that support for polluters be terminated and that support is instead given to clean and safe alternatives.

Specific FeeBates proposed:

- a fee of 10% on sales of new gasoline cars, with proceeds used to fund rebates on zero emission cars
- a fee of 10% on sales of fossil fuel, with proceeds used to fund rebates on purchase and installation of renewable energy facilities
- a fee of 10% on sales of building and construction work that used polluting concrete (i.e. that contributed to global warming), with rebates on purchase of clean concrete
- a fee of 10% on sales of fertilizers, with rebates on sales of agrichar

Resource: <http://samcarana.blogspot.com/>

**FeeBate.net** advocates a combination of fees and rebates to be implemented, in order to achieve specific market shifts.

*Effective:* The FeeBate is doubly effective in achieving a market shift; it works by charging a fee on something that is to be discouraged, while the proceeds are used to pay for rebates on better alternatives, thus helping these alternatives gain market share.

*Ideology-neutral:* The FeeBate platform can receive all-partisan support, because it doesn't favor one ideology over another. It merely accepts a problem on the basis of scientific evidence and it

deals with it by imposing a fee on what causes the problem and using the proceeds of the fee to give a rebate on better alternatives.

*Non-bureaucratic:* The FeeBate policy minimizes the risk of money being wasted on bureaucracy or favoritism. The FeeBate automatically fades itself out as the problem disappears; rebates are best paid out on a first-come-first-go basis, as this pool of money will decrease as the desired shift takes shape.

*Budget-neutral:* The FeeBate platform can be implemented without budget revisions; proceeds from fee go directly to fund rebates, while all funding for the rebates is generated by the fees.

*Adjustable:* The FeeBate can be reviewed, say, on an annual basis, to adjust the levels of fees and rebates, depending on how successful the shift is. If the shift to better alternatives doesn't take place fast enough, fees and rebates can be increased.

Resource: <http://FeeBate.net/>

#### Retire or Improve Your Ride Programs:

*Retire Your Ride* is a voluntary initiative to encourage the accelerated retirement of older vehicles and, as such, operates without legislative authority. Rewards offered by such an initiative vary from region to region, and may include a choice of options to encourage the use of environmentally friendly transportation, such as discounts on public transit passes, bicycles, memberships in car-sharing programs or \$cash. The following should be considered with all such programs:

- A 1995 or earlier model vehicle produces 19 times more air pollution than a 2004 or newer model. This is because emissions standards for personal vehicles are much tougher than they were in the past and the technology used in vehicles has improved. So the encouragement of every old vehicle model year 1995 or earlier should be retired through this program.
- A reward system should be developed so that individuals who own personal vehicles (i.e. cars, pick-up trucks, minivans, or sport-utility vehicles) of model year 1995 or earlier can trade their older vehicle for rewards. Eligible vehicles must be in running condition, and registered and insured for at least the last six months.
- Removing older vehicles from the road and replacing them with environmentally friendly transportation like a bicycle, or public transit will also help reduce greenhouse gases emissions and should be encouraged through tax credits. These tax credits should include credit for all public transit passes received by an individual in one calendar year on all individual tax returns.
- All programs should ensure that vehicles are recycled responsibly; thereby further preventing the release of harmful substances into the environment.

#### Responsible Vehicle Recycling:

*Retire Your Ride* programs should ensure that all old cars that are retired are recycled in an environmentally sound manner. Vehicle recyclers participating in the program are required to comply with all rules or codes of practice to ensure that high standards are met during the recycling process. If not handled properly, scrapped vehicles can damage the environment by releasing harmful substances such as oil, antifreeze, and mercury.

Many older vehicles on the road today contain mercury switches in hood and trunk courtesy lighting systems as well as in the tire balancing systems. Mercury is toxic and can accumulate in the tissue of living organisms. One mercury switch contains approximately 85 mg of mercury and this amount could contaminate all the water contained in 15 Olympic-size swimming pools. Removing mercury-containing parts from a vehicle before it is shredded and its metal components sent to steel mills for recycling will prevent the release of several tons of this toxic substance in the environment.

Retire Your Ride programs provide an opportunity to help Kansans recycle their older, higher polluting vehicles and make sustainable transportation choices, leading to reduced air pollution and greenhouse gas emissions. Kansans that own a vehicle of model year 1995 or earlier, and it is licensed, insured and in running condition, should be given the alternative to qualify for a reward if they retire their vehicle.

Resource: [http://www.ec.gc.ca/cleanair-airpur/Sustainable\\_Transportation/Vehicle\\_Scrappage\\_Program-WSF8711200-1\\_En.htm](http://www.ec.gc.ca/cleanair-airpur/Sustainable_Transportation/Vehicle_Scrappage_Program-WSF8711200-1_En.htm)

## Policy Design

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

**Goals:** Establish Efficient Vehicle Incentives (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 by 20\_\_\_\_ that can be adopted by the private sector workforce and required by government agencies to take advantage alike.

**Timing:** By 20\_\_\_\_, the State or appropriate agency will:

- Establish initiatives that provide strong promises of meeting applicable environmental compliance requirements and to incorporate 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 which offers rebates from \$1,000 to \$2,000 to individuals who buy or enter a long term lease (12 months or more) for a fuel efficient vehicle that meet the required criteria according to latest fuel efficient guidelines.

- Establish an initiative called the *Cool Commute program* that awards points to employees who carpool or leave their cars at home and opt instead to retire their ride voluntarily, walk, bike or take public transportation to work.
- Establish an initiative designed to encourage employer participation in providing reward systems to all employees that either purchase a fuel efficient vehicle or who join the *Cool Commute program* 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 state-wide website to network and promote the implementation, education and participation of tax credits, feebates, vehicle scrappage, procurement of efficient fleet vehicles, retire or improve your ride programs and all other rebate and commute programs.

By 20\_\_\_\_, 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 a strong fuel efficiency and emission standards for the state that enhances and supports TLU-2 Priority Policy Option.
- Establish legislation to provide a \$1,000 *Efficient Vehicle Tax Credit* for vehicles meeting higher air quality and fuel efficiency with standards to include gas/electric hybrid vehicles; and, a \_\_\_\_\_% of the cost for the conversion of a vehicle to operate on propane, compressed natural gas or electricity with a \$2,500 tax credit cap.
- Establish legislation to allow for tax credits and reward systems.
- Establish specific FeeBates.
- Establish codes and rules for *Responsible Vehicle Recycling*.

**Parties Involved:**

**Other:**

**Implementation Mechanisms**

**Related Policies/Programs in Place**

**Type(s) of GHG Reductions**

**Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## 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 will reduce single occupant vehicle travel which reduces emissions of pollutants and greenhouse gases (GHG). The following is from the report “Vision for the future

– U.S. intercity passenger rail network through 2050” prepared by the Passenger Rail Working Group:

*“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 CO2 emissions per passenger-mile than the average auto and half the GHG emissions of an airplane.”*

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. A KDOT-sponsored 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 much as 240,000 people a year.

Further study of a Kansas City to Fort Worth rail corridor is taking place as Amtrak is conducting a new study. 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 State 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, the Kansas Department of Transportation and other interested parties and agencies will:

- 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 Kansas Department of Transportation 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, the Kansas Department of Transportation, 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:** Kansas Department of Transportation, Passenger Rail Advisory Committee (yet to be created), Kansas Legislature, Amtrak, Midwest Interstate Passenger Rail Commission, local governments, and regional/metropolitan planning organizations, Kansas Department of Commerce, Kansas League of Municipalities, Kansas Chamber of Commerce, railroads, Congressional delegation and environmental organizations.

**Other:**

## Implementation Mechanisms

## Related Policies/Programs in Place

## Type(s) of GHG Reductions

## Estimated GHG Reductions and Net Costs or Cost Savings

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

Funding availability for the provision of additional passenger rail service is a significant uncertainty. Legislative approval for KDOT's role is also subject to political current.

**Additional Benefits and Costs**

Funding availability for the provision of additional passenger rail service is a significant uncertainty. Legislative approval for KDOT's role is also subject to political current.

**Feasibility Issues**

Additional passenger rail service is still in the study phase and as a result it is expected that additional feasibility issues will be assessed through future study and planning.

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**

## 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 greenhouse gas emissions. Transportation system management techniques fall into two general categories: 1) transportation system management (TSM) and, 2) transportation demand management (TDM). TSM strategies are generally physical improvements that improve traffic flow, such as signalization, signal coordination, channelization, addition of turn lanes, ramp metering, contra flow or reversible traffic lanes, and high-occupancy vehicle (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>2</sup>

For substantial reductions in greenhouse gas emissions to be achieved through transportation management, strategies which maximize use of our 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, should also be paired with TSM strategies. (as referenced in TLU-7),

Congestion and travel demand issues occur on many routes throughout the state. These issues are more commonly felt in metro areas; nevertheless, rural areas of the state also may experience forms of congestion as well. As such, the transportation system management techniques to address these issues cannot be uniformly applied across the state. As these transportation demand and transportation system issues differ between networks, it is felt that a regional approach to transportation system management 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 target regional employment centers, and public transportation systems. This approach 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 transportation system management techniques which relieve congestion and improve vehicle flow; thereby reducing greenhouse gas emissions. Specific goals of this package are as follows:

<sup>2</sup> Transportation Management Element of Transportation Outlook 2030 Update:  
[http://www.marc.org/outlook2030/update\\_chapter\\_9.pdf](http://www.marc.org/outlook2030/update_chapter_9.pdf)

- Utilize TSM strategies to reduce GHG emissions by X% by 2020 (perhaps 2030) in the most congested corridors in both of Kansas's largest metro areas-Kansas City and Wichita.
- Support ramp metering to improve traffic flow in Kansas City and Wichita.
- Develop region-wide "managed lane" strategies in KC and Wichita.
- Support the KC SmartPort Trade Data Exchange and FHWA 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.

**Timing:** Transportation Management Strategies have a variety of implementation timeframes. Some strategies such as telecommuting and carpool/vanpool programs can start more immediately while others such as 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.

**Parties Involved:** State government agencies, MPOs, local governments, KCScout, Operation Greenlight program at MARC, local transit providers, private employers

**Other:**

### Implementation Mechanisms

- Explore alternative funding mechanisms and innovative financing techniques in order to assist in implementation of TSM strategies in metro areas and statewide.
- Work to develop performance measures and monitoring techniques associated with the implemented TSM strategies.
- Encourage public and private partnerships to implement work-based TSM Strategies such as telecommuting and ridesharing programs.
- Effectively implement the Congestion Management Plan in both the Kansas City and Wichita Metro areas.
- Expand the implementation of the Operation Green Light program in the Kansas City Metro Area.

### Related Policies/Programs in Place

**Type(s) of GHG Reductions**

NO<sub>x</sub>, VOC, CO, CO<sub>2</sub>, PM, hydrocarbons, other hazardous pollutants such as benzene

**Estimated GHG Reductions and Net Costs or Cost Savings**

**Data Sources:**

**Quantification Methods:**

**Key Assumptions:**

**Key Uncertainties**

**Additional Benefits and Costs**

**Feasibility Issues**

**Status of Group Approval**

**Level of Group Support**

**Barriers to Consensus**