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Transportation and Land Use Efficiency Subcommittee

Status Summary of Draft Straw Proposals

Draft Option #	Draft Policy Option Name	Straw Proposal Liaison (CCS)	Straw Proposal Volunteers	Status
TLU-1	Smart Growth Bundle	Bill Cowart	Stephanie Weisenbach Neil Volmer Stuart Anderson Mayor Frank Cownie	<i>Draft In Progress</i> (Discuss items 2.1.4 and 2.1.5, Timing and Parties Involved)
TLU-2	Light Duty Vehicle Fuel Efficiency Incentives	Lewison Lem	Bruce Anderson Senator Hogg	Draft Completed (Combined with 10)
TLU-3	GHG Impacts for State and Local Capital Funding	Bill Cowart	Stephanie Weisenbach Neil Volmer Stuart Anderson Mayor Frank Cownie Bob Miklo	Draft Completed (Discuss Parties Involved)
TLU-4	Expand Transit Infrastructure	Bill Cowart	Stephanie Weisenbach Neil Volmer Stuart Anderson Mayor Frank Cownie	Draft Completed (Discuss Timing, Parties Involved)
TLU-5	Support Passenger Rail Service in Iowa	Bill Cowart	Scott Cirksena Stephanie Weisenbach Iowa DOT Tammy Nicholson Kevin Brubaker	Draft Completed
TLU-6	Adopt Best Workplaces for Commuters in	Tiffany Batac	IDOT	Draft Completed

Draft Option #	Draft Policy Option Name	Straw Proposal Liaison (CCS)	Straw Proposal Volunteers	Status
	Iowa			
TLU-7	Fuel Efficient Operations for Light Duty Vehicles	Tiffany Batac	Bruce Anderson Senator Hogg	Two Drafts Completed for Discussion (7.1 and 7.2)
TLU-8	Fuel Strategies	Lewison Lem	Larry Roehl John Maynes Jeff Hove (Petroleum Marketers and Convenience Stores of Iowa (PMCI) Harold Hommes (Iowa Department of Agriculture & Land Stewardship)	<i>Draft Pending</i> (Discuss Biodiesel and Fuel Strategies as drafted by Des Moines Staff)
TLU-9	Freight Strategies (Truck and Rail)	Bill Cowart	Scott Cirksena Iowa DOT	Draft Completed
TLU-10	New Vehicle Standards (Tailpipe GHG and Fuel Economy – FOR DISCUSSION)	Lewison Lem	Bruce Anderson Senator Hogg	Draft Completed (Combined with 2)

TLU-1 Smart Growth Bundle

Policy Description:

Downtown revitalization

Revitalizing existing downtown areas for businesses and residents can produce a number of positive outcomes. These positive outcomes include public finances (re-using existing infrastructure and increasing property values), a better quality of life (centralizing entertainment, retail, and other cultural locations can provide the critical mass for success) and environmental improvement (reducing VMT for commuters and providing sufficient density for walking and transit operations provide two major means of reducing greenhouse gas emissions). In addition, bringing new and expanded uses into existing downtowns promotes the reuse of the existing buildings while providing an economically viable alternative to developing at the far edges of cities and suburbs where “greenfields” are often located.

This priority can affect the smaller towns in Iowa as well as the larger cities. Des Moines, for example, has had a policy focusing on business development in the downtown. In 2002, the City expanded that policy by adopting a goal to bring housing into the downtown to fill commercial building spaces that were underused and vacant; these spaces were structurally sound but functionally obsolete by current business standards. Since 2002, over 1,700 housing units have been added in the downtown by rehabbing numerous former office and warehouse buildings and constructing on infill properties. Adding over 3,000 new residents to the downtown has generated demand for additional retail and service uses which uses additional vacant and underused space. Des Moines, by advocating a diversification of its downtown uses, is getting a better return on its “investment” while reducing adverse environmental effects.

Brownfield redevelopment

Brownfields are generally defined as property on which industrial and commercial facilities were located and expansion or redevelopment is complicated by environmental contaminations. Greyfields are generally defined as economically obsolete or underutilized real estate assets/land located near existing development or infrastructure and served by community services like transit and libraries

Re-using previously developed property is a key factor in downtown revitalization by providing new areas for residential, commercial, or mixed-use development. However, re-using property is often difficult due to real problems such as significant surface and subsurface contamination, multiple private ownerships and economic viability (due to additional costs of demolition and

remediation) as well as market-perceived issues such as fear of being the pioneer project and unknown marketability.

From a public perspective, re-use and infill development is positive; the new development takes advantage of existing infrastructure and public facilities. It reduces average trip distances and makes non-auto transit like walking, bicycling and mass transit more feasible. In addition, renovation of existing buildings benefits the environment by lowering energy usage and increasing the HVAC and electrical systems' efficiency. It reuses existing materials rather than producing additional landfill materials. Also, infill development capitalizes on the downtown surrounding growth and development and backs up other private and public investment made in the immediate area.

Many of the brownfield opportunities are older industrial areas near downtown areas. In Des Moines for example, the DICO site comprises about 40 acres of property uniquely situated directly south of downtown, adjacent to the new MLK Parkway, a major roadway connection the downtown to I-235.

The State DNR is key to assisting cities in certifying the properties for redevelopment and the opportunity to fill in new development near central business districts as opposed to continuing to develop at the edges of cities. The state agencies should assist in evening the cost differentials between green field development and brown field sites by giving priority to infill projects.

Infill redevelopment

By encouraging infill development, communities can focus development on existing sites that are already served with streets and utilities and lessen demand for continued conversion of farm ground for development. Infill development is often difficult for a variety of reasons. There may be existing environmental conditions to be corrected. An infill site may be smaller or oddly configured presenting difficulties for reuse but also opportunities for well designed buildings. There may also be existing businesses and neighborhood organizations concerned with additional traffic, water run off or change in general. Greenfield development rarely has such upfront issues.

Continued Greenfield annexation by newer communities provides easy sites for developers but may cause overall transportation and land use problems for a metropolitan area. To address these overall community needs with out additional legislation, infill possibilities for businesses and offices should be promoted and any additional development costs evened out in order to incent infill opportunities.

The State could provide a role by looking to locate their agencies on infill sites before developing on the edge of a community in a Greenfield. Infill development can significantly decrease commuting times for employees and clients resulting in energy savings as well as time savings. Reusing a previously developed site reduces the costs of infrastructure and provides access to well developed commercial areas and neighborhoods.

Transit-Oriented Development

Developing a system that brings together efficient fast transit service and high quality high-density mixed-used (commercial and residential) developments along designated rapid transit corridors would allow people to utilize public transit rather than relying on their personal vehicles. Such a network would foster more efficient use of land and reduce overall vehicle miles travelled (VMT), which would result in a reduction of greenhouse gas emissions. These initiatives would require the coordination of multiple governmental bodies' decisions on public policies (transit, zoning, development incentives, etc.), private investors' decisions on development, and the general public's commitment to utilize transit. Each element must work together to bring an effective solution that links higher concentrations of both commercial and residential uses to transit availability.

In order to be a desirable mode of transportation, public transit would need to be fast and efficient, possibly using a rail or rapid bus network. The network must also be viewed as clean and safe.

A potential model for this concept would be to utilize the Highway 69/East 14th Corridor passing north/south through Des Moines for a rapid bus route linking the cities of Ankeny to the north with Indianola to the south. In addition to providing residents and visitors alike with a swift commute, a rapid bus route could spur revitalization opportunities at the node. Similar corridors could be identified for TOD applications.

The Des Moines Area Regional Transit Authority (DART) or a similar body would be responsible for operating and maintain the rapid transit. Local municipalities would offer incentives to private developers to construct high-quality and dense developments surrounding the transit stops or hubs.

Smart Growth Planning, Modeling, Tools

Developing a statewide or regional policy to promote smart growth would have significant economical and ecological benefits for cities and citizens alike. Smart growth principles include developing walkable mixed-use communities, infilling already developed areas, developing on "brownfields" rather than "greenfields", and constructing transit-oriented development around transit hubs. Efficient and high quality commercial and residential developments that utilize the existing network of infrastructure, including roads, sewers, and utilities, result in reduced costs to the governmental bodies and developers, which ultimately results in reduced costs for the end buyers.

In order to promote smart growth, governmental bodies must recognize that new developments follow major investments in infrastructure, such as roads and sewers. Therefore, public investments would only be made when the existing infrastructure systems are at capacity or all available land is developed. Instead, incentives would be provided to developers to develop within the already developed areas. The Cities could also designate a urban growth boundary that identifies where future utilities and services will be extended or provided.

These initiatives would require the coordination of multiple governmental bodies' decisions on public policies (transit, zoning, development incentives, etc.), private investors' decisions on development. Each body must work together to bring an effective solution that links higher concentrations of both commercial and residential uses to transit availability.

In order for smart growth policies to be truly effective, the efforts must be regional. If all municipalities in an area are not practicing smart growth, development may gravitate to developing on "greenfields", resulting in urban sprawl.

Smart growth methods such as walkable communities would foster more efficient use of land and reduce overall vehicle miles travelled (VMT), which would result in a reduction of greenhouse gas emissions.

In order to promote smart growth, the State should fund a program that educates community leaders and provides information to developers. Such a program could possibly be coordinated with the Iowa State Extension Office.

Bike and pedestrian infrastructure

Improving, adding and promoting bicycle and pedestrian activities can increase pedestrian and bicycle travel and reduce automobile use. There are many barriers that have reduced the amount of bicycle and pedestrian travel for many years. Some of these barriers are physical and others are societal. One of the biggest keys to encouraging and promoting bicycle and pedestrian use is having good infrastructure for bicyclists and pedestrians to use.

Infrastructure improvements that, when implemented, could increase the number of bicycle and pedestrian trips include: bicycle parking all places where there is automobile parking, shower or locker amenities at places of employment, extensive off street trail networks, sidewalks in all developments and, on street bicycle lanes and routes. Other improvements should include education and encouragement programs to increase the use of bicycle and pedestrian activity.

Local government "complete streets" policies and bicycle and pedestrian master plans would help achieve these improvements.

A potential model to follow would be the City of Des Moines' adoption of goals to create a bicycle friendly community. These goals were just adopted in December 2007 and the next couple years will show whether these goals are successful at creating a more bicycle friendly community.

Adopt statewide growth management plan & GHG cap guiding conforming regional transportation and land use plans/programs that meet state-determined GHG budgets and vehicle miles traveled (VMT) per capita targets

The state must establish and maintain a land use policy framework that ensures that local land use planning satisfies both state goals and local interests. Iowa should require cooperative land use planning between cities and counties to achieve compact development, improved community design, and control urban sprawl. This will slow the rate of farmland loss in Iowa, allowing for more biomass to be available for energy needs. It also will measurably reduce Vehicle Miles Traveled by _____ #.

There are three land use problems this policy should address:

- annexation of land that results in auto-dependent development within incorporated cities,
- large-lot estate development in unincorporated areas far away from city services, and
- the lack of priority growth areas designated at the state level that include redevelopment of vacant or underutilized land.

Strategic Development Areas shall be designated by the state as areas of _____ size anticipating and/or experiencing urban growth. (*definition to be decided in implementation*)

Land use and service agreements between cities and counties in Strategic Development Areas (designated urban growth areas of the state) shall be required and designed to prevent annexation as a means of reacting to unincorporated large lot development within the fringe area of a few miles outside of a city. The agreements should also control the unneeded extension of urban infrastructure (ie. water, sewer, roads) in order to prevent encroachment into rural areas as a precursor to annexation. These agreements should protect cities from being threatened by counties negatively impacting their prospective growth area. The agreements should also assure counties and rural property owners that infrastructure is not installed in the 2-mile area primarily to facilitate annexation and encroachment of auto-dependent development onto greenfields.

Each Strategic Development Area, comprised of local governments and regional governments (if applicable), shall identify goals for the development of land and create a Strategic Development Plan. These plans shall outline the means to accomplish state goals for growth principles including the reduction of Vehicle Miles Traveled and protection of agricultural land. The means to accomplish these state goals will be flexible, but the state shall provide technical assistance, incentives, and/or funding for Strategic Development Areas.

Provide technical and financial support to local and regional agencies, enhancing technical tools, capacity, and fund Blueprint Planning Grant program (2.1.4)

Modify and fund liberalizations/reforms of state and local tax and zoning/building codes and policies to support GHG reductions and implementation of State growth plans (2.1.5)

Policy Design:

Goal levels:

Downtown revitalization

Continue support and strengthen state support of development in downtowns by creating policies that give preference to downtowns and helps to “even” the costs of developing and revitalizing downtown areas with new green field development.

Brownfield redevelopment

Establish an office within state government that will assist cities in working through regulatory requirements to allow Brownfield reuse and development.

Work with cities to develop or update inventories of qualifying Brownfield and Greyfield sites.

Target funding sources to connect fiscal resources to site acquisition/remediation. Incorporate preferential rating of Brownfield Greyfield field sites into point system for federal transportation funds, acknowledging (negative energy) impact of continuous new interchanges and new greenfields coming into land inventory.

Work with cities to create Brownfields Rewards program to provide targeted assistance for new business establishment (reasoning-less impact to transportation system expansion costs, and better opportunities to promote sustainability)

Infill redevelopment

State agencies should be directed to locate in infill opportunities when possible and give preference to business and developments that utilize existing infill sites.

Transit-Oriented Development

- Establish a regional policy to fund transit operations which embrace and commit to rapid transit that will support higher density development.
- Establish a policy that identifies existing facilities that can be retrofitted to have rapid transit capacity.
- Establish a priority to financially assist private investments that achieve TOD objectives.
- Establish a policy to support necessary zoning and land use plan amendments to accommodate intense uses around transit hubs.
- Establish minimum design guidelines to ensure that dense transit-oriented developments (TOD) are high quality and pedestrian-friendly.

Smart Growth Planning, Modeling, Tools

- Establish a statewide or regional policy to fund educational seminars for municipalities to learn the financial and ecological benefits operations which embrace and commit to rapid transit that will support higher density development.
- Establish a policy that identifies existing facilities that can be retrofitted to have rapid transit capacity.
- Establish a policy to financially assist private investments that achieve smart growth objectives that are measurable.
- Establish a policy to support necessary zoning and land use plan amendments to accommodate intense uses around transit hubs.
- Establish minimum design guidelines to ensure that dense transit-oriented developments (TOD) are high quality and pedestrian-friendly.

Bike and pedestrian infrastructure

- IDOT will provide appropriate support and raise the priority of pedestrian and bicycle facilities in their projects through the creation of the office of Pedestrian and Bicycle Development.
- Establish and adopt a statewide “complete streets” policy and design guidelines that incorporate bicycle and pedestrian facilities in all state, or state funded transportation projects.
- Make all transportation facilities safe for bicycle and pedestrian use by using a standard evaluation of bicycle and pedestrian safety and through effective law enforcement and detailed crash analysis.
- Create an education campaign to educate bicyclists, motorist and pedestrians about the benefits of bicycling and walking.
- Increase bicycle and pedestrian use through targeted marketing and health promotion.

Growth Management

Statewide: Reduce subsidies for low-density auto-oriented development patterns and provide incentives and technical assistance to communities to target growth in Strategic Development Areas where walking, bicycling, transit use, and shorter trips can reduce VMT.

2008-2009 Develop technical assistance coordinated amongst agencies to local governments where funding programs already connect to infrastructure and development in cities and counties.

2008-2009 Revise funding criteria to favor development within currently developed areas.

Statewide: Create Strategic Development Areas and require specific land use and service agreements between cities and counties in the area, as provided in the policy description.

2008 Decide which areas of the state are considered Strategic Development Areas and require intergovernmental agreements. Convene local government and stakeholder representatives in these areas for technical assistance.

Statewide: Create process for land use planning and framework within Strategic Development Areas that reduces Vehicle Miles Traveled.

2009 Implement the process for using Strategic Development Areas to achieve state goals.

Statewide: Identify outlying areas of the state not included in Strategic Development Area and create a process for coordinated land use and transportation planning to reduce VMT.

Timing:

Downtown revitalization

By **20XX** the state will

Further strengthen its Mainstreet program, etc to provide technical assistance to cities engaged in repositioning and revitalizing their downtown areas

Adopt a preferential rating system for its agencies to establish offices etc in downtown location as opposed to new development sites.

Adopt policies that encourage reconstruction of in-place/ aging infrastructure as opposed to new infrastructure in “green field” locations

Enhance tax credits for rehab/re-use projects

Brownfield redevelopment

By **20XX** the state or appropriate agency will establish additional expertise in an office to give technical assistance to State Agencies and Cities in Brownfield redevelopment.

Infill redevelopment

By **200XX** the State or the appropriate agency will:

Fund street and road improvements in existing communities to promote infill as a priority before funding new streets in greenfield areas or expansion areas.

Fund sewer and water line improvements in existing communities to promote infill before funding expansion of sewer and water systems into Greenfield areas.

Develop a public information program promoting the acceptance of infill and higher densities in exiting neighborhoods

Promote employees and clients use of public transportation and ride share programs by use of incentives in order to make development compact on a site.

Explore use of pervious paving systems and collection of water run off to further improve existing water collection systems.

Transit-Oriented Development

- By Year **20XX**, the State Department of Transportation will provide assistance to transit operators to coordinate the development of possible t rapid transit corridors.
- By Year **20XX** transit providers such as, the Des Moines Area Regional Transit Authority (or similar regional body), will identify corridors that can accommodate rapid transit.
- By Year **20XX**, municipalities will develop and implement policies that support and promote high quality, dense developments at hubs and nodes along the identified rapid transit routes.
- By Year **20XX**, transit providers will acquire and construct the resources necessary to operate the rapid transit network.
- By Year **20XX**, transit providers will begin operating rapid transit on the designated routes.

Smart Growth Planning, Modeling, Tools

- By Year **20XX**, the State will fund an educational program to inform governmental bodies and developers of the benefits of smart growth.
- By Year **20XX**, the communities within Metropolitan areas will cooperate regionally to promote smart growth by developing urban growth boundaries and involve utility promoters (Water, Wastewater) similar to the Des Moines MPO “Balanced Growth” processes.

Bike and pedestrian infrastructure

- By 20XX the state will establish an office of Pedestrian and Bicycle Development to promote a sound network of sidewalks and trails encouraging bicycling and walking as an accepted form of transportation within the State of Iowa.
- By 20XX the state will update the SUDAS design manual to incorporate standards for appropriate bicycle and pedestrian accommodation in all transportation projects.
- By 20XX all projects funded through the Iowa DOT will include bicycle and pedestrian facilities.
- By 20XX an analysis will be completed on all transportation facilities and a plan created to guide bicycle and pedestrian improvements to create safer transportation facilities for bicycles and pedestrians. (Should be statewide plan and local plans)
- By 20XX a comprehensive education and encouragement plan will be developed and distributed statewide to increase bicycle and pedestrian activity.

Growth Management (See Above Goals)

Parties Involved:

Downtown revitalization

Brownfield redevelopment

Iowa DNR, State of Iowa, EPA, Cities and Counties, MPO

Infill redevelopment

Transit-Oriented Development (TBD)

Any municipality interested in rapid transit service

Smart Growth Planning, Modeling, Tools TBD, but could include:

State of Iowa, Iowa State University Extension Office, Metro Cities, Area Metropolitan Planning Organizations, Transit promoters, all rural and Metro utility providers

Bike and pedestrian infrastructure TBD, but could include:

Iowa Department of Natural Resources, Iowa Natural Heritage Foundation, Iowa Department of Transportation, Iowa State University, Cities, Counties, Conservation Boards

Growth Management

Department of Economic Development, Department of Transportation, Department of Natural Resources, Universities, cities, counties, school districts, regional governments, developers and contractors, employers, homeowners.

Implementation Mechanisms

Bike and pedestrian infrastructure

Adopting appropriate policies and ordinances to encourage bicycle and pedestrian travel

- Bicycle parking ordinance that requires bicycle parking at all developments and allows for reduction of auto spaces when certain amounts of bicycle parking are provided
- Ordinance that would require companies to build and provide locker rooms, showers and bicycle storage facilities for employees choosing to walk or ride bikes.

Related Policies/Programs in place:

Infill redevelopment

Increase funding for environmental clean-up strategies.

Participate in obtaining funding from previous polluters to help clean particular sites.

Increase funding for mass transit initiatives

Bike and pedestrian infrastructure

As an example, the City of Des Moines has adopted goals to become a recognized bicycle friendly community through the League of American Bicyclists. By adopting these goals the City has identified a series of engineering, education, enforcement, and encouragement goals that will allow bicycling to become an accepted form of transportation within the city of Des Moines. Some of these goals include:

- Preparing a bicycle master plan to identify an alternative transportation network and encourages and reduces the barriers to bicycling within the city.
- Requiring driver education to the rights and responsibilities of drivers and bicyclists.

- Creating safe routes to school program to reduce barriers and encourage children to walk or bike to school.
- Create an interconnected network of off street trails and on street bicycle facilities to facilitate bicycle travel.
- Adopting a series of ordinances and policies such an ordinance to require appropriate bicycle parking with all development and a “complete streets” policy to consider person trips with all street projects, not just automobile trips.

Model communities in the United States where bicycle and pedestrian activity is a priority include, Portland Oregon, Madison Wisconsin, Boulder Colorado, Seattle Washington, and Minneapolis, Minnesota.

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

Additional Benefits:

- Reduced costs of providing public services, such as utilities and public safety
- Reduced greenhouse gas emissions.
- Increased efficiency in use of land.
- Preservation of fertile land for agricultural production.
- Improved physical fitness and health benefits.

Additional Costs:

- Costs associated with education governmental bodies and developers.
- Costs associated with cleaning up contaminated “brownfields”.
- Costs associated with acquiring new corridors to accommodate public transit.

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-2 Light Duty Vehicle Fuel Efficiency Incentives

Policy Description:

Iowa can reduce its greenhouse gas emissions by improving the fuel economy of the light duty vehicle fleet. The first policy option is to charge a state agency with tracking the fuel economy of Iowa's entire fleet. Once a baseline for Iowa's fuel economy is established, the state could then establish goals for improving the fuel economy of the entire fleet. For example, if the current fuel economy is 20 miles per gallon (mpg), goals of 21 mpg by 2012 and 25 mpg by 2020 could be adopted. All other things equal, increasing fuel economy from 20 mpg to 25 mpg would reduce fuel consumption and greenhouse gases by 20 percent. Further reductions beyond 2020 are also likely. Iowa could establish a goal of 40 to 200 mpg by 2050, reflecting the climate council's goals of reducing emissions by 50 to 90 percent.

Policy options to meet a goal of higher fuel economy include consumer education about vehicle purchases, monetary incentives through a feebate system or tax credits, investment in a plug-in hybrid infrastructure, and a state policy for scrapping older vehicles that do not have good fuel economy. Information about vehicle fuel economy and consumer benefits of higher fuel economy are available at www.fueleconomy.gov. As the federal agencies responsible for that website explain, "The difference between a car that gets 20 mpg and one that gets 30 mpg amounts to \$775 per year (assuming 15,000 miles of driving annually and a fuel cost of \$3.10)."

Another policy option to achieve improved fuel economy would be adopting California car standards, as recommended by the Office of Energy Independence. This option is problematic because, at present, the U.S. Environmental Protection Agency has not approved the waiver required for California's car standards. In addition, a policy limited to new vehicles would not affect the fuel economy of existing vehicles, potentially leading to a "jalopy effect" whereby owners retain their existing and less efficient vehicles for longer periods of time. In addition, state level adoption of car standards that differ from those in other states in our region would create an uneven vehicle market and would likely create barriers to dealer trades within that market.

Policy Design:

Goal levels/Timing: Improve fuel economy by 5% by 2012, 20% by 2020, and 100% or more by 2050.

Parties Involved: Iowa Department of Transportation, Iowa Department of Revenue, County Treasurers, Iowa Automobile Dealers Association, and Iowa Independent Automobile Dealers Association.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-3 GHG Impacts for State and Local Capital Funding

[State Policies and Capitol Funding Programs to be a model for climate-friendly development patterns]

Policy Description:

The State of Iowa will be a leader in ensuring that the development of state facilities, and the funding programs that state agencies administer are helping to meet GHG-reduction goals.

State government will locate new facilities and agency offices on infill sites to reduce Vehicle Miles Traveled. Any state of Iowa office that serves the public in an urban area shall be accessible by public transportation within ¼ mile at a frequency rate that supports the needs of everyday Iowans who visit that facility. New buildings for state offices located in downtowns should be high density and consider first floor retail to encourage mixed use and pedestrian orientation in downtowns.

Capitol funding that Iowa administers shall be a model for climate-friendly development. This policy would improve coordination between state agencies, local and regional governments to provide the technical assistance, incentives, and tools needed to reduce VMT through smart growth implementation and linking infrastructure planning to land use planning. State agencies with the most involvement in land use and development patterns include the Department of Transportation, the Department of Economic Development, and the Department of Natural Resources.

Existing infrastructure and community development funding sources will be reviewed to assess their potential to facilitate smart growth, and new funding programs will be developed to fill in needed funding gaps. Maintenance needs of local sewer, water, and roads will be compiled by a coordinated effort amongst state agencies to assess funding needs for maintenance as a priority. Comprehensive planning and site planning information from local and regional governments will be submitted to the state for review specific state funding applications. The state will significantly reduce capitol investments that result in VMT increase. Technical assistance and planning tools will be developed and disseminated in conjunction with the realignment of state funding assistance and approval processes.

Policy Design:

Goal levels: Establish and adopt a statewide “complete streets” policy and design guidelines that incorporate transit, bicycle and pedestrian facilities in all state, or state-facilitated and federally funded transportation projects.

Establish a source of capitol funding for public transportation within the Iowa DOT.

Pass a state administrative policy regarding the location and accessibility of state offices and agencies

Strategically target maintenance needs first before roadway expansion and new roads. Fund street and road improvements in existing communities to promote infill as more of a priority (than it is today) before funding new streets in greenfield areas or expansion areas.

Fund sewer and water line improvements in existing communities to promote infill as more of a priority (than it is today) before funding expansion of sewer and water systems into greenfield areas.

Infrastructure funding shall go towards projects that are designed to serve higher density, more compact, pedestrian friendly development.

Adopt a state-level amendment to the NEPA process for roadway studies to include GHG impacts including VMT

Timing:

- **2008** Complete streets policy, compilation of maintenance needs of all infrastructure, compile data on existing state capitol funding programs, begin technical assistance and education to stakeholders and applicants for state funding.
- **2009** Fix it first infrastructure policy applied to selected state capitol funding, create a state-level source of capitol funding for public transportation, state NEPA policy development, pass state administrative policy on location of state facilities, begin applying community design principles to state or state-administered federal capitol funding.
- **2010 – 2020** Implementation

Parties Involved: Xxx...[Ex: government agencies, specific organizations, universities, industries, businesses, etc.]

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-4 Expand Transit Infrastructure

Policy Description:

Improvements and expansion of existing transit service and implementation of new, innovative transit services can shift more passenger transportation from single-occupant vehicles to public transit, thereby reducing emissions. Public transportation improvements are critical to support Smart Growth initiatives (e.g. transit oriented development) and is a key to an ongoing effort to reduce VMT.

Policy Design:

Goal levels: Implement transit investments that allow for significantly greater use of public transportation, such as the following:

- Improve service frequency on selected existing transit routes.
- Offer more forms of transit services (e.g. commuter rail, urban streetcars, bus, BRT, passenger stations, facilities, suburban park and ride lots).
- Reduce travel times on selected existing transit routes (signal prioritization, exclusive lanes, technology improvements, etc.).
- Improve service quality on selected transit routes (safety, cleanliness, enhanced bus stops/shelters, real-time schedule communications).
- Expand longer distance ridesharing activities by promoting carpool and vanpool services throughout the state.
- Reduce or eliminate transit fares paid by riders, that hinder ridership growth, by implementing other funding strategies (e.g. employer subsidies).

The goal of this set of activities is for the state to provide the leadership and resources necessary to help create expanded transit and ridesharing networks throughout Iowa that provides Iowans with an alternative to the single-occupant auto and reduces VMT. The state will update their transportation policy that meets the state's emission and greenhouse gas reduction goals by supporting public transit operating and capital investment:

1. Currently, annual State funding for public transit operations covers approximately 14 percent of total operations costs. State funding should be increased with a target of reaching 25 percent of total operations costs dependent on level of transit service provided. This level of state funding is still significantly below neighboring states, Minnesota, Wisconsin, and Illinois- 70%, 45%, 65% respectfully).

2. To complement existing federal funding through Iowa’s Clean Air Attainment Program, a new state public transit funding should be created, focused and quantifiably measured towards transit services designed to reduce VMT.
3. The State will create a public transit capital fund to support transit capital investments, with an emphasis on rolling stock, designed to reduce VMT. These funds may be used to supplement federal transit fund match requirements.
4. The State will be a funding partner to community-sponsored investments in transit infrastructure improvements (rapid transit, major passenger facility).
5. The DOT shall be provided the resources needed to manage, evaluate, and provide technical assistance to communities interested in enhancing their public transit networks. This office will coordinate efforts with other state agencies (e.g. Iowa Department of Economic Development and the Office of Energy Independence).
6. New state funding will be required to be additional to existing and increasing local funding (can not substitute for) and shall only enhance (not reduce) the quality of the existing rural transit network.
7. Investigate and seek new state funding assistance to support commuter rail service that supplements other long-distance and regional passenger rail service.

Timing: Xxx...[Ex: By 2012, achieve X..., by 2020...by 2050 achieve full participation...]

Parties Involved: Xxx...[Ex: government agencies, specific organizations, universities, industries, businesses, etc.]

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**

- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-5 Support Passenger Rail Service in Iowa

Policy Description:

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.”

Iowa is currently served by two Amtrak long distance routes. The California Zephyr runs east-west through southern Iowa from Omaha to Burlington and the Southwest Chief cuts across the southeastern tip of Iowa through Fort Madison. Total ridership on these routes in FY 2006 was 61,377 which is a 33 percent increase from FY 2002. These long-distance routes are important to connect Iowa with the rest of the nation and should continue.

The Iowa Department of Transportation (DOT) has participated in a study of the development of a Midwest Regional Rail System which would provide high-speed service (up to 79 mph) across Iowa from Omaha to the Quad-Cities ultimately connecting with Chicago. This service would provide an estimated user benefit to Iowa of \$500 to \$700 million. This system would require a significant investment to upgrade track and an operational subsidy the first few years of service.

The DOT is now partnering with Amtrak to study regional passenger service in Iowa. Initial feasibility studies have been completed for service from Chicago to Dubuque and Chicago to the Quad Cities. Studies are underway to look at extending the Chicago to Quad Cities service on to Iowa City and then on to Des Moines. Estimated ridership for the Chicago to Dubuque service is 74,500 and would require capital upgrades (primarily in Illinois) and an annual operating subsidy of \$2.9 million. Estimated ridership for the Chicago to Quad Cities service is 102,700 and would require capital upgrades (primarily in Illinois) and an annual operating subsidy of \$6 million.

The DOT, along with other interested partners and agencies, will develop and implement a statewide passenger rail system in Iowa. This will involve identification and implementation of funding to support capital and operating costs. The plan will identify a phased implementation of service and appropriate funding support based on type of service provided (i.e. long-distance vs. regional vs. commuter service). In the short-term this effort should result in regional

passenger rail service from Chicago to Dubuque and from Chicago to the Quad Cities to Iowa City. In the long-term, this will result in statewide passenger rail service consistent with yet to be developed long-range passenger rail plans.

Policy Design:

Goal levels: Establish a statewide passenger rail system in Iowa to supplement existing long-distance service and that provides connections to other modes of transportation.

Timing:

By 2010, the Iowa Department of Transportation and other interested parties and agencies will:

- Support the initiation and development of passenger rail feasibility studies.
- Develop and implement education, marketing, and promotion activities that support passenger rail service.
- Develop a Passenger Rail Advisory Committee.
- 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 Iowa along with an implementation strategy.

By 2012, the Iowa Department of Transportation and other interested parties and agencies will:

- Support implementation of regional rail service from Chicago to Dubuque and Chicago to the Quad Cities and on to Iowa 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.
- Support implementation of other regional service as deemed feasible and consistent with the passenger rail plan.

By 2030, The Iowa Department of Transportation, in coordination with other interested parties, will:

- Support full implementation of passenger rail service as envisioned in the passenger rail plan. This will be higher speed service that results in significant ridership.

Parties Involved: Iowa Department of Transportation, Passenger Rail Advisory Committee (yet to be created), Iowa Legislature, Amtrak, Midwest Interstate Passenger Rail Commission, Illinois Department of Transportation, local governments, and regional/metropolitan planning organizations, Iowa Department of Economic Development, Iowa League of Cities, Iowa Chamber Alliance, railroads, Congressional delegation and

environmental organizations.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-6 Adopt Best Workplaces for Commuters in Iowa

Policy Description:

According to the 2001 National Household Travel Survey, 27 percent of total vehicle miles traveled are to and from work, equivalent to 734 billion miles nationally. Assuming that same percentage applies to Iowa, over 8.5 billion miles of travel in 2006 was from Iowans going to and from work. Of those trips, 78 percent are done by single occupant vehicles (2000 census).

Many actions can be taken to reduce single occupant vehicle commuting. These include increasing the number of employees that telework, carpool, vanpool, ride transit, ride bicycles, and walk. In May, 2001, a new government-industry partnership was created and sponsored by the United States Environmental Protection Agency and the United States Department of Transportation titled, **Best Workplaces for Commuters**. This program recognizes employers and districts (e.g. downtown districts, malls, business parks) that subsidize employee transit/vanpool use, implement telework programs, and/or other activities that reduce traffic and air pollution. Benefits of designation include public recognition, training, access to web-based tools, one-on-one technical assistance, and networking opportunities. A 2005 survey of program participants found that programs that included a comprehensive benefits package (i.e. guaranteed ride home, on-site services, financial incentives, etc.) resulted in a 15 percent reduction of trips, pollutants, and fuel consumption. More information is available at www.bestworkplaces.org.

The state of Iowa and interested organizations should take action to reduce single-occupant vehicle commuting by encouraging and incentivizing participation in activities such as Best Workplaces for Commuters.

Policy Design:

Goal levels: Major employers and districts in all nine of Iowa's metropolitan areas will be designated as 'Best Workplaces for Commuters.'

Timing:

By 2012, the state of Iowa and other interested parties will:

- Educate, inform and market to employers and communities in Iowa's metropolitan areas regarding the Best Workplaces for Commuters program.
- Identify existing funding programs and make funding available to assist employers and commuters to take actions that will assist qualifying for designation (i.e. funding for van pools, subsidization of transit fees, etc.)

- Identify and implement public incentives (e.g. tax credits, deductions, etc.) to support actions that will assist qualifying for designation (i.e. funding for van pools, subsidization of transit fees, etc.)
- Evaluate opportunities to expand the goal level beyond Iowa's metropolitan areas into smaller communities and rural areas.

Parties Involved: Local governments, state agencies, environmental organizations, United States Environmental Protection Agency, United States Department of Transportation, metropolitan planning organizations, local governments, chambers, Iowa Chamber Alliance, Iowa League of Cities, transit providers, Transportation Management Associations, major employers, downtown development groups, etc.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-7.1 Fuel Efficient Replacement Tires Program

Policy Description:

Improve the fuel economy of the LDV fleet by setting minimum energy efficiency standards for replacement tires and requiring that greater information about low-rolling resistance (LRR) replacement tires, including all season/all weather LRR tires, be made available to consumers at the point of sale. Snow and mud LRR tires are currently available, and tire manufacturers, such as Michelin, are currently researching and developing fuel efficient all weather replacement tires.

Vehicle manufacturers currently use LRR tires on some new vehicles, but they are not easily available to consumers as replacement tires. When installing original equipment tires, carmakers sometimes use LRR tires to meet federal corporate automobile fuel economy standards (CAFE). When replacing the original equipment tires, consumers often purchase less fuel-efficient tires and potentially more costly tires (depending on annual vehicle miles traveled [VMT]). Currently, tire manufacturers and tire retailers are not required to provide information about the fuel efficiency of replacement tires.

An appropriate state agency would initiate a fuel efficient tire replacement program. The program would include consumer education, product labeling, and minimum standards elements.

These programs would be developed under a rule development process. All programs would incorporate the best scientific information, including the test results of tires conducted by the tire manufacturers, the Tire Industry Association, and the National Academy of Sciences and others.

Policy Design:

This policy is designed to encourage consumer choice and example by state government.

Goal Levels: Establish voluntary energy efficiency standards that achieve an average % gain in fuel economy.

Timing: By , the state or appropriate agency would initiate a fuel efficient tire replacement program for the state fleet if all season/all weather tires are available and are incorporated into legislatively approved rental rates, establish voluntary energy efficiency standards for replacement tires, and develop a marketing program for fuel efficient replacement tires.

By , the state or appropriate agency would ensure that a proportion of tires replaced on state-owned and -leased vehicles will be LRR tires (if they are available for the vehicle type and

are rated for all season/all weather service) and would consider legislation or administrative regulation to set LRR standards for tires with mandatory manufacture labeling.

Parties Involved: Iowa Department of Transportation, Iowa Department of Natural Resources, Iowa Energy Center, LRR manufacturers, tire distributors.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-7.2 Consumer Information on Vehicle Miles Per Gallon (MPG)

Policy Description:

Provide consumers with information about the fuel efficiency and cost in relation to the purchase, maintenance, and operation of their vehicles. Consumers would receive real-time information on MPG while their vehicles are in operation and alerts when their tire pressure is too low (i.e., devices such as Air Alert Valve Caps). Generally, a set of four light-emitting diode (LED) self-calibrating tire pressure valve caps such as Tire Alert cost about \$22.00, and real time MPG monitoring systems such as ScanGauge are about \$100.00. In addition, consumers would receive public education and information relating to the impact that vehicle maintenance practices have on the operation of their vehicles. Finally, consumers would be encouraged to consider a vehicle's MPG before and at the time of purchase of their vehicles.

Policy Design:

This policy is designed to impact consumer choice and behavior.

Goals: Greatly increase the awareness and availability of consumer information on MPG to result in greater fuel efficiency across the state.

Timing: Program would begin in <date>, with program expansion as resources are made available.

Parties Involved: Iowa Department of Transportation, product manufacturers, product distributors, Iowa Automobile Dealers Association, Iowa Independent Automobile Dealers Association, independent repair shops, Iowa Energy Center.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-8 Fuel Strategies

Under Development – See separate document for comments on Biodiesel Use and Fuel Strategies

TLU-9 Freight Strategies (Truck and Rail)

Policy Description:

The movement of freight on Iowa's transportation system plays a critical role in our economy. Iowa also serves as a cross-road for the movement of freight across the country. In fact, it is estimated that 43 percent of all freight movements in Iowa is just passing through the state. There has been tremendous growth in freight traffic with truck traffic having grown over 50 percent in the last 15 years and expected to grow another 50 percent by 2020. 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.

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 that moves by rail instead of truck reduces GHG by two-thirds or more. 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 Iowa Department of Transportation (DOT) seeks to assure 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 Iowa, within the Midwest and nationally.

Policy Design:

Goal levels: Increase the share of freight that is hauled by rail and reduce greenhouse gas emissions due to truck idling.

Timing:

By 2010, the Iowa 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 development of the ethanol terminal in Manly, IA where ethanol is brought in by truck from multiple plants and shipped by rail).
- 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 funding to support rail freight improvements.
- Seek opportunities to support truck stop electrification including the utilization of federal Congestion Mitigation and Air Quality. 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.

Parties Involved: Iowa Department of Transportation, local governments, Iowa Legislature, regional/metropolitan planning organizations, Iowa Department of Economic Development, railroads, shippers, developers, U.S. Department of Transportation, and other state DOTs.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e

Cost-Effectiveness				\$/MtCO ₂ e
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- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD

TLU-10 New Vehicle Standards

Policy Description:

Iowa can reduce its greenhouse gas emissions by improving the fuel economy of the light duty vehicle fleet. The first policy option is to charge a state agency with tracking the fuel economy of Iowa's entire fleet. Once a baseline for Iowa's fuel economy is established, the state could then establish goals for improving the fuel economy of the entire fleet. For example, if the current fuel economy is 20 miles per gallon (mpg), goals of 21 mpg by 2012 and 25 mpg by 2020 could be adopted. All other things equal, increasing fuel economy from 20 mpg to 25 mpg would reduce fuel consumption and greenhouse gases by 20 percent. Further reductions beyond 2020 are also likely. Iowa could establish a goal of 40 to 200 mpg by 2050, reflecting the climate council's goals of reducing emissions by 50 to 90 percent.

Policy options to meet a goal of higher fuel economy include consumer education about vehicle purchases, monetary incentives through a feebate system or tax credits, investment in a plug-in hybrid infrastructure, and a state policy for scrapping older vehicles that do not have good fuel economy. Information about vehicle fuel economy and consumer benefits of higher fuel economy are available at www.fueleconomy.gov. As the federal agencies responsible for that website explain, "The difference between a car that gets 20 mpg and one that gets 30 mpg amounts to \$775 per year (assuming 15,000 miles of driving annually and a fuel cost of \$3.10)."

Another policy option to achieve improved fuel economy would be adopting California car standards, as recommended by the Office of Energy Independence. This option is problematic because, at present, the U.S. Environmental Protection Agency has not approved the waiver required for California's car standards. In addition, a policy limited to new vehicles would not affect the fuel economy of existing vehicles, potentially leading to a "jalopy effect" whereby owners retain their existing and less efficient vehicles for longer periods of time. In addition, state level adoption of car standards that differ from those in other states in our region would create an uneven vehicle market and would likely create barriers to dealer trades within that market.

Policy Design:

Goal levels/ Timing: Improve fuel economy by 5% by 2012, 20% by 2020, and 100% or more by 2050.

Parties Involved: Iowa Department of Transportation, Iowa Department of Revenue, County Treasurers, Iowa Automobile Dealers Association, and Iowa Independent Automobile Dealers Association.

Implementation Mechanisms

Related Policies/Programs in place:

Estimated GHG Savings and Cost Per Ton:

	2012	2020	2050	Units
GHG Emission Savings				MMtCO ₂ e
Net Present Value (2008-2050)				\$ Million
Cumulative Reductions (2008-2050)				MMtCO ₂ e
Cost-Effectiveness				\$/MtCO ₂ e

- Data Sources: **TBD**
- Quantification Methods: **TBD**
- Key Assumptions: **TBD**

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD