

Energy Security / Alternative Fuels

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Background:

The State of Washington recognizes that our nation's dependency on foreign oil has a negative impact on our country's economy, mobility, and security, as well the national and the global environment. Efforts to address energy independence and climate change work toward similar goals: reducing the dependence on foreign oil and moving this nation toward a carbon neutral mobility system.

The United States consumes roughly 30 percent of the world's yearly petroleum supply while producing just 7 percent of the world's total¹. Nationally, cars, trucks, planes, and ships – the transportation sector – account for as much as two-thirds of the U.S. petroleum consumption. Projections indicate that growing world demand for fuel and dwindling petroleum reserves will exacerbate these impacts. Added to our dependence is the fact that burning carbon fuels is the leading source of the nation's greenhouse gas (GHG) emissions. In Washington, the transportation sector consumption of fossil fuels is responsible for nearly 47 percent of total greenhouse gas emissions.

For these reasons, the State and Federal governments have a vital interest in supporting initiatives that cost-effectively reduce the Nation's dependence on petroleum for transportation. Diminishing funding resources, environmental and economic crises point to the need for commitment and creativity in developing GHG reduced alternatives to our carbon based transportation system. Because of these major issues, the federal transportation program should be considered for a significant redevelopment rather than a reauthorization.

The National Commission on Surface Transportation Revenue and Policy has recommended a major federal program aimed at energy security and alternative fuels development entitled, *Energy Security: A Program to Accelerate the Development of Environmentally - Friendly Replacement Fuels*. This program would fund both development of alternative fuels and efforts to reduce greenhouse gas emissions leading toward energy independence.

Governor Gregoire placed Washington State at the forefront in responding to climate change with her Climate Change Challenge Executive Order 07-02 in 2007. The state legislature passed greenhouse gas and vehicle miles traveled (VMT) reduction goals during the last two legislative sessions (ESSB 6001 in 2007 and in 2008 ESSHB 2815). The Governor's Climate Action Team will soon recommend programs that can aid in achieving the Governor's GHG and VMT reduction goals.

The Washington State Department of Transportation (WSDOT) is developing measurable and balanced emission reduction strategies to create more efficient driving conditions, reduce the amount of driving, and introduce more fuel-efficient vehicles. This approach is consistent with how WSDOT is relieving congestion: "Moving Washington" adding capacity strategically, operating efficiently, and managing demand: key elements of the statewide program.

¹ Energy Information Administration. Accessed on 10/15/08
http://www.eia.doe.gov/emeu/iea/Notes%20for%20Table%202_2.html

Key Strategies:

A cornerstone to implementing workable change and making progress toward energy independence and responding to climate change will be the synergy of these approaches. A three prong approach employing “carrots and sticks” will be effective in reaching the necessary goals of reducing the demand for travel with carbon based vehicles; improving vehicle fuel efficiency; and developing a new non-carbon based energy system. Key strategies related to the potential Energy Security and Alternative Fuels Program are:

1. Reduce Energy Consumption by Reducing Demand (Reduce VMT)

To reduce VMT, with the ultimate goal of reducing GHG emissions, a package of strategies is recommended that fall into three broad categories, but which are synergistically more beneficial when integrated and implemented in conjunction with each other.

- Invest in Transit, Ridesharing, and Commuter Choice Programs including recommendations to expand and enhance current programs to increase viable transportation options available to residents to conduct the activities, trips, and travel needed and desired for daily life.

- Encourage Compact and Transit Oriented Development (CTOD) and Bicycle and Pedestrian Accessibility. Encourage development and accessibility that supports compact walking, bicycling, and public transportation-friendly communities and the increase the travel choices available.

- Employ Transportation Pricing Strategies Utilize transportation funding and pricing strategies that identify and create potential pricing mechanisms to support and incentivize GHG and VMT reductions. Stress considerations for revenue use to support transportation infrastructure maintenance and operations.

2. Improve Fuel Economy

- *Increase Corporate Average Fuel Economy (CAFE) standards and fuel economy standards for commercial vehicles*

Raising the average miles per gallon the vehicles sold in the U.S. to 35 mpg or more will have a positive impact on greenhouse gas emissions and will reduce demand for petroleum.

- *Support research and employment into more efficient engine technologies*
 - Establish a Low Carbon Fuel Standard (LCFS);
 - Incentivize Diesel Engine Emission Reductions;
 - Reduce Engine-Idling through national regulatory and voluntary programs;
 - Encourage the use of telematics, driver education, “eco-driving”, auxiliary power and other fuel saving driver/vehicle related programs.
 - Continuously Variable Automatic Transmission – helps boost fuel economy through better gear ratios. (Currently offered in some vehicles)
 - Variable-Valve-Control Engine – enhances engine performance by controlling the mix of fuel and air more precisely. (Currently offered in some vehicles)
 - Promote research to increase fuel efficiency of commercial vehicles

3. Further Develop Alternative Fuel Sources

- *Encourage the use of existing alternative fuel options (plug-in and hybrids) as a means to bridge the gap to the future alternative fuel platforms*

- *Equally promote development of efficient and sustainable alternative fuel sources*
 - Such as biomass fuels, hydrogen, electricity derived from renewable sources, etc.
 - Establish a Low Carbon Fuel Standard (LCFS);

- *Prepare for the necessary new fuel / energy delivery systems and infrastructure*