TLU-14 Reduced Speed Limit for Commercial Trucks

Policy Description:

Reduce speed limit for commercial trucks to 60 or 55 mph. By reducing the vehicle speed, fuel economy is increased, reducing fuel consumption and CO2 emissions.

Policy Design:

- **Goal levels:** Reduce Class 8 commercial truck traffic traveling above 60 or 55 mph on interstates, freeways, and major arterials by 50 percent.
- **Timing:** Begin enforcement of measure by 2008 with a 60 mph speed limit for Class 8 commercial trucks. Lower speed limit to 55 mph by 2015.
- **Parties:** NMDOT, state police

Implementation Method(s):

Education/outreach: Provide information to the trucking industry and the general public about the fuel economy benefits obtained when reducing speeds from 70 mph to 60 or 55 mph. Emphasize fuel savings and safety aspects also.

Codes/standards: Have all interstates, freeways, and major arterials signed with a maximum speed of 60 or 55 mph for Class 8 commercial trucks. Significant enforcement resources will be needed to ensure the success of this measure.

Related Policies/Programs in Place:

Current speed limits are as high as 75 mph, depending on the highway segment.

Types(s) of GHG Benefit(s):

CO2, black carbon

Estimated GHG Savings and Costs Per MTCO2e:

	2012	2020	Units
GHG Emission Savings	0.14-0.18	0.22-0.30	MMtCO2e
Net Present Value (2006-2020)		$113-$150	$million
Cumulative Emissions Reductions (2006-2020)		2.2-3.0	MMtCO2e
Cost-Effectiveness		$50	$/tCO2e

Data Sources, Methods and Assumptions:

- **Data Sources:**

U.S. Department of Labor, Bureau of Labor Statistics, "Establishment Data; Hours and Earnings," Table B-14 and "Employer Costs for Employee Compensation-December 2005," Table 10.

U.S. Environmental Protection Agency, Office of Transportation and Air Quality, Smartway Transport Partnership, "A Glance at Clean Freight Strategies: Reducing Highway Speed," EPA420-F-04-007, February 2004.

U.S. Environmental Protection Agency, Office of Transportation and Air Quality, MOBILE6 model, documented in "User's Guide to MOBILE6.1 and MOBILE6.2: Mobile Source Emission Factor Model," EPA420-R-03-010, August 2003.

Ang-Olson, Jeffrey and William Schroeer, "Energy Efficiency Strategies for Freight Trucking: Potential Impact on Fuel Use and Greenhouse Gas Emissions," *Transportation Research Record 1815*, Transportation Research Board of the National Academy of Sciences, Washington, DC, 2002.

- **Quantification Methods:**

The diesel fuel consumption from Class 8 diesel trucks was multiplied by 60 (low) or 80 (high) percent to account for the amount of fuel consumed at speeds above 60 mph from 2008 through 2014. Starting in 2015, the speed for Class 8 trucks was reduced to 55 mph. This fuel consumption was then multiplied by 50 percent to account for the expected penetration rate of this measure. This quantity was then multiplied by the percentage increase in fuel economy. The ratio of reduction in fuel consumption was then multiplied by the baseline CO2 emissions to estimate the reduction in CO2 from this measure. Costs were calculated by multiplying the per unit fuel cost by the number of gallons reduced and subtracting this from the product of the increased time required for traveling the same distances at 60 mph (prior to 2015) or 55 mph (2015 and later) rather than 70 mph multiplied by the hourly trucking industry cost.

- **Key Assumptions:**

60 to 80 percent of Class 8 diesel truck travel (fuel consumption) is spent at speeds above 60 mph, assumed to be at 70 mph on average. 50 percent of this truck travel is assumed to be reduced to 60 mph or 55 mph (Ang-Olson and Schroeer).

Each one mile per hour reduction of speed from 70 mph to 55 mph yields a fuel economy increase of 0.1 miles per gallon (EPA).

A fuel cost of $2.40/gallon is assumed.

Average hourly truck transportation wage is $17.22/hour (BLS), with an industry average overhead rate of 1.48 (BLS).

Base fuel economy assumed to be 6.42 mpg (EPA MOBILE6 model); assumed to increase to 7.42 mph with this measure.

Key Uncertainties:

Ability to enforce a speed limit significantly lower than current policy.

Ancillary Benefits and Costs:

Some reduction in criteria pollutants. Reduction in fuel consumption. Increase in travel time required. Increased costs of speed enforcement are not included here. Should lead to increased driver safety which may decrease operating costs. Reducing speed is also likely to reduce truck maintenance costs.

Feasibility Issues:

TBD

Status of Group Approval:

TBD

Level of Group Support:

TBD

Barriers to Consensus:

TBD