

The Recreational Vehicle Industry Association commented that increases in light truck fuel economy could indirectly impact the sales and production of trailers, conversion vehicles and recreational vehicles by reducing the availability of suitably powerful light trucks and light truck chassis.

The final rule is not based on any engine shifts. Forcing through regulation substantial deviation from product offerings may impose unreasonable constraints on the market. Thus, we conclude that it is not appropriate to include such engine shifts in the Stage analysis. Since the final rule would not otherwise necessitate any such substantial deviation, NHTSA does not believe that this standard will have an adverse effect on the recreational vehicle industry.

NHTSA's cost analysis recognizes the importance of the competitive market. We believe that the standards contained in this final rule will not limit the availability of vehicles that consumers need and want. We believe that the standards established in this final rule will not result in changes to power-to-weight ratios, towing capacity or cargo and passenger hauling ability. In short, the standards will not affect the utility of available vehicles and therefore should not affect consumer preferences for or against them. Since consumer choices will not be affected, neither will the production plans of any particular manufacturer.

2. Benefits to Society

In the FEA, the agency analyzed the economic and environmental benefits of this final rule by estimating fuel savings over the lifetime of the model year (approximately 25 years).

The agency's analysis estimated the undiscounted future impacts and then determined their present value using a 7 annual percent discount rate. We translated impacts other than direct fuel savings into dollar values and then factored them into our cumulative estimates. Adding indirect benefits to the direct benefits of fuel saved as a result of higher CAFE standards produced an incremental benefit to consumers, when reduced to present value, of \$29 per vehicle for MY 2005, \$83 per vehicle for MY 2006 and \$121 per vehicle for MY 2007. The total present value of these direct and indirect benefits is estimated to be \$218 million for MY 2005, \$645 million for MY 2006 and \$955 million for MY 2007.

We obtained forecasts of light truck sales for future years from the EIA's Annual Energy Outlook 2002 (AEO 2002). Based on these forecasts, NHTSA

estimated that approximately 7,654,000 light trucks would be sold in MY 2005. For MYs 2006 and 2007, we estimated 7,795,000 and 7,922,000 light truck sales respectively.

We estimated fuel economy performance for each future model year's light trucks under the current CAFE standard and with alternative standards in effect, using the agency's projections for the application of fuel saving technologies. We then assessed the economic value of annual fuel savings resulting from higher light truck CAFE standards by applying EIA's AEO 2002 forecast of future fuel prices to each year's estimated fuel savings. In turn, we estimated future fuel savings by dividing the total number of miles that the surviving population of vehicles of that model year are estimated to be driven by the average on-road fuel economy level associated with the base standard of 20.7 mpg.

NHTSA then assumed that if the same trucks met a higher CAFE standard when sold, their total fuel consumption during each subsequent calendar year could be calculated by dividing the increased number of miles they are driven as a result of the higher fuel economy resulting from that standard. The sum of these annual fuel savings over each calendar year that vehicles remain in service represents the cumulative fuel savings resulting from applying a stricter CAFE standard to light trucks produced during that model year.

NHTSA's analysis of the benefits of external factors totaled \$0.083 per gallon of gasoline, including \$0.048 for "monopsony" effect (the effect on the world market price of gasoline from reductions in U.S. demand), and \$0.035 for reducing the threat of supply disruptions.

In the FEA, we also analyzed the effect of the standards on vehicle and refinery emissions. Our analysis indicated that the MY 2005 standard would result in a net reduction of criteria pollutants with a present value of \$2.4 million. For MY 2006, this net reduction would have a present value of \$8.0 million and for MY 2007 the net reduction of criteria pollutants would have a present value of \$12.7 million.

We obtained per mile emission rates using EPA's Mobile 6.2 motor vehicle emissions factor model. Then we monetized changes in total emission levels.⁵

⁵ White House Office of Management and Budget, Office of Information and Regulatory Affairs, "Report to Congress on the Benefits and Costs of Federal Regulations," 1998, p. 72. See also Office of Management and Budget, "Draft Report to Congress on the Costs and Benefits of Federal

Commenters questioned NHTSA's use of several of the variables and values used in the PEA and also in the Draft Environmental Assessment. In response to these comments, the agency further considered the use and accuracy of its chosen variables and values. In many cases, the agency concluded that, based upon current data and literature, it was correct in its determinations and has retained those variables or values. In other cases, the agency has decided to revise its assumptions and the estimates that they support. The agency's response to comments on the economic and environmental analyses is delineated below and a more detailed analysis is provided in the FEA and the Environmental Assessment.

a. Vehicle Miles Traveled and Survivability

A VMT growth rate is a key parameter used to account for travel trends and to calculate the resulting vehicle emissions. The EPA's MOBILE6 air quality model, which is used by State and local governments to help them meet Clean Air Act requirements, was used in the analysis and incorporates a 1.8 percent VMT growth rate.

Ford questioned whether the baseline on-road average annual VMT growth rate of 1.8 percent over the entire study period is accurate since, as it argues, historical data from the last ten years indicate that the VMT (per vehicle) has remained stable.

The agency notes that the information provided by Ford is accurate when referring to, as Ford does, VMT per vehicle per year. However, the 1.8 percent VMT growth rate used in the Environmental Assessment refers not to the per-vehicle VMT, but to fleet VMT per year. Historical data show that the VMT per year for the light-duty vehicle fleet has been increasing and this trend is expected to continue. The value of 1.8 percent was derived from the AEO 2002 report published by the EIA. EIA uses data from the FHWA Highway Statistics as inputs to its model and forecasts a growth rate of 1.8 percent for light-duty vehicles (combined) per year over the 2000–2020 period. Since the period covered by the agency's final rule falls within this period, the value projected by EIA is appropriate.

Regulations: Notice," **Federal Register**, Volume 67, No. 60, Thursday, March 28, 2002, p. 15041. The values used for VOC, NO_x, and SO₂ are the midpoints of the ranges used by OMB. However, OMB does not provide a damage cost estimate for carbon monoxide (CO); the value used here was derived from Donald R. McCubbin and Mark A. Delucchi, "The Health Costs of Motor-Vehicle-Related Air Pollution," *Journal of Transport Economics and Policy*, September 1999, Volume 33, part 3, pp. 253–86.