

(i) The clean-fuel vehicle aftermarket conversion certifier shall demonstrate to the Administrator economic hardship of the 10,000 sales volume limit. At a minimum, the clean-fuel vehicle aftermarket conversion certifier shall provide to the Administrator the following data: company sales projections (by engine family), cost analysis indicating that certification costs on a per-vehicle basis will be substantially greater than those for an OEM vehicle manufacturer (i.e., incremental cost of full durability testing per vehicle), and an analysis indicating why the specific volume limit requested is appropriate. The Administrator may require additional data as he may deem necessary to demonstrate economic hardship of the 10,000 sales volume limit. The clean-fuel vehicle aftermarket conversion certifier must receive approval from the Administrator on a case by case basis to waive the 10,000 sales volume limit, and the certifier shall apply for a new waiver each model year. In no case shall the sales volume limit for any petitioner exceed 30,000.

(ii) For clean-fuel vehicle aftermarket conversion configurations certified after December 31, 2000, the 10,000 sales volume limit in 40 CFR 86.094-14(b)(1) shall apply.

(iii) The sales volume limit provided in paragraphs (b)(3)(i) and (b)(3)(ii) of this section shall apply to the aggregate total of all vehicles sold by a given clean-fuel vehicle aftermarket conversion certifier at all of its installation facilities without regard to the model year of the original vehicles upon which the conversion configurations are based. All vehicle sales will be included in calculating the clean-fuel vehicle aftermarket conversion certifier's aggregate total, including vehicle conversions performed under the requirements of this part 88, and all other vehicle conversions. Vehicle conversions not covered by this part 88 will be counted if they occur within the model year for which certification is sought.

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## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

#### 49 CFR Part 533

[Docket No. 94-20; Notice 2]

RIN 2127-AF16

#### Light Truck Average Fuel Economy Standard, Model Year 1998

**AGENCY:** National Highway Traffic Safety Administration (NHTSA).

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** This document proposes to establish an average fuel economy standard for light trucks manufactured in model year (MY) 1998. The issuance of a standard is required by statute. The agency is proposing to set a combined standard for all light trucks at 20.7 miles per gallon (mpg) for MY 1998.

**DATES:** Comments must be received on or before February 20, 1996.

**ADDRESSES:** Comments must refer to the docket and notice number set forth above and be submitted (preferably in 10 copies) to Docket Section, National Highway Traffic Safety Administration, Room 5109, 400 Seventh Street SW, Washington, DC 20590. The Docket is open 9:30 a.m. to 4 p.m., Monday through Friday. Submission containing information for which confidential designation is requested should be submitted (in three copies) to Chief Counsel, National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street SW, Washington, DC 20590, and seven additional copies from which the purportedly confidential information has been deleted should be sent to the Docket section.

**FOR FURTHER INFORMATION CONTACT:** Mr. Orron Kee, Office of Market Incentives, National Highway Traffic Safety Administration, 400 Seventh Street SW, Washington, DC 20590 (202-366-0846).

#### SUPPLEMENTARY INFORMATION:

##### I. Background

In December 1975, during the aftermath of the energy crisis created by the oil embargo of 1973-74, Congress enacted the Energy Policy and Conservation Act. Congress included a provision in that Act establishing an automotive fuel economy regulatory program. That provision added title V, "Improving Automotive Efficiency," to the Motor Vehicle Information and Cost Saving Act. Title V has been amended and recodified without substantive change into Chapter 329 of Title 49 of the United States Code. Chapter 329 provides for the establishment of

average fuel economy standards for cars and light trucks.

Section 32902(a) of Chapter 329 requires the Secretary of Transportation to issue light truck fuel economy standards for each model year. Chapter 329 provides that the fuel economy standards are to be set at the maximum feasible average fuel economy level. In determining the maximum feasible average fuel economy level, the Secretary is required under section 32902(f) to consider four criteria: technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy. (Responsibility for the automotive fuel economy program was delegated by the Secretary of Transportation to the Administrator of NHTSA (41 FR 25015, June 22, 1976)). Such standards must be established no later than 18 months prior to the beginning of the model year in question. Pursuant to this authority, the agency has set Corporate Average Fuel Economy (CAFE) standards through MY 1997. The standard for MY 1997 is 20.7 mpg.

Following the establishment of the light truck fuel economy standards through 1997, the process of establishing standards for model years after MY 1997 began with the publication of an Advance Notice of Proposed Rulemaking (ANPRM) in the Federal Register (59 FR 16324) on April 6, 1994. The ANPRM outlined the agency's intention to set standards for some or all of model years 1998 to 2006. The ANPRM solicited comments through, among other things, nine questions designed to assist the agency in developing the proposed standards.

Comments were submitted by six manufacturers: Ford, General Motors (GM), Chrysler, Nissan, Toyota, and the Rover Group. Comments were also submitted by the American Automobile Manufacturers Association (AAMA), the American Council for an Energy Efficient Economy (ACEEE), the Coalition for Vehicle Choice (CVC), the Competitive Enterprise Institute, and many other organizations and private individuals.

On November 15, 1995, Congress enacted the Department of Transportation and Related Agencies Appropriations Act for Fiscal Year 1996, P.L. 104-50. A provision in that Act precludes the agency from using any funds appropriated for that year to

prepare, propose, or promulgate any regulations \* \* \* prescribing corporate average fuel economy standards for automobiles \* \* \* in any model year that differs from standards promulgated for such

automobiles prior to enactment of this section. (Section 330, P.L. 104-50)

Since CAFE standards must be set no later than eighteen months before the model year in question, the agency must adopt the MY 1998 standard during FY 1996.

The possibility of setting light truck CAFE standards for a multi-year period raises complex issues, many of which were addressed by the comments on the ANPRM. Faced with a statutory deadline of approximately April 1, 1996, for promulgating a standard for MY 1998, the agency has decided to defer rulemaking for MY's 1999-2006. In this notice, the agency is therefore proposing a standard only for MY 1998.

## II. Overview of Proposal

This notice proposes to establish an average fuel economy standard for light trucks of 20.7 mpg for MY 1998. The agency's proposal is based on information derived from a variety of sources. One major source is the submissions received in response to the April 6, 1994, ANPRM, which are available in Docket No. 94-20-No.1. The agency's decision is, of course, constrained by the provisions of P.L. 104-50 noted above.

As a part of proposing a standard, this notice discusses a variety of issues which are being considered by the agency, all of which are relevant to the statutory criteria in Chapter 329. In providing a comment on a particular matter, commenters are requested to provide all relevant factual information to support conclusions or opinions, including but not limited to statistical and cost data, and the source of such information.

## III. Manufacturer Capabilities for MY 1998

In evaluating manufacturers' fuel economy capabilities for MY 1998, the agency has analyzed manufacturers' current projections and underlying product plans and has considered what, if any, additional actions the manufacturers could take to improve their fuel economy. A more detailed discussion of these issues is contained in the agency's Preliminary Regulatory Impact Analysis (PRIA), which has been placed in the docket for this notice. Some of the information included in the PRIA, including the details of manufacturers' future product plans, has been determined by the agency to be confidential business information whose release could cause competitive harm. The public version of the PRIA omits the confidential information.

### A. Manufacturer Projections

#### 1. General Motors

In an August 1994 submission General Motors projected CAFE within a range of 21.1 to 21.9 mpg for the 1998 model year. GM submitted a revised estimate on May 31, 1995, indicating that certain technological improvements and other changes it had anticipated could not be implemented in the time period outlined in its first submission. The May 31, 1995, submission projected a range of 20.6 to 21.3 mpg. This compares to a projection of 19.8 mpg for MY 1995 from GM's mid-model year report of July 31, 1995.

#### 2. Ford

Ford projected in August 1994 that it could achieve a CAFE level within a range of 20.4 to 21.0 mpg for MY 1998. This compares to a July 1995 mid-model year report projection of 20.6 mpg for MY 1995.

#### 3. Chrysler

Chrysler projected in August 1994 that it could achieve a CAFE level of 21.0 mpg for MY 1998. This compares to a mid-model year report projection of 20.1 mpg for MY 1995. Chrysler submitted a revised estimate for MY 1998 of 20.1 mpg on September 18, 1995, which was received (13 months after the end of the comment period) too late to be considered for this NPRM. However, the agency will consider these new data prior to taking final action on the MY 1998 Standard.

#### 4. Other Manufacturers

Most of the other light truck manufacturers exceed the CAFE levels of the large domestic manufacturers. The exceptions are the Rover Group, which projected 16.3 mpg for the 1995 model year in July 1995, and Volkswagen, a manufacturer of passenger vans, which projected 18.6 mpg for the 1995 model year in July 1995. Mercedes-Benz plans to enter the light truck market with a sport utility vehicle whose CAFE level is unknown.

Nissan, Toyota and the Rover Group submitted comments in response to NHTSA's April 6, 1994 notice.

Nissan's submission did not contain any projections for specific model years. Its 1995 mid-model year report indicated a 1995 CAFE level of 22.5 mpg. The Rover Group's submission also did not contain any projections for the 1998 model year. The Rover Group indicated in its August 1994 submission that it could not attain significant improvements in fuel economy until MY 2002 or later. Toyota's August 1994 submission projected a 1998 MY CAFE

of 22.4-23.0 mpg. This compares to a July 1995 mid-model year report projection of 21.2 mpg for MY 1995.

### B. Possible Additional Actions Affecting MY 1998 CAFE

#### 1. Further Technological Changes

NHTSA has considered whether manufacturers can use further technological changes to improve their CAFE beyond their August 1994 projections for MY 1998. The ability to improve CAFE by further technological changes to product plans is dependent on the availability of fuel efficiency enhancing technologies that manufacturers are able to apply within the available time.

The agency's PRIA discusses the fuel efficiency enhancing technologies which are expected to be available during the MY 1998 time period. A significant potential constraint on the increased use of these technologies for MY 1998 is the limited leadtime. NHTSA recognizes that the leadtime necessary to implement significant improvements in engines, transmissions, aerodynamics and rolling resistance is typically at least three years. Also, as the agency discussed in establishing its final rule for MYs 1996-97, once a new design is established and tested as feasible for production, the leadtime necessary to design tools and establish quantity production is typically 30 to 36 months. Some potential major changes may take even longer. Further, light trucks have a long model life, i.e., 8-10 years or more. If a manufacturer must make a major model change ahead of its normal schedule, this change may have a significant, unprogrammed financial impact.

Given the leadtime constraints, the agency does not believe that manufacturers can achieve a significant improvement in these projected CAFE levels for MY 1998 by additional technological actions.

#### 2. Product Restrictions

As an alternative to technological improvements, manufacturers could improve their CAFE by restricting their product offerings, e.g., limiting or deleting production of particular larger light truck models and larger displacement engines. Such product restrictions, if made necessary by selection of a CAFE standard that is above manufacturers' capabilities, could result in adverse effects on vehicle sales, or industry-wide employment, if consumers elected to retain older vehicles longer than usual or purchase the product of a competitor that was not similarly constrained. If consumers

chose instead to purchase vehicles over 8,500 pounds GVWR, which are not subject to CAFE standards, this shift would have the additional effect of defeating the energy-saving aims of the CAFE program. The agency's preliminary analysis of manufacturer capabilities indicates that 20.7 mpg is an appropriate level for the least capable manufacturer with a significant market share.

Application of a standard that would require product restrictions could have a substantial economic impact. In its most recent previous light truck CAFE rulemaking, the agency estimated the loss of production associated with sufficient product restrictions to raise the CAFE of the least capable manufacturer by 0.5 mpg. This analysis, contained in the final rule establishing MY 1996-97 light truck CAFE standards published in the Federal Register on April 6, 1994 (59 FR 16312), indicated that product restrictions could result in significant losses in production. This loss of production would cause hardship in the automobile industry and result in the loss of jobs and other economic effects. In addition to the adverse impacts on the automotive industry, the analysis concluded that a wide range of businesses could be seriously affected to the extent that they could not obtain the light trucks they need for business use. Also, such product restrictions could unduly limit consumer choice.

Given these considerations, which the agency believes are equally applicable to MY 1998, NHTSA tentatively concludes that product restrictions should not be considered as part of manufacturers' capabilities to improve MY 1998 CAFE.

### *C. Manufacturer-Specific CAFE Capabilities*

Of the manufacturers producing light trucks for sale in the U.S. in MY 1995, only two were projecting a CAFE lower than the large major domestic manufacturers: the Rover Group and Volkswagen. The Rover Group imports a small number of luxury 4WD utility vehicles and Volkswagen imports a small number of passenger vans. Because none of these fleets have a significant share of the U.S. market, and because the agency must set standards on an "industry-wide" basis, the discussion in this section will be limited to the capabilities of the three large domestic light truck manufacturers: Chrysler, Ford, and GM. Each of these manufacturers has at least 20 percent of the light truck market, which NHTSA considers a

representation of "industry-wide" effects.

#### 1. Chrysler

Chrysler's projected CAFE level is 21.0 mpg for MY 1998. In its submission, Chrysler discussed uncertainties associated with specific technologies and risks in forecasting future CAFE capabilities. It did not, however, quantify the fleet-wide effect of these risks and uncertainties except in the case of Federally mandated emissions and safety requirements.

Chrysler calculated a weight increase for each of the new safety and emissions requirements that will become effective during MY 1998 and derived a fuel economy effect for each of them. The agency accepts these figures except as discussed below.

The agency does not agree with any weight penalty for Federal Motor Vehicle Safety Standard (FMVSS) 214 for MY 1998 because compliance with the newly issued standard (60 FR 38749; July 28, 1995) should not add additional weight and the final rule will not apply until MY 1999. Similarly, the agency also will not consider any weight penalty for Federal Motor Vehicle Safety Standard (FMVSS) 206, as compliance with the requirements of recent amendments (60 FR 50124; September 28, 1995) should not add additional weight. The agency also will not consider projected penalties for safety rulemakings for which it has not issued a proposal, namely enhanced frontal impact (FMVSS 208) and side glazing ejection protection (FMVSS 205), since these standards, if amended, are unlikely to apply to MY 1998. However, if Chrysler plans to improve, voluntarily, the safety of its vehicles in these areas, NHTSA will consider the specific improvements and their CAFE effects.

Chrysler also projected a fuel economy effect for Federal Test Procedure (FTP) emissions test changes that will penalize fuel economy performance as measured in the laboratory. These test procedure changes include the effect of testing California cars with California Phase II fuel and the conversion to the 48-inch electric dynamometer.

The California Phase II fuel has a lower energy content than the reference fuel used for fuel economy testing for vehicles not meeting the California requirements. EPA intends to apply a correction to account for this energy loss, but Chrysler believes that the correction accounts for only half of the penalty, leaving a 2 to 3 percent net loss. EPA, however, has advised NHTSA that manufacturers may still run the fuel

economy test using the present Indolene fuel, so there is no need for a manufacturer to count a fuel economy penalty for fuel changes. Chrysler also estimates the change to the 48 inch dynamometer will produce fuel economy losses of 3 to 6 percent, although this is preliminary. EPA has indicated that its proposed test procedure revisions, including the 48-inch electric dynamometer, are unlikely to be in effect for MY 1998.

Eliminating Chrysler's provision for weight effects attributed to FMVSS 214, FMVSS 208 enhanced frontal impact, FMVSS 205, FMVSS 206, FTP revision, and the use of the 48-inch dynamometer leaves Chrysler's projected MY 1998 CAFE of 21.0 mpg unchanged. Without consideration of Chrysler's revised submission of September 18, 1995, the agency tentatively concludes that Chrysler's fuel economy capability for MY 1998 is 21.0 mpg.

#### 2. Ford

In its submission in response to the ANPRM, Ford projected a MY 1998 CAFE of 21.0 mpg and presented information in support of its contention that a combination of risks and opportunities applicable to MY 1998 result in CAFE of only 20.4 mpg.

Ford quantified a number of risks and minor opportunities, allocating much of the total risk to safety and emissions requirement effects. Ford also noted that there may be additional unquantified risks.

The safety portion of the risk is described in Ford's comment as due to additional weight to meet the proposed dynamic side impact test in FMVSS 214. As discussed above, this standard will not take effect in MY 1998. In regard to emissions, NHTSA requested that EPA review the emissions risk contained in Ford's proposal. EPA's response was that it is unlikely that the electric 48-inch dynamometer and its other proposed test procedure revisions will apply to 1998 model year vehicles. Based on these supporting comments, NHTSA removes the 48-inch dynamometer and FMVSS 214 risks.

The net of technological (non-regulatory) risks and opportunities for MY 1998 is also outlined in Ford's submission. NHTSA believes that these are reasonable corrections to the Ford nominal projections because there is an acknowledged risk that technologies will not always achieve their expected benefit and that, in combination with other technologies, the total gain does not equal the sum of the individual improvements taken alone.

Using the net of technological risks and opportunities and discarding the

claimed emissions and safety penalties leads NHTSA to estimate the MY 1998 Ford fleet CAFE capability to be 20.9 mpg.

3. General Motors

In its revised response to the ANPRM, General Motors projected a MY 1998 CAFE of 21.3 mpg along with a "higher confidence" estimate of 20.6 mpg. This represents a reduction of its prior estimate, submitted in August of 1994, of a projected 1998 MY CAFE of 21.1 to 21.9 mpg. GM attributed the change in its projection to the unavailability of technical improvements and other changes it had previously believed would be implemented by MY 1998.

GM provided a general discussion of the uncertainties about actually meeting the projected 21.3 mpg level. These uncertainties included the possibility of falling fuel prices causing consumer resistance to the purchase of the more fuel efficient models, an increased demand for higher performance, and the availability of fuel efficient technologies in competition with emission and alternative fuels mandates. In assessing the risks of each projected technology, GM accumulated certain estimated risks for MY 1998. These adjustments include possible detrimental mix shifts and under performance or delays of various new technologies. GM stated that it used a "probabilistic approach" to develop the risks that result in its "higher confidence" CAFE projection of 20.6 mpg for MY 1998. GM has not revealed the details of this analysis to the agency. Nonetheless, the agency agrees that there are risks to the introduction of new models and technologies on schedule and the achievement of the full potential of new technologies. NHTSA believes that the GM risk estimate, much of which is attributable to further mix shifts and the possible underachievement of technical improvements in earlier years, is excessive by at least 0.1 mpg. Thus, the agency tentatively concludes that GM's baseline capability for MY 1998 is 20.7 mpg.

GM also pointed out in its May 31, 1995, submission that its model mix puts it at a disadvantage relative to other manufacturers for CAFE performance. GM included a computation that showed that if GM produced the same model mix in MY 1994 as Ford did, its CAFE would be 1.16 mpg higher. (Ford's fleet most nearly matches GM's in array of models offered.) The agency was able to replicate this value using its own databases from manufacturers' fuel economy reports.

Thus, the baseline "higher confidence" GM fleet projection of 20.6

mpg may be increased by discarding 0.1 mpg of the risk used by GM to establish the differential between its higher confidence estimate of 20.6 mpg and its lower confidence estimate of 21.3 mpg. As noted above, the agency believes that this risk, set by GM as 0.7 mpg, is overstated by 0.1 mpg and fails to account for control over mix shifts and the complete development of technical improvements. Adding this 0.1 mpg to the higher confidence estimate of 20.6 mpg yields a CAFE capability of 20.7 mpg for General Motors for MY 1998.

In summary, the agency tentatively concludes that the CAFE capability of the three domestic manufacturers for MY 1998 is as follows:

Manufacturer	MY 1998
Chrysler .....	21.0
Ford .....	20.9
GM .....	20.7

There are, of course, uncertainties, as well as new information in late-filed comments, which may require these projections to be adjusted. NHTSA notes that variations may occur in the light truck mix in response to consumer demand, fuel prices and fuel availability. Also, as noted elsewhere, application of fuel saving technologies and other improvements involving substantial redesign may not be possible for the 1998 model year due to leadtime considerations.

IV. Other Federal Standards

In determining the maximum feasible fuel economy level, the agency must take into consideration the potential effects of other Federal standards. The following section discusses other government regulations, both in process and recently completed, that may have an impact on manufacturers' fuel economy capability for MY 1998.

A. Safety Standards

NHTSA has adopted several safety standards that have been analyzed for their potential impact on light truck fuel economy capabilities for MY 1998. They are discussed below.

FMVSS 208 (Automatic Restraints)

On March 26, 1991, NHTSA published (56 FR 12472) a final rule requiring automatic restraints on trucks with a Gross Vehicle Weight Rating of 8,500 pounds or less and an unloaded vehicle weight of 5,500 pounds or less. These requirements phase in at the following rate for each manufacturer: 20 percent of light trucks manufactured from September 1, 1994 to August 31, 1995; 50 percent of light trucks manufactured from September 1, 1995

to August 31, 1996; 90 percent of light trucks manufactured from September 1, 1996 to August 31, 1997; and all light trucks manufactured on or after September 1, 1997. Although light truck manufacturers may comply with the automatic restraint requirements by using automatic belts, "passive interiors," or air bags, NHTSA expects that essentially all light truck manufacturers will comply by using air bags.

To encourage the use of more innovative automatic restraint systems (primarily air bags) in light trucks, during the first four years of the phase-in (i.e., through MY 1998) manufacturers may count each light truck equipped with such a restraint system for the driver's position, and a manual safety belt for the right-front passenger's position, as a vehicle complying with the automatic restraint requirements. Beginning with MY 1999, however, all light trucks are required to provide automatic restraints for both the driver and right-front passenger positions.

Title II of the Intermodal Surface Transportation Efficiency Act of 1991 (P.L. 102-240) required NHTSA to amend its automatic restraint requirements to mandate that 80 percent of MY 1998 light trucks be equipped with both driver and passenger-side air bags, and that all MY 1999 light trucks be equipped with driver and passenger-side air bags. On September 2, 1993, NHTSA published a final rule in the Federal Register (58 FR 46551) to implement this requirement.

In the 1991 Final Regulatory Impact Analysis for the light truck automatic restraint rulemaking, NHTSA estimated weight increases per vehicle of 35.7 pounds for the combination of driver and right-front passenger air bags (including "secondary weight"—i.e., weight added for supporting structure, etc.). Fuel economy would be reduced by about 0.12 mpg.

The manufacturers' estimates of the average weight effect of mandatory air bags were generally consistent with the agency's estimate of 35.7 pounds. The weight effects of FMVSS 208 are included in the manufacturers' fuel economy projections, so there is no need for NHTSA to adjust their projections to consider the impact of this standard. In addition, because NHTSA expects manufacturers to rely on driver- and passenger-side air bags to meet the requirement that 90 percent of MY 1997 light trucks be equipped with some form of passive restraint, the incremental effect of going from 90 percent passive restraints to 100 percent automatic restraints (and at least 80

percent airbags) in MY 1998 is very small. This incremental increase in air bag usage should reduce MY 1998 fuel economy capabilities by only about 0.012 mpg.

#### FMVSS 208 (Safety Belt Comfort and Fit)

On August 3, 1994, NHTSA published a final rule (59 FR 39472) requiring that lap/shoulder belts installed for adjustable seats in vehicles with a GVWR of 10,000 pounds or less either be integrated with the seat or be equipped with a means of adjustability to improve the fit and increase the comfort of the belt for a variety of different-sized occupants. The effective date for the rule is September 1, 1997 (or, essentially, MY 1998). This rule was issued in response to an Intermodal Surface Transportation Efficiency Act requirement that NHTSA address the matter of improved design for safety belts.

The agency believes that adjustable upper anchorages and seat-frame-mounted anchorages are the most likely compliance measures. Integrated seats (in which a belt design is incorporated into the seat) are another compliance option, but high costs are expected to delay their widespread use. NHTSA expects that this rule will result in an average weight increase of about one pound per vehicle. This translates into a fuel economy loss of less than 0.004 mpg.

#### FMVSS 214 (Side Impact Protection)

On July 28, 1995 NHTSA issued a final rule (60 FR 38749) extending dynamic testing requirements for side impact protection to light trucks, multipurpose passenger vehicles and buses with a GVWR of 6,000 pounds or less manufactured after September 1, 1998. The test will require a light truck to provide occupant protection in a side-impact crash test.

The new side impact rule incorporates the moving deformable barrier used in the passenger car requirements of FMVSS 214, with no change in height or weight.

NHTSA has concluded that the extension of the passenger car dynamic side impact requirements to light trucks will not result in weight increases to the average vehicle, and certainly will not cause any weight increases in MY 1998. Accordingly, the agency does not believe that there is a CAFE penalty imposed by the new requirements of Standard 214.

#### FMVSS 216 (Roof Crush Resistance)

FMVSS 216 is intended to reduce deaths and injuries due to the crushing

of the roof into the passenger compartment in rollover crashes. The standard establishes strength requirements for the forward portion of the roof to increase the resistance of the roof to intrusion and crush.

NHTSA is researching the area of improved roof crush strength. Chrysler mentioned the possibility of upgraded requirements in this area. Ford also noted that "[r]esearch is also being conducted which could result in more stringent roof crush for rollover protection." Because NHTSA has not issued a proposal in this area, no CAFE effect is assumed for MY 1998.

#### FMVSS 201 (Interior Head Impact Protection)

The Intermodal Surface Transportation Efficiency Act of 1991 required that NHTSA initiate and complete rulemaking to address "improved head impact protection from interior components of passenger cars (i.e., roof rails, pillars, and front headers)." On August 18, 1995, NHTSA issued a final rule amending FMVSS 201 (58 FR 7506) to require passenger cars and light trucks with a GVWR of 10,000 pounds or less to provide protection when an occupant's head hits upper interior components (such as A-pillars and side rails) during a crash. The estimated weight effects for trucks from changes to this standard would be 6-9 pounds per vehicle. A weight increase of 9 pounds per light truck would translate into a fuel economy penalty of about 0.03 mpg. However, as the amendments call for phase-in beginning with MY 1999 vehicles, the FMVSS 201 amendments will have no impact on MY 1998 CAFE.

#### Anti-Lock Brakes

The Intermodal Surface Transportation Efficiency Act of 1991 required that NHTSA initiate rulemaking to "consider the need for any additional brake performance standards for passenger cars, including antilock brake standards." On January 4, 1994, NHTSA issued an ANPRM (see 59 FR 281) to request information on the desirability of requiring that passenger cars and light trucks be equipped with anti-lock brake systems (ABS). For MY 1993, 52 percent of domestic and imported light trucks were equipped with 2-wheel ABS and 31 percent were equipped with 4-wheel ABS.

In the Preliminary Economic Assessment accompanying the ABS ANPRM, NHTSA estimated that 4-wheel ABS would add 13 pounds to the weight of a non-ABS vehicle. A rear-wheel-only ABS was estimated to add 7.2 pounds. These estimates do not include any

consideration of secondary weight. If all light trucks were equipped with 4-wheel anti-lock brakes, the fleet average increase in weight relative to MY 1993 installation rates would be about nine pounds. This would reduce the average CAFE level by about 0.03 mpg.

Manufacturers are voluntarily increasing the installation of ABS on light trucks in response to consumer demand. In their responses to the ANPRM, Ford, General Motors and Chrysler all included CAFE weight penalties for equipping varying proportions of their fleets with anti-lock brakes. As the agency does not wish to impede voluntary adoption of safety improvements, it will accept the manufacturers' projected penalties rather than apply a single reduction in setting MY 1998 light truck CAFE.

#### FMVSS 206 (Door Locks and Door Retention Components)

On September 5, 1995 (60 FR 50124), NHTSA issued a final rule to extend the existing side door requirements of FMVSS 206 to the back doors of passenger cars, as well as multi-purpose vehicles with gross vehicle weight ratings below 8,500 pounds. This includes sport utility vehicles and passenger vans. The purpose of the amendment is to reduce the likelihood of occupants being ejected through rear hatches, tailgates, and other rear doors of these vehicles in crashes. This standard becomes effective on September 1, 1997.

NHTSA also is considering a general upgrade in the stringency of FMVSS 206 to reduce door openings and associated ejections. In August 1988, NHTSA published an ANPRM describing alternative measures to reduce ejection and, on July 12, 1995, NHTSA published a Federal Register notice (60 FR 35889) announcing a public meeting on a potential upgrade of FMVSS 206. NHTSA has conducted studies of crash-involved vehicles where door latch failures may have occurred. NHTSA also has conducted tests to determine the strength of latches on various vehicles. However, at this point, NHTSA has not issued a specific proposal to amend the standard.

For MY 1998 CAFE, NHTSA is assuming no measurable CAFE impact for upgrading latch strength in response to the agency's final rule. Agency comparisons of complying and non-complying latches showed no significant weight differences. Also, no specific proposal has been issued on a more general upgrade of FMVSS 206; thus, any potential weight or CAFE impacts would be purely speculative.

### FMVSS 205 (Glazing Materials)

NHTSA published two ANPRMs in 1988 announcing that the agency was considering proposing requirements for passenger vehicles to reduce the risk of ejections in side impact crashes. One notice (53 FR 31712, August 19, 1988) dealt with passenger cars. The other (53 FR 71716, August 19, 1988) dealt with light trucks. The agency reported that a significant number of fatalities and serious injuries involved partial or complete ejection of occupants through doors and side windows.

In addition, a Rulemaking Plan entitled "Planning Document for Rollover Prevention and Injury Mitigation" was published for public comment on September 29, 1992 (57 FR 44721). This document included a section concerning ejection mitigation using glazing. It noted that the agency was considering rulemaking to reduce ejections through side window glazing.

Because NHTSA has not issued a proposal in this area, no CAFE effect is assumed for MY 1998.

### FMVSS 301 (Fuel System Integrity)

On April 12, 1995, NHTSA published an advance request for comment (60 FR 18566) on upgrading FMVSS 301 in a 3-phased approach. In the notice, the agency stated its desire to reduce the number of fire-related casualties to occupants of passenger cars and light trucks.

This is another area where NHTSA has not issued a specific proposal to upgrade the existing standard. Therefore, no estimate can be made of possible impacts on MY 1998 light truck fuel economy capabilities.

### Bumpers

Toyota's response to the ANPRM indicated a possible fuel economy loss due to upgraded bumpers in response to a bill introduced in Congress in 1994. NHTSA has not proposed any upgrading of the bumper standard (nor has this bill passed) and has therefore not included any effect for this item in determining manufacturers' light truck fuel economy capabilities.

### B. Voluntarily-Installed Safety Equipment

In their comments on the ANPRM, a number of light truck manufacturers indicated they would be installing some safety equipment that is not required by Federal Motor Vehicle Safety Standards.

#### Daytime Running Lights

On January 11, 1993, NHTSA published a final rule (58 FR 3500) facilitating the introduction of daytime running lights (DRLs) as items of

optional motor vehicle lighting equipment. The rule was designed to ensure that auto manufacturers may offer DRLs in all 50 states, and to adopt specifications so that DRLs do not reduce the current level of highway safety.

In its ANPRM response, General Motors indicated that it would begin the voluntary phase-in of DRLs in MY 1995. The company said the weight increase would be about one pound. EPA has decided to conduct fuel economy and emissions testing with the DRL system deactivated until further information is available on the actual safety benefits of the system. GM stated, "Since the DRLs will not be energized during fuel economy testing and since the additional weight of the system is negligible, GM's truck CAFE will not be significantly impacted. However, if the policy for fuel economy testing is changed a CAFE penalty would occur."

#### Other Voluntarily-Installed Safety Equipment

The effect of other voluntarily-installed safety equipment (i.e., traction control, and built-in child restraints) on fuel economy is estimated to be negligible for MY 1998. Any impact for each company is included in the manufacturers' estimates of fuel economy capability.

#### Conclusions

The great majority of light truck safety standards that have been promulgated in recent years will be in full effect before MY 1998. New safety standards known to be going into effect during MY 1998 (or for which NHTSA has issued an NPRM) will have a negligible impact on light truck manufacturers' fuel economy capabilities. The anticipated reduction in MY 1998 CAFE capability attributable to these standards is less than 0.02 mpg, with 0.012 mpg attributed to mandatory air bags (FMVSS 208), 0.004 mpg attributed to improved belt fit (FMVSS 208), and no fuel economy penalty for dynamic side impact (FMVSS 214) or the application of FMVSS 206 to rear doors.

Based on manufacturer responses to the ANPRM, the post-1997 CAFE effect of voluntarily-installed safety equipment will be negligible. Typical safety equipment that light truck manufacturers are voluntarily installing on some models today (such as greater-than-required use of air bags, anti-lock brakes, built-in child restraints, and traction control) will be in widespread use before MY 1998. Thus, there will be little impact from additional voluntary installations of such equipment in the post-1997 period.

### C. Environmental Requirements

#### Revised Federal Exhaust Emissions Standards

The Clean Air Act Amendments of 1990 impose more stringent exhaust emissions standards on light trucks. Under the Clean Air Act Amendments, new standards (so-called "Tier I" standards) for trucks apply to all MY 1996 and later trucks with GVWRs up to 6,000 pounds. All light trucks over 6,000 pounds GVWR must meet the new standards in MY 1997 and later.

In its response to the ANPRM, General Motors stated that, "\* \* \* initial indications are that there will be some lost opportunities to improve fuel economy when redesigning our powertrains in 1996 MY to comply with these standards."

Chrysler stated, "The combination of calibrating to the tighter emission standards and the increase in weight due to the additional hardware necessary to meet standards will have a negative effect on fuel economy." This loss appears to be included in Chrysler's MY 1998 baseline fuel economy. Ford did not specifically address Tier I emission requirements in its ANPRM response.

NHTSA believes that compliance with the Tier 1 requirements does not impose any significant CAFE penalty. In addition, because these standards are in full effect before MY 1998, they should cause no additional loss in MY 1998 light truck fuel economy capabilities.

#### Evaporative Emission Standards and Onboard Vapor Recovery

The Clean Air Act Amendments also required EPA to promulgate regulations covering evaporative emissions (1) during operation (so-called "running losses") and (2) over two or more days of non-use. These revised regulations begin taking effect in MY 1996, applying to 20 percent of vehicles in that model year, increasing to 40 percent in MY 1997, 90 percent in MY 1998, and 100 percent for MY 1999 and subsequent model years. Onboard vapor recovery requirements begin taking effect in MY 2001.

In its ANPRM response, General Motors said that the weight gains associated with meeting both of these requirements are small and the corresponding truck CAFE impact would be negligible. Ford did not specifically address either item in its response. Chrysler's response contains estimates for fuel economy loss in meeting these requirements.

NHTSA asked EPA to review the manufacturers' comments on the possible fuel economy effects of

upcoming and potential light truck emission regulations. In its response, EPA addressed a number of emission regulations.

With regard to enhanced evaporative and onboard refueling vapor recovery requirements, EPA indicated that new evaporative procedures and on-board vapor recovery standards are likely to require larger canisters to comply. The larger canisters add an estimated 2 pounds for enhanced evaporative requirements and somewhat less than 10 pounds for on-board vapor recovery systems. EPA also indicated that different test procedures governing canisters in tests for emissions and fuel economy will negate any potential fuel economy loss involving onboard canisters. NHTSA estimates that EPA's projection of about a 12-pound weight increase for enhanced evaporative and onboard refueling vapor recovery requirements would translate into a fuel economy loss of about 0.04 mpg. However, only the evaporative requirements would affect MY 1998 fuel economy levels; their impact would be less than 0.01 mpg.

#### Potential Revisions to the Federal Test Procedure

The 1990 Clean Air Act Amendments require EPA to review (and revise as necessary) the Federal Test Procedure (FTP) to ensure that vehicles are tested under circumstances reflecting actual driving conditions. EPA published an NPRM on the FTP on February 7, 1995.

In its ANPRM response, General Motors stated, "It is likely that the FTP might change during the period considered in [NHTSA's light truck fuel economy] ANPRM. If changes are enacted that impact fuel economy testing, CAFE would be impacted unless EPA *fully* compensates for any CAFE penalty."

Ford stated that the use of the electric 48-inch dynamometer may significantly decrease measured fuel economy. In Ford's view, the proposed FTP revisions would have a negative impact on fuel economy.

Chrysler stated that additional hardware may be needed to meet the new standards, thus increasing weight and negatively impacting fuel economy testing if the requirements result in additional vehicle weight or higher applied engine loads. Chrysler claimed fuel economy losses of 3–6 percent have been measured using the electric dynamometer.

Chrysler claimed a substantial fuel economy loss for potential test procedure changes including losses of 0.6–1.2 mpg in MY 1998.

In EPA's response to NHTSA with regard to revised FTP requirements, EPA stated:

Revised FTP standards are not likely to reduce the fuel economy during fuel economy testing. The additional off-cycle tests required will likely have lower fuel economy; however, only the FTP would be used for fuel economy purposes.

NHTSA believes that the possible higher speed/higher acceleration and air conditioning tests will not have a significant effect on MY 1998 light truck CAFE capabilities. As EPA indicates that it is unlikely that its proposed test procedure revisions, including the use of 48-inch dynamometers, will apply to 1998 model year vehicles, NHTSA is not making any correction for their use in determining the MY 1998 light truck fuel economy standards.

#### California Requirements

In 1991, the California Air Resources Board approved Low-Emission Vehicle (LEV) and Clean Fuels regulations. These regulations establish stringent emissions standards for four new classes of low-emission vehicles and require auto manufacturers to meet an annual, increasingly stringent, fleet-average standard for non-methane organic gas (NMOG) emissions. In addition, California "Phase II" reformulated gasoline is required to be available at the pump by January 1, 1996. The Phase II fuel has a number of different characteristics from the Indolene fuel currently used for fuel economy testing. EPA indicates that the energy content (BTUs/gallon) of California Phase II fuel is about 2–3 percent lower than Indolene. Lower energy content results in lower measured fuel economy, in miles per gallon.

In its response to NHTSA's fuel economy ANPRM, Ford indicated that compliance with California's NMOG standards would result in fuel economy penalties relative to a MY 1997 baseline. With regard to the California emissions standards, General Motors stated that if an electrically heated catalyst (EHC) is used to meet the LEV/ULEV requirement, it would cause at least a 3 percent fuel economy loss in these vehicles. Nissan claimed a 2.1 percent fuel economy penalty for "Emissions (LEV)." Chrysler did not claim that the California LEV emissions control requirements would have any impact in MY 1998.

The impacts of the California emissions standards are somewhat uncertain. The fuel economy losses claimed by Ford and Chrysler are specifically outlined in their submissions. However, because essentially all of their impacts occur in

the post-1998 period, NHTSA has not included these adjustments in determining these companies' fuel economy capabilities. In addition, the claims made by GM and Nissan for California-standards-induced fuel economy losses in their ANPRM responses were not specific enough for the agency to make any adjustment to their fuel economy projections.

Chrysler also raised an issue about the impacts of California reformulated gasoline on fuel economy. The company stated that the fuel economy values for vehicles tested using California Phase II gasoline will be 4–6% lower than if tested using Indolene but that existing EPA fuel economy test procedures do not adequately address this deficit. The result, according to Chrysler, is a 2–3% decrease in fuel economy. Chrysler contends that since no action is currently being taken by EPA to correct the adjustment procedure, the fuel economy penalty must be taken into account by NHTSA in setting future standards.

NHTSA does not agree with Chrysler that the agency must make an adjustment for California Phase II fuel in setting future light truck fuel economy standards. EPA has addressed this issue through allowing the use of Indolene for fuel economy testing.

#### Section 177

States may voluntarily adopt the more stringent California emissions standards under Section 177 of the Clean Air Act Amendments of 1990. None of the manufacturers providing submissions provided any specific data outlining fuel economy losses for other states adopting the California LEV program. As in the case of California emissions standards, because the impacts of the Section 177 emissions standards are uncertain and the fuel economy impacts for MY 1998 are negligible, NHTSA has not made any adjustment for the impact of Section 177 standards.

#### B. Other Light Truck Fuel Economy Studies

In 1992, the National Academy of Sciences (NAS) published a report jointly commissioned by the Federal Highway Administration and NHTSA entitled *Automotive Fuel Economy—How Far Should We Go?* This report included a discussion of "technically achievable" fuel economy levels for light trucks for MYs 1996, 2001, and 2006. Additionally, the Department of Energy published a report in January 1994 prepared by its contractor, Energy and Environmental Analysis, Inc. (EEA) entitled *Domestic Manufacturers' Light*

Truck Fuel Economy Potential to 2005 (Docket No. 94-20-NO1-003).

Both the NAS and the EEA studies have limitations in providing guidance for setting CAFE standards. The NAS study does not completely replicate the new light truck fleet in that its model fleet does not include large vans and utility vehicles. Its use of expensive fuel saving technologies may go beyond what the market will accept; and at the same time, it may not fully recognize the growing demand for more power, accessories, and weight in light trucks. The NAS study also treats the entire light truck fleet together, rather than analyzing individual companies as the agency must in setting standards. It should be noted that the Academy itself stated that its "technically achievable" fuel economy estimates should not "be taken as its recommendation on future fuel economy standards." A detailed discussion of the Academy's estimates is contained in the agency's Preliminary Regulatory Evaluation which has been placed in the docket.

The EEA study is more useful in that it discusses the prospects of the domestic manufacturers individually. However, the EEA study has limited application to setting a 1998 MY CAFE standard as it envisions CAFE improvement derived from design and technical improvements that would be difficult to implement by the 1998 model year.

The Department of Transportation Appropriations Act for FY 1995, directed the Department to conduct a study of the unique capabilities, uses, and utility requirements of light trucks to determine if such requirements would result in design constraints that would limit fuel economy improvements. That study is underway and should be completed in time to be considered prior to taking final action for MY 1998.

#### V. The Need of the United States to Conserve Energy

The United States imported 15 percent of its oil needs in 1955. The import share reached 36.8 percent in 1975, the year the Energy Policy and Conservation Act (EPCA) was passed, and rose to 46.4 percent in 1977. Although the share declined to below 30 percent in the mid-1980's, lately the United States has again become increasingly dependent on imported oil. Over 40 percent of the country's petroleum needs have been imported in every year since 1988, reaching 44.3 percent in 1990 and an estimated 48.2 percent in 1994.

Similarly, the percentage of oil imported from OPEC sources, which

peaked at 70 percent in 1977, and declined to a low of 36 percent in 1985, has since risen to the point where OPEC supplies about half of the nation's imported oil. Imports from OPEC reached 53.6 percent of imports in 1991 and accounted for 47 percent of 1994 imports.

The average cost of crude oil imports jumped from \$4.08 per barrel in 1973 to \$12.52 in 1974 as a result of the oil embargo against selected countries, including the United States, by Arab members of OPEC. Additional increases in the cost of oil occurred in 1979-80, due to unrest in Iran (which eliminated a substantial portion of that country's oil output), and in 1980-81, when the outbreak of the Iran-Iraq war reduced supply from the area. In 1981, the United States adopted a policy of reliance on market forces and decontrolled the price of oil. Since 1981, prices generally have fallen. In 1990, petroleum prices were affected by the conflict in the Persian Gulf, and prices for crude oil and petroleum rose and fell in response to Middle East events. In 1994, the average refiner acquisition cost of imported crude oil was \$15.51 per barrel, 6 percent below the average 1993 level. The cost of domestic crude oil in 1994 was \$15.68, four percent less than the 1993 average.

The current energy situation and emerging trends point to the continued importance of oil conservation. The United States now imports a higher percentage of its oil needs than it did during 1975, the year EPCA was passed, and the percentage of its oil supplied by OPEC is similar to that of 1975. Oil continues to account for over 40 percent of all energy used in the United States, and 97 percent of the energy consumed in the transportation sector. Despite legislation designed to spur the use of alternative fuels, gasoline will likely remain the predominant fuel in the transportation sector. Sales of alternative-fueled vehicles are forecast to account for only 3.0 percent of light-duty vehicle sales in 2000. Domestic oil production has declined steadily since reaching a peak of 10.6 million barrels per day in 1985 to 9.1 million barrels per day in 1991. Domestic crude oil production is expected to drop by 170,000 barrels per day (2.6 percent) in 1995 and an additional 220,000 barrels per day (3.4 percent) in 1996. While the United States is currently the world's second largest oil producer, it contains only about three percent of the world's known oil reserves. Persian Gulf countries contain 63 percent of known world reserves, and former communist countries contain 9 percent.

Long-term projections of petroleum prices, supply, and demand are now influenced by a wide range of uncertainties associated with sweeping economic and political changes in the former U.S.S.R. and in Eastern Europe, environmental issues, the role of Middle East countries in determining the world's future oil supplies and prices, and future energy demands in populous developing countries. The Department of Energy projects that oil prices will be between \$14 and \$22 (1994 dollars) per barrel in the year 2000, and will rise to between \$15 and \$30 per barrel by 2010. DOE projects a continuing decline in domestic oil production to between 3.58 and 6.20 million barrels per day in 2010, with imports rising to between 48 percent and 78 percent of total use. Two-thirds of the projected increase in total petroleum consumption in the United States during the next 20 years will be in the transportation sector. This is in spite of the fact that DOE's projections assume that significant improvements in vehicle fuel efficiency will take place as motor gasoline prices rise.

The level of petroleum imports is only one aspect of the total energy conservation picture. Under the Energy Policy and Conservation Act and the National Environmental Protection Act, for example, national security, energy independence, resource conservation, and environmental protection must all be considered.

The increase in market share of light trucks points to the importance of fuel economy for this class of vehicle. Light trucks are less fuel efficient and, on average, are driven more miles over their lifetime than passenger automobiles. In 1991, over half of the energy in the transportation sector was used by light-duty vehicles (automobiles and light trucks). Light trucks have steadily increased their share of petroleum use in the transportation sector. Between 1976 and 1994, the market share for passenger cars decreased from 78 percent to 60 percent of total light-duty vehicle sales, while market share for light trucks rose from 22 percent to 40 percent.

Light trucks meeting the standard proposed by this notice would be more fuel-efficient than the average vehicle in the current light truck fleet in service, thus making a positive contribution to petroleum conservation.

#### VI. Determining the Maximum Feasible Average Fuel Economy Level

As discussed above, section 32902(a) requires that light truck fuel economy standards be set at the maximum feasible average fuel economy level. In



making this determination, the agency must consider the four factors of section 32902(f): technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy. In addition, for this rulemaking, the agency is constrained by the provision of P.L. 104-50 which states that the agency may not set a standard that "differs from standards promulgated for such automobiles prior to [November 15, 1995]."

#### A. Interpretation of "Feasible"

Based on definitions and judicial interpretations of similar language in other statutes, the agency has in the past interpreted "feasible" to refer to whether something is capable of being done. The agency has thus concluded in the past that a standard set at the maximum feasible average fuel economy level must: (1) Be capable of being done and (2) be at the highest level that is capable of being done, taking account of what manufacturers are able to do in light of technological feasibility, economic practicability, how other Federal motor vehicle standards affect average fuel economy, and the need of the nation to conserve energy.

#### B. Industry-wide Considerations

The statute does not expressly state whether the concept of feasibility is to be determined on a manufacturer-by-manufacturer basis or on an industry-wide basis. Legislative history may be used as an indication of congressional intent in resolving ambiguities in statutory language. The agency believes that the reports on the 1975 Act provide guidance on the meaning of "maximum feasible average fuel economy level."

The Conference Report on the 1975 Act (S. Rep. No. 94-516, 94th Cong., 1st Sess. 154-55 (1975)) states:

Such determination [of maximum feasible average fuel economy level] should take industry-wide considerations into account. For example, a determination of maximum feasible average fuel economy should not be keyed to the single manufacturer which might have the most difficulty achieving a given level of average fuel economy. Rather, the Secretary must weigh the benefits to the nation of a higher average fuel economy standard against the difficulties of individual manufacturers. Such difficulties, however, should be given appropriate weight in setting the standard in light of the small number of domestic manufacturers that currently exist and the possible implications for the national economy and for reduced competition association [sic] with a severe strain on any manufacturer. \* \* \*

It is clear from the Conference Report that Congress did not intend that

standards simply be set at the level of the least capable manufacturer. Rather, NHTSA must take industry-wide considerations into account in determining the maximum feasible average fuel economy level.

NHTSA has traditionally set light truck standards at a level that can be achieved by manufacturers whose vehicles constitute a substantial share of the market. The agency did set the MY 1982 light truck fuel economy standards at a level which it recognized might be above the maximum feasible fuel economy capability of Chrysler, based on the conclusion that the energy benefits associated with the higher standard would outweigh the harm to Chrysler. 45 FR 20871, 20876, March 31, 1980. However, as the agency noted in deciding not to set the MYs 1983-85 light truck standards above Ford's level of capability, Chrysler had only 10-15 percent of the light truck domestic sales, while Ford had about 35 percent. 45 FR 81593, 81599, December 11, 1980. For MY 1998, NHTSA estimates that Chrysler, Ford, and GM each have more than 20 percent of the light truck market. NHTSA deems this percentage significantly large so as to represent "industry wide" effects. Thus, the agency does not plan to set the MY 1998 standard above the "maximum feasible" level of any of these manufacturers.

#### C. Petroleum Consumption

The precise magnitude of energy savings associated with alternative light truck fuel economy standards is difficult to ascertain. The potential savings associated with a MY 1998 standard above 20.7 mpg would be highly uncertain. Depending on the level of the standard, one or more of the three large domestic manufacturers could likely meet the level of the standard only by restricting the sales of its large light trucks (given the short leadtime before MY 1998 begins). If this occurred, consumers might tend to keep their older, less fuel-efficient light trucks in service longer. Also, consumers might purchase still larger trucks that are not subject to CAFE standards.

#### D. The Proposed MY 1998 Standard

Several manufacturers provided general recommendations for the MY 1998 standard in their responses to the ANPRM. Chrysler did not suggest a fuel economy standard for the year, but did state that the standards should be set at levels that can be achieved under any set of likely scenarios of economic practicability. As noted previously, Chrysler submitted a revised analysis of its CAFE capability too late to be included in this NPRM. However, the

agency will fully analyze Chrysler's late submission prior to reaching a final decision for MY 1998. Ford did not suggest any specific CAFE standard for future years, but cautioned against setting high standards. In its May 31, 1995, update, GM stated that NHTSA did not give adequate consideration to the risks of product introduction delays and technology shortfalls in evaluating a manufacturer's product plans for establishing fuel economy standards. GM noted that this lack of consideration is particularly harmful to the manufacturer that is determined to be the "least capable" for standards setting. GM also discussed how manufacturers' forecasts of CAFE decline as the actual production date approaches, i.e., the forecast in response to the NPRM is often lower than the forecast in response to the ANPRM for a given model year.

In response to the latter GM comment, NHTSA always bases the final rule on an assessment of the latest manufacturers' forecasts. Earlier projections are of interest for the changes that have occurred in the manufacturers' product plans, but they are not determinative when later information is available.

In regard to the GM argument on NHTSA's consideration of manufacturers' risks and product timing problems, which are addressed in detail in the agency's Preliminary Regulatory Evaluation (PRIA), the NHTSA estimates of each manufacturer's capability have been close to the manufacturer's own estimates for MY's 1990 through 1995, except for GM for MY 1995. Also, Ford and Chrysler have each achieved CAFE performance similar to their estimates, except in the case of Chrysler's mid-model year report values for MYs 1994 and 1995. (This discrepancy may be due to higher than expected sales of the new Chrysler standard pickup which is one of the least fuel-efficient models in the Chrysler fleet.) On average over these six model years, Chrysler has overestimated its final CAFE by 0.2 mpg; Ford's range of estimates averaged from 0.1 mpg too high to 0.4 mpg below the final value; and GM's range of estimates averaged from 0.1 to 0.3 mpg above the final value.

GM also notes that import manufacturers are not constrained, as yet, by the standards because of their model mix that is dominated by small trucks. Because of this, the import manufacturers do not have to employ expensive technologies to meet the standards, and they are able to produce fleets that have a larger share of their vehicles with 4WD. An alternative to this situation is to set class standards

that, for instance, might require different levels of fuel economy performance for specific vehicle types or weight subclasses. While such a system might be feasible were CAFE standards adopted with long lead times, as considered in the ANPRM, it is not feasible in the short lead time available for MY 1998.

Based on its analysis described above and on manufacturers' projections, NHTSA has tentatively concluded that the major domestic manufacturers can achieve the light truck fuel economy levels listed in the following table:

Manufacturer	Approximate market share (percent, based on MY 1994)	CAFE (mpg) MY 1998
GM .....	33	20.7
Ford .....	30	20.9
Chrysler .....	24	21.0

As indicated above, most light truck manufacturers other than GM, Ford and Chrysler are expected to achieve CAFE levels above those companies. Only two or three light truck manufacturers, Range Rover, Volkswagen, and possibly Mercedes-Benz, are expected to have fuel economy levels lower than the major domestic manufacturers. Since these companies have extremely small market shares, NHTSA believes that setting a standard based on their capabilities would be inconsistent with a determination of maximum feasibility that takes industry-wide considerations into account, as required by statute.

As the above table demonstrates, NHTSA has tentatively concluded that GM is the least capable manufacturer with a substantial share of sales for MY 1998. NHTSA has also tentatively concluded that 20.7 mpg is the maximum feasible standard for MY 1998. For the reasons discussed below, the agency believes this level would balance the potential petroleum savings associated with a higher standard against the difficulties of manufacturers facing a potentially higher standard.

The agency believes that a 20.7 mpg light truck CAFE standard for MY 1998 would make a positive contribution to petroleum conservation by promoting continued production of fuel efficient vehicles. Moreover, it would encourage GM, which has a large market share, to achieve its projected CAFE level.

The agency believes that a 20.7 mpg standard would not unduly restrict consumer choice or have adverse economic impacts on the large domestic manufacturers. The current product plans submitted by Ford, GM and

Chrysler indicate that they expect to achieve a MY 1998 CAFE level at or above 20.7 mpg. Therefore, they will not have to make any changes in their product plans to achieve the level of the standard.

NHTSA believes that a higher standard than 20.7 mpg for MY 1998 could result in serious economic difficulties for GM. Product restrictions could be required to achieve a CAFE higher than 20.7 mpg. Given leadtime constraints, NHTSA believes that the first potential fuel-efficiency actions that GM or any other manufacturer would consider in response to a higher standard would consist of marketing actions. For the reasons discussed in other notices, however, the agency does not believe that marketing actions can be relied upon to significantly improve a manufacturer's CAFE. See, e.g., MY 1993-94 light truck CAFE final rule (56 FR 13775, April 4, 1991). If such marketing actions were unsuccessful in whole or in part, GM would likely have to engage in product restrictions to achieve the level of a higher CAFE standard. Such product restrictions could result in adverse economic consequences for GM, its employees and the economy as a whole and limit consumer choice, especially with regard to the load-carrying needs of light truck purchasers.

As indicated above, while NHTSA has tentatively concluded that GM is the least capable manufacturer with a substantial share of sales, the agency believes that GM's capability is not significantly below that of Ford or Chrysler. These three companies combined will sell over 85 percent of all new light trucks sold in the U.S. in MY 1998. Therefore, even if the agency were to set a standard above GM's capability, the standard could not be much above 20.7 mpg and still remain within the capability of the overwhelming majority of the industry.

NHTSA believes that a 20.7 mpg standard would balance the potentially serious adverse economic consequences for GM that could result from a higher standard with the potential for continued petroleum savings. The agency has tentatively concluded, in view of the statutory requirement to consider specified factors, that the relatively small and uncertain energy savings associated with setting a standard above GM's capability would not justify the potential harm to that company and the economy as a whole.

A number of organizations and individuals have requested that NHTSA evaluate the safety effects of its CAFE decisions. An analysis of the extent to which significantly higher light truck

CAFE standards could affect safety is more complex than for passenger car standards, since purchasers would have many more options for substitution (e.g., different kinds of light trucks, trucks with a high enough GVWR that they are not subject to CAFE standards, etc.) The agency notes that since light trucks are generally significantly larger and heavier than passenger cars, the safety effects of a particular weight change, if they exist, would likely be smaller than for cars.

The available evidence indicates that a MY 1998 standard of 20.7 mpg would not have any impact on safety. NHTSA notes that, in setting the light truck CAFE standards for recent model years, the agency has not included in its analyses of manufacturer capabilities any product plan actions that would significantly affect the weight, size or cost of the vehicles the manufacturers planned to offer. The agency also notes that the levels of the light truck CAFE standards have not varied significantly for more than a decade. The light truck CAFE standards for MY 1987-89 and MY 1994 were set at 20.5 mpg, and, as far back as MY 1984, the standard was 20.0 mpg.

NHTSA therefore believes that the size and weight of current and planned light trucks are not significantly different from what would have occurred in the absence of CAFE standards. Moreover, as discussed above, Ford, GM and Chrysler do not need to change their product plans to meet or exceed the level of the proposed MY 1998 light truck CAFE standard. Thus, a 20.7 mpg light truck CAFE standard for MY 1998 would not lead to significant changes in light truck size or weight, or shifts toward less safe vehicles. The agency, therefore, has tentatively concluded that it would not likely have any impact on safety.

This proposed rule would not have any retroactive effect. Under section 32919 of Chapter 329 of Title 49, (49 U.S.C. 32919), whenever a Federal motor vehicle fuel economy standard is in effect, a state may not adopt or maintain separate fuel economy standards applicable to vehicles covered by the Federal standard. Under section 32919(b) of Chapter 329 of Title 49 (49 U.S.C. 32919(b)), a state may not require fuel economy labels on vehicles covered by section 32908 of Chapter 329 of Title 49 (49 U.S.C. 32908) which are not identical to the Federal standard. Section 32919 does not apply to vehicles procured for the State's use. Section 32909 of Chapter 329 of Title 49 (49 U.S.C. 32909) sets forth a procedure for judicial review of final rules establishing, amending or revoking

Federal average fuel economy standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

VII. Impact Analyses

A. *Economic Impacts*

The agency has considered the economic implications of the proposed standard and determined that the proposal is significant within the meaning of Executive Order 12866 and significant within the meaning of the Department's regulatory procedures. The agency's detailed analysis of the economic effects is set forth in a Preliminary Regulatory Evaluation (PRE), copies of which are available from the Docket Section. The contents of that analysis are generally described above.

B. *Impacts on Small Entities*

Pursuant to the Regulatory Flexibility Act, the agency has considered the impact this rulemaking would have on small entities. I certify that this action would not have a significant economic impact on a substantial number of small entities. Therefore, a regulatory flexibility analysis is not required for this action. Few, if any, light truck manufacturers subject to the proposed rule would be classified as a "small business" under the Regulatory Flexibility Act.

C. *Impact of Federalism*

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that the proposed rule would not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment.

D. *Department of Energy Review*

In accordance with section 32902(i) of Chapter 329 of Title 49, the agency

submitted this proposal to the Department of Energy (DOE) for review. The Department has concurred in the level proposed for MY 1998.

VIII. Comments

NHTSA is providing a comment period, ending on March 4, 1996 for interested parties to present data and views on the issues raised in this notice and the accompanying PRE, as well as any other issues commenters believe are relevant to this proceeding. It is requested but not required that 10 copies be submitted.

Comments must not exceed 15 pages in length (49 CFR 553.21). Necessary attachments may be appended to these submissions without regard to the 15-page limit. This limitation is intended to encourage commenters to detail their primary arguments in a concise fashion.

If a commenter wishes to submit certain information under a claim of confidentiality, three copies of the complete submission, including purportedly confidential business information, should be submitted to the Chief Counsel, NHTSA, at the street address given above, and seven copies from which the purportedly confidential information has been deleted should be submitted to the Docket section. A request for confidentiality should be accompanied by a cover letter setting forth the information specified in the agency's confidential business information regulation. 49 CFR part 512.

All comments received before the close of business on the comment closing date indicated above for the proposal will be considered, and will be available for examination in the docket at the above address both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Comments received too late for consideration in regard to the final rule will be considered as suggestions for further rulemaking action. Comments on the proposal will be available for inspection

in the docket. NHTSA will continue to file relevant information as it becomes available in the docket after the closing date, and it is recommended that interested persons continue to examine the docket for new material.

Those persons desiring to be notified upon receipt of their comments in the rules docket should enclose a self-addressed, stamped postcard in the envelope with their comments. Upon receiving the comments, the docket supervisor will return the postcard by mail.

List of Subjects in 49 CFR Part 533

Energy conservation, Motor vehicles.

**PART 533—[AMENDED]**

In consideration of the foregoing, 49 CFR Part 533 would be amended as follows:

1. The authority citation for part 533 would be amended to read as follows:

Authority: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.50

2. Section 533.5(a) would be amended by revising Table IV to read as follows:

**§ 533.5 Requirements.**

\* \* \* \* \*

TABLE IV

Model year	Standard
1996 .....	20.7
1997 .....	20.7
1998 .....	20.7

\* \* \* \* \*

Issued on: December 26, 1995.

Barry Felrice,

*Associate Administrator for Safety Performance Standards.*

[FR Doc. 96-4 Filed 1-2-96; 8:45 am]

BILLING CODE 4910-59-P