

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 73 as follows:

### **PART 73—[RADIO BROADCAST SERVICES]**

1. The authority citation for Part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 334, and 336.

#### **§ 73.202 [Amended]**

1. Section 73.202(b), the Table of FM Allotments under North Carolina, is amended by adding Smithfield, Channel 272A, and removing Channel 272A at Goldsboro.

Federal Communications Commission.

**John A. Karousos,**

*Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.*

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## **DEPARTMENT OF TRANSPORTATION**

### **National Highway Traffic Safety Administration**

#### **49 CFR Part 538**

**[Docket No.: NHTSA-2001-10774; Notice 2]**

**RIN 2127-AI41**

#### **Automotive Fuel Economy Manufacturing Incentives for Alternative Fuel Vehicles**

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** To provide an incentive for the production of vehicles that can operate on certain alternative fuels as well as on regular petroleum fuels, Congress established a special procedure for calculating the fuel economy of those vehicles for the purpose of determining compliance with the Corporate Average Fuel Economy standards. This procedure increases the fuel economy attributed to such "dual-fueled" vehicles, thus facilitating compliance with those standards. By statute, the incentive is available through the end of the 2004 model year and may be extended by up to four additional years through rulemaking.

This document proposes to extend the availability of the incentive by four years, i.e., through the end of the 2008 model year.

**DATES:** Comments must be received on or before April 10, 2002.

**ADDRESSES:** You may submit your comments in writing to: Docket Section, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590.

Alternatively, you may submit your comments electronically by logging onto the Docket Management System (DMS) Website at <http://dms.dot.gov>. Click on "Help & Information" or "Help/Info" to view instructions for filing your comments electronically. Regardless of how you submit your comments, you should mention the docket number of this document. You can find the number at the beginning of this document.

Docket hours are 9 a.m. to 5 p.m.

Monday through Friday.

**FOR FURTHER INFORMATION CONTACT:** The following persons at the National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590:

For non-legal issues: Mr. Kenneth Katz, Consumer Programs Division, Office of Planning and Consumer Programs, NPS-32, Room 5320, telephone (202) 366-4936, facsimile (202) 493-2290.

For legal issues: Otto Matheke, Office of the Chief Counsel, NCC-20, Room 5219, telephone (202) 366-5263, facsimile (202) 366-3820.

#### **SUPPLEMENTARY INFORMATION:**

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#### **I. Summary of Agency Proposal**

Congress created the Corporate Average Fuel Economy (CAFE) program when it enacted the Energy Policy and Conservation Act of 1975 (Pub. L. 94-163; Dec. 22, 1975). The CAFE statutory provisions, now codified in Chapter 329 of Title 49 of the United States Code (49

U.S.C. 32901 *et seq.*), mandate fuel economy standards that must be met by vehicle manufacturers. These standards apply separately to each manufacturer's annual fleet of passenger cars and to its annual fleet of light trucks under 8,500 lbs. gross vehicle weight rating, instead of applying to individual vehicles. Each manufacturer's average fuel economy is determined by the Environmental Protection Agency in accordance with procedures set forth in 49 U.S.C. 32904. Those procedures provide for determining the fuel economy of a manufacturer's model types produced in a particular model year and calculating a weighted fuel economy average for the manufacturer.

Congress amended the CAFE provisions when it enacted the Alternative Motor Fuels Act of 1988 ("AMFA") (Pub. L. 100-94; October 14, 1988). The purposes of AMFA were to encourage the development and use of methanol, ethanol and natural gas as transportation fuels and to promote the production of alternative fuel vehicles (AFVs). For the latter purpose, AMFA provides special procedures for calculating the fuel economy of "dedicated" alternative fuel vehicles and "dual-fueled" vehicles that meet specified eligibility criteria. "Dedicated vehicles" are cars or light trucks designed to operate exclusively either on natural gas or on a methanol or ethanol fuel mixture composed of at least 85 percent of either substance. "Dual-fueled vehicles" have the capability to operate on conventional petroleum and the capability to operate on an alternative fuel. Most dual-fueled vehicles produced to date are capable of operating on E85 (a blend of 85 percent ethanol and 15 percent gasoline) and either gasoline or diesel. The special calculation procedures used in determining the fuel economy of alternative fuel vehicles substantially increase the fuel economy ratings of these vehicles.

In creating the incentive program for dual-fueled vehicles, Congress expressly limited both the extent to which a manufacturer can avail itself of the incentive in any model year as well as the duration of the incentives.<sup>1</sup> For the 1993-2004 model years, the maximum increase in CAFE available to a manufacturer for producing qualifying dual-fueled vehicles is 1.2 miles per gallon.

AMFA provides that by December 31, 2001, the agency either extend the program beyond the 2004 model year or

<sup>1</sup> Congress did not apply either of these limitations to the incentive program for dedicated vehicles.

issue a notice of termination ending it at the close of that model year. An extension of up to four model years is authorized. If the program were extended, the maximum increase in CAFE attributed to the incentive would be limited to .9 miles per gallon in any of those model years.

AMFA further directs that NHTSA evaluate the dual-fuel incentive program and provide a report to Congress analyzing the success of the incentive program and preliminary conclusion regarding extension of the program beyond the 2004 model year.

NHTSA is proposing that the dual-fuel incentive program be extended by four years, i.e., through the end of the 2008 model year. We are proposing this extension for several reasons. Domestic energy security is more important than ever. The vehicles affected by the program operate on ethanol, a domestic fuel. To the extent that domestic fuels can be used, we can decrease our reliance on foreign petroleum. We recognize the potential value to domestic energy security of having a fleet of vehicles that can be operated on non-petroleum fuels. This value would be realized in times of petroleum shortages. We are mindful that the vehicle manufacturers would not likely maintain their current level of efforts to produce alternative fuel vehicles in the absence of the incentive program. As we recommend in our report to Congress that steps be taken to enhance the infrastructure, we want to maintain the program while efforts are made to identify and implement those steps. The proposed four-year extension would give Congress, other executive branch agencies, regional authorities, and the private sector ample time to identify, adopt and implement such steps. NHTSA is also concerned that an extension of less than four years would not allow sufficient time to begin to realize the potential benefits from the operation of the dual fuel incentive program. For a variety of reasons, significant numbers of dual fuel capable vehicles have only recently begun to appear in the marketplace. It is, therefore, not yet clear whether the continuing presence of these vehicles, their ability to use alternative fuels, programs intended to increase the use and production of alternative fuels and other conditions will stimulate the expansion of the alternative fuel infrastructure as envisioned by Congress in creating the dual fuel incentive program. The development of a viable alternative fuel infrastructure, particularly one based on domestically produced ethanol fuel, would reduce the nation's dependence on imported oil. The realization of this

significant benefit, in our view, may require nothing less than a full four-year extension of the incentive program.

In proposing this extension, we recognize that the incentive program, as it is now operating, potentially may be having some negative energy effects. By upwardly adjusting the calculated level of fuel efficiency of dual-fueled vehicles, the incentive program allows manufacturers to build less fuel efficient conventionally fueled vehicles without paying CAFE penalties. If manufacturers do so, have no other means of meeting CAFE standards in the absence of the incentive, and choose not to allow their CAFE to fall to the level where they would have to pay penalties, the incentive program provides a means for producing a less fuel efficient fleet. Under the foregoing conditions, if dual-fueled vehicles are operated almost exclusively on petroleum, the net impact is, in effect, to reduce the CAFE levels that are achieved by manufacturers and increase the consumption of petroleum. However, in order to conclude that the incentive program has a negative energy impact, one must make certain assumptions about the various actions that manufacturers may take in meeting CAFE, including the notion that manufacturers would not, in the face of increasing demand for less efficient vehicles, have simply chosen to pay CAFE penalties in order to meet that demand. As NHTSA has, until recently, been constrained from collecting data regarding manufacturer capabilities and any analysis of manufacturer capabilities and choices is necessarily complex, the agency cannot state with any certainty that the incentive program has, or will, have negative energy effects.

Any increased costs resulting from the operation of the incentive program must, if the program is to be extended, be offset by actual or potential benefits. As noted above, one such benefit is having a fleet of vehicles that can operate on alternative fuels. Use of alternative fuels by these vehicles reduces dependence on foreign oil and would help to lessen demand for conventional fuels, thereby helping to keep fuel prices low. If sufficient numbers of dual fuel vehicles exist and continue to spur development of an alternative fuel infrastructure, the nation would, to a degree, be insulated from the impacts of "oil shocks" resulting from sudden disruptions to the petroleum supply.

## II. Background

### A. Statutory Background

In 1988, Congress enacted the Alternative Motor Fuels Act (AMFA). Section 6 of that Act amended the fuel economy provisions of the Motor Vehicle Information and Cost Savings Act by adding a new section, section 513, providing incentives for the manufacture of vehicles designed to operate on alternative fuels, including dual-fueled vehicles. The section provides that incentive by establishing special procedures for calculating the fuel economy of those vehicles. These special procedures result in alternative fuel vehicles being assigned a higher fuel economy value for CAFE compliance purposes than they would have under the procedures used for calculating the fuel economy of other vehicles. Manufacturers choosing to build such vehicles can use the fuel economy of their alternative fuel vehicles to raise the calculated level of their CAFE.

Dual-fueled vehicles generally are vehicles that can operate either on alternative fuel and either gasoline or diesel fuel, or on natural gas and either gasoline or diesel fuel. Section 513(h) specifically defined a "dual energy automobile" as one that meets a minimum driving range and:

- (i) Which is capable of operating on alcohol and on gasoline or diesel fuel;
- (ii) Which provides equal or superior energy efficiency, as calculated for the applicable model year during fuel economy testing for the Federal Government, while operating on alcohol as it does while operating on gasoline or diesel fuel; [and]
- (iii) Which \* \* \* provides equal or superior energy efficiency, as calculated for the applicable model year during fuel economy testing for the Federal Government, while operating on a mixture of alcohol and gasoline or diesel fuel containing exactly 50 percent gasoline or diesel fuel as it does while operating on gasoline or diesel fuel.

A "natural gas dual energy" automobile was defined as a vehicle that met a specified minimum driving range, and:

- (i) Which is capable of operating on natural gas and on gasoline or diesel fuel; [and]
- (ii) Which provides equal or superior energy efficiency, as calculated for the applicable model year during fuel economy testing for the Federal Government, while operating on natural gas as it does while operating on gasoline or diesel fuel.

The Energy and Policy Act of 1992 added new provisions to section 513. The definition of "alternative fuel" was expanded to include liquefied petroleum gas, hydrogen, liquid fuels derived from coal and biological materials, electricity and any other fuel

that the Secretary of Transportation determines to be substantially non-petroleum based and have environmental and energy security benefits. The 1992 Act also revised terminology by replacing “dual energy” and “natural gas dual energy” with “alternative fueled vehicles” in order to reflect the expanded list of fuels.

The 1988 AMFA amendments established the eligibility criteria and procedures for calculation of the incentive benefits. Manufacturers of alternative fuel vehicles that met the minimum driving range and energy efficiency criteria could use a special procedure for calculating the fuel economy of these vehicles for the 1993 through 2004 model years. The special calculation procedure substantially raises the fuel economy of the vehicle. For instance, a dedicated alternative fuel vehicle achieving 15 miles per gallon while operating on alcohol would, based on the special calculation procedures, be deemed to have a fuel economy of 100 miles per gallon.<sup>2</sup>

The special calculation procedure for alternative fuel dual-fueled vehicles is based on the assumption that those vehicles will operate 50 percent of the time on the alternative fuel and 50 percent of the time on conventional fuel, resulting in a fuel economy figure that is based on a harmonic average of alternative and conventional fuel. For example, an alternative dual-fueled model that achieves 15 miles per gallon operating on an alcohol fuel and 25 mpg on the conventional fuel would, based on the special calculation procedure, be calculated to have a CAFE fuel economy of 40 miles per gallon.<sup>3</sup>

The CAFE values for a natural gas alternative fuel vehicle are calculated in a similar fashion. For the purposes of this calculation, the fuel economy is equal to the weighted average of the vehicle fuel economy while operating on natural gas and the vehicle fuel economy while operating on either gasoline or diesel fuel. Section 32905(c) specifies the energy equivalency of 100

cubic feet of natural gas to be equal to 0.823 gallons of gasoline, with the gallon equivalent of natural gas to be considered to have a fuel content equal to 0.15 gallons of fuel.

Since alternative fuel vehicles will, for CAFE purposes, have a higher calculated fuel economy rating than their conventionally fueled counterparts, production of alternative fuel vehicles allows manufacturers to boost their CAFE ratings. The opportunity for raising a manufacturer's calculated CAFE through this incentive program is limited to 1.2 miles per gallon per model year for the 1993 through 2004 model years. If the program is extended beyond the 2004 model year, the CAFE increase is limited to 0.9 miles per gallon per model year.

Sections 32905(b) and (d) specify that the dual-fuel incentives apply to vehicles produced in the 1993 through 2004 model years. The incentives may, however, be extended. Section 32905(f) provides that the Secretary of Transportation shall, no later than December 31, 2001, either complete rulemaking to extend the incentive program for up to four more consecutive model years or issue a notice of termination ending it.

In anticipation of the decision regarding extension, section 32905(g) directed the Secretary, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency, to submit a report to Congress containing the results of a study of this alternative fuel vehicle mileage credit incentive policy and providing preliminary conclusions whether the program should be extended for up to an additional four (4) model years. In preparing this study and report, the Secretary is required to consider the following factors:

- (i) [T]he availability to the public of alternative fueled automobiles, and alternative fuels;
- (ii) Energy conservation and energy security;
- (iii) Environmental considerations; and
- (iv) Other relevant factors.

#### *B. Report to Congress*

In response to the directive in section 32905(g), NHTSA is submitting a report to Congress simultaneously with the issuance of this notice. This report, which contains the agency's findings regarding the impacts and effectiveness of the dual-fuel incentive program, was preceded by a request for comments that the agency published in the **Federal Register** on May 9, 2000 (65 FR 26805) (Docket No. NHTSA 2000-7087). The request for comments asked a number of

questions regarding the impact of the incentive program on the production and development of dual-fueled vehicles, the costs of producing these vehicles, vehicle performance and reliability and the efforts made to market the vehicles. Other questions asked for information on future product plans for the production of dual-fueled vehicles, the impact that the incentives have had on the availability of alternative fuels, consumer awareness of alternative fuels, obstacles to alternative fuel use, potential modifications to the incentive program and whether the incentive program should be extended or discontinued.

The agency received comments from three automobile manufacturers—General Motors (GM), Ford Motor Company (Ford) and DaimlerChrysler (DC); five associations—Alliance of Automobile Manufacturers (Alliance), Renewable Fuels Association (RFA), National Ethanol Vehicle Coalition (NEVC), Clean Fuels Development Coalition (CFDC), and Ethanol Producers and Consumers (EPAC); one state agency—the Missouri Department of Natural Resources Energy Center (DNREC); the governors of New Mexico, Missouri, Kansas, and Wisconsin; Senators J. Robert Kerrey, Tom Daschle, Wayne Allard, Evan Bayh, John Ashcroft, Carl Levin, Charles E. Grassley, Christopher S. Bond, and Chuck Hagel; the Congressional Auto Caucus; and joint comments from the American Council for an Energy-Efficient Economy (ACEEE), Center for Auto Safety (CAS), the Sierra Club, and the U.S. Public Interest Research Group (USPIRG).

With the exception of the joint ACEEE—CAS—Sierra Club—USPIRG letter, all of the commenters voiced strong support for continuation of the incentive program from the end of the 2004 model year to the end of the 2008 model year. The supporting commenters unanimously indicated that the incentive program was primarily responsible for the development and production of alternative fuel vehicles in high volumes and was also responsible for the development of the existing refueling infrastructure. The comments also reflected a consensus that availability and price of alternative fuels continued to be the most significant obstacle to their use. Two commenters, DNREC and Governor Gary E. Johnson of New Mexico, indicated that extension of the incentive program is desirable for government entities that are required to purchase and use alternative fuel vehicles. DNREC and Governor Johnson both expressed concern that termination of the

<sup>2</sup> The fuel economy of dedicated vehicles is derived by computing the weighted average of fuel economy while operating on gasoline or diesel fuel and when operating on alternative fuel after dividing the alternative fuel economy by a factor of 0.15. In the example cited above, the equation is as follows:  $FE = (1/0.15)(15) = 100$ .

<sup>3</sup> The fuel economy for an alternative dual-fueled model is calculated by dividing 1.0 by the sum of 0.5 divided by the fuel economy as measured on the conventional fuel and 0.5 divided by the fuel economy as measured on the alternative fuel, using the 0.15 volumetric conversion factor. For example, an alternative dual-fueled model that achieves 15 miles per gallon operating on an alcohol fuel and 25 mpg on the conventional fuel would have its CAFE fuel economy calculated as follows:  $1 / ((0.5/25) + (0.5/100)) = 40$  miles per gallon.

incentive program could impact the price and availability of alternative fuel vehicles and of the fuels that these vehicles use.

The joint ACEEE—CAS—Sierra Club—USPIRG letter opposed any extension of the incentive program. These commenters indicated that the incentive program had not resulted in any expansion of alternative fuel infrastructure. In their view, the primary impact of the incentive program was to allow manufacturers to produce less fuel-efficient vehicles. Based on this assessment, the signatories to the letter indicated that the incentive program increased petroleum consumption and increased emissions. They further urged that the incentive program be terminated unless availability of the incentive could actually be linked to alternative fuel consumption.

Ford, GM, DC, and the Alliance all indicated that the existence of the incentive program had a major influence on decisions by some vehicle manufacturers to produce dual-fueled vehicles in high volumes. Ford and DC indicated that they offered dual-fueled vehicles at no additional cost to consumers, while GM indicated that pricing was subject to a large number of factors. All three of these manufacturers indicated that present technology allowed production of reliable and usable dual-fueled vehicles. However, DC noted that alcohol fuels presented problems with starting in low temperatures. GM observed that early alcohol fuels presented corrosion problems. RFA indicated its belief that performance of dual-fueled vehicles operating on alternative fuels could be improved by tuning the engine management system to use these fuels more efficiently. The Alliance and each manufacturer also indicated that continued production of alternative fuel vehicles would be a part of their efforts to meet the CAFE standards and that such production would be adversely affected by termination of the incentive program.

Following consideration of the comments and other data, NHTSA issued its report. The agency's report indicates that the dual-fuel incentive program has had a positive impact on the production and availability of dual-fueled vehicles. However, the increased availability of these vehicles has not stimulated any meaningful growth in the availability and use of the alternative fuels used in dual-fueled vehicles. Few dual-fueled vehicles are being operated on alternative fuels. Since the incentive program rewards manufacturers for producing qualifying vehicles through an upward adjustment

of their fleet fuel economy, the primary effect of the program, if manufacturers produced less fuel efficient vehicles only because the incentive program allowed them to do so, has been to increase petroleum consumption without producing a corresponding increase in the availability or use of alternative fuels (Report to Congress: Effects of the Alternative Motor Fuels Act CAFE Incentives Policy, Executive Summary (hereinafter cited as Report)).

The report finds that, by the end of the 2000 model year, the population of dual-fueled alternative fuel vehicles had increased to over 1.2 million vehicles. This growth, including 115,000 passenger cars and 1,077,000 light trucks using E85 ethanol fuel, occurred in less than five years (Report, Sec. III). By 2000, close to 8 percent of all new light trucks were dual-fueled vehicles as compared to virtually no dual-fueled light trucks two years before. About 1.4 percent of passenger cars produced in the 2000 model year were dual-fueled vehicles (compared to .025 percent in 1993) (Report, Sec. III). As the number of dual-fueled vehicles increased, the manufacturers building these vehicles grew closer to gaining the maximum CAFE increase permitted under the incentive program. For the 2000 model year, both Ford and DaimlerChrysler approached the 0.9-mpg maximum benefit level that would be allowed if the dual-fueled vehicle CAFE credit provision were extended. Similarly, GM increased its production of dual-fueled vehicles in order to benefit from the incentive program (Report, Executive Summary).

The agency's report finds that the increased production of dual-fueled vehicles had stimulated some growth in the use and availability of alternative fuels. NHTSA found that alternative fuel use in alternative fuel vehicles in the U.S. has been rising over the past decade. In 1992, a total of 230 million gasoline gallon equivalents of alternative fuel were used in alternative fuel vehicles; for 2000, that number is projected to rise to 368 million gasoline gallon equivalents, or an increase of roughly 6 percent per year. In comparison, the highway use of gasoline and diesel increased roughly 2 percent per year. However, alternative fuel use only accounts for 0.23 percent of total highway fuel use.

One factor limiting greater expansion of alternative fuel use is the availability of alternative fuels. As of May 2001, there were 5,236 alternative fuel refueling sites, with sites in all 50 states (Report, Sec. IV). Of the existing alternative fuel refueling stations, the vast majority offered liquefied

petroleum gas (LPG). Natural gas refueling sites—1,217 compressed natural gas (CNG) and 44 liquefied natural gas (LNG)—had increased from 1,065 CNG refueling sites in 1995. The number of ethanol refueling sites, which provide the E85 fuel used in most dual fuel vehicles, had grown to 121 from 37 in the five years from 1995–2001. In the same period, the number of methanol (M85) refueling stations dropped from 105 to 37 as the number of M85 flexible-fuel vehicles decreased. (Report, Sec. IV).

Our report indicates that despite the fact that the incentive program had led to sales of more than one million ethanol flexible-fuel vehicles through the 2000 model year, the small number of E85 stations and the limited amount of E85 produced strongly suggest that these vehicles were being operated almost exclusively on gasoline.

The report also notes that conducting an assessment of the energy and environmental impacts of the incentive program is complicated by uncertainty about the behavior and capabilities of vehicle manufacturers. While the use of alternative fuels can reduce petroleum consumption and greenhouse gas emissions, the energy consumption and environmental impacts cannot be determined with any reasonable amount of certainty because it is difficult to determine what manufacturers would have done in the absence of the credit incentive.

In an effort to evaluate the effects of the incentive program up to the year 2000, the Environmental Protection Agency (EPA), performed an analysis comparing a baseline case in which no incentive program existed with a case where the incentive program was in place. In the incentive program case, it was assumed that one percent of the fuel used by dual-fueled vehicles during the years from 1996 to 2000 was an alternative fuel. The model also assumed that the enhanced fuel efficiency of dual-fueled vehicles resulting from application of the CAFE incentive allowed manufacturers to produce fewer fuel efficient conventional vehicles and still meet the CAFE standards and avoid civil penalties. Estimates were made of both conventional and alternative fuel use, total motor fuel consumption, and greenhouse gas emissions. These estimates were compared to the baseline analysis, in which the absence of an incentive program or consumer demand for lower mpg vehicles compelled manufacturers to make more fuel-efficient conventional vehicles. A comparison of the two models indicated that when dual-fueled vehicles are only

operated on alternative fuel one percent of the time, the incentive program increases the consumption of petroleum in two ways. First, dual-fueled vehicles operating on petroleum consume petroleum themselves. Second, the production of the dual-fueled vehicles allows manufacturers to build less efficient petroleum fueled vehicles than they would without the incentive program. Through 2000, the CAFE incentives policy was estimated to have resulted in an increase in alternative fuel use (almost all E85) and a slight increase in gasoline consumption (about 1 percent)(Report Sec. V).

The analysis also attempted to predict the effect of an extension of the incentive program on the environment and energy consumption. The effects of extending the CAFE credit to 2008 under four basic scenarios were evaluated under the assumption that manufacturers would continue to be constrained by CAFE and choose not to build less efficient vehicles and pay CAFE penalties in response to consumer demand. Two different production rates for flexible-fuel vehicles were considered: One based on a maximum benefit of 0.9 mpg and, due to a then pending legislative proposal to amend the existing limit, one based on 1.2 mpg. Two different rates of E85 fuel consumption were then considered under the aforementioned two production rates (one based on the current rate of about 1 percent and one based on a steady increase in use from the current 1 percent to 50 percent in 2008) in an attempt to bound the range of possible outcomes. All four scenarios would result in increases in petroleum use and greenhouse gases if the incentive program were extended to 2008. The analysis also considered additional scenarios under which flexible-fuel vehicles would use E85 an average of 50 percent of the time and 100 percent of time). In the 50 percent case, petroleum consumption would not increase if the credit were extended to 2008. However, the amount of greenhouse gases produced would still increase, if the credit were extended, compared to the option of allowing the program to expire in 2004. If flexible-fuel vehicles used E85 100 percent of the time, petroleum consumption would decline, although greenhouse gases would still increase. The increase in greenhouse gases in both cases would stem from the overall increase in petroleum use by conventional vehicles allowed by the incentive program and the fact that flexible-fuel vehicles burning E85 would still generate some

greenhouse gas emissions (Report Sec. V).<sup>4</sup>

The preceding analysis assumes that in the absence of the incentive program, manufacturers would not have produced larger, less fuel efficient vehicles. It is also possible that manufacturers might have responded to strong consumer demand for performance and utility and produced the same vehicles without the provision as they did with it. In this case, manufacturers would have chosen to pay civil penalties rather than meet the CAFE standard. Under this scenario, the main effect of the program has been to greatly expand the population of vehicles that have the potential to use alternative fuels.

In assessing the dual-fuel incentive program, the report finds that the credit program has been successful in stimulating a significant increase in the availability of alternative fuel vehicles. The existence of the incentive program was a major factor in the development and production of alternative fuel vehicles in high volumes. The existence of these vehicles has not, however, stimulated a corresponding increase in the availability of alternative fuels. The report also finds that the nation's limited capacity for producing E85 fuel could be further limited by the possibility that a gasoline additive, Methyl Tertiary-Butyl Ether (MTBE), could be replaced by ethanol. This would further constrain any future expansion of E85 use. Given the slow rate of growth in the alternative fuel infrastructure, the report states that if the incentive program were used by manufacturers to meet CAFE standards in lieu of producing more efficient vehicles, energy conservation and environmental benefits will only be realized through the extension of the incentive provisions if other incentives, programs, or market conditions stimulate the production, distribution, and use of E85 fuel. Therefore, the agency's report indicates that a number of other actions might be considered to improve the program and its chances for success.

Specific actions by Congress or others might include any or all of the following:

- (1) Examine alternatives to the current dual-fuel vehicle CAFE credit program structure, such as linking the CAFE credit to actual alternative fuel used;
- (2) Develop, implement, and evaluate policies, regulations, or programs to promote

<sup>4</sup> This analysis assumes that, in the absence of the dual-fuel incentive, manufacturers would produce more efficient vehicles to meet the CAFE standards, rather than pay civil penalties.

the actual use of alternative fuels by consumers; and

(3) Develop, implement, and evaluate policies and programs that facilitate more rapid expansion and use of the alternative fuel infrastructure. Such policies and programs should be evaluated, taking into account the availability of alternative fuel and other potential transportation uses for each fuel.

In view of the nation's energy security interests, it is important to increase alternative fuel capability throughout the fleet. Given the mixed results of the program to date, it would be prudent for Federal agencies, Congress, industry, and other interested stakeholders to identify additional programs and authorities that could contribute to achieving greater use of alternative fuels in dual-fuel vehicles that receive the CAFE credit.

### C. Other Developments

In the last year, several events have transpired related to CAFE and the credit incentive provision. These are summarized below.

On May 17, 2001, the Energy Policy Development Group, led by Vice President Dick Cheney, issued its National Energy Policy. This report made recommendations to President Bush regarding the path that the administration's energy policy should take and included specific recommendations regarding vehicle fuel economy and CAFE. The report recommends that the President direct the Secretary of Transportation to

- Review and provide recommendations on establishing CAFE standards with due consideration of the National Academy of Sciences study to be released in July 2001. Responsibly crafted CAFE standards should increase efficiency without negatively impacting the U.S. automotive industry. The determination of future fuel economy standards must therefore be addressed analytically and based on sound science.
- Consider passenger safety, economic concerns, and disparate impact on the U.S. versus foreign fleet of automobiles.
- Look at other market-based approaches to increasing the national average fuel economy of new motor vehicles.

The Energy Policy Development Group also stated in its report that ethanol vehicles offer tremendous potential if ethanol production can be expanded. Additionally, the report states that, "a considerable enlargement of ethanol production and distribution capacity would be required to expand beyond their current base in the Midwest in order to increase use of ethanol-blended fuels."

Like the appropriations acts for the preceding five years, the fiscal year 2001 DOT Appropriations Act included the rider prohibiting the Department from revising the CAFE standards. However it

also included a provision directing the Department to fund a National Academy of Sciences study on the effectiveness and impacts of CAFE standards. On July 30, 2001, the National Academy of Sciences released a preliminary report entitled, "Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards." This report included 15 findings and seven recommendations. Recommendation 5 stated that, "Credits for dual-fuel vehicles should be eliminated, with the provision that NHTSA's notice of such action provides enough lead-time to limit adverse impacts on the automotive industry."

On August 2, 2001, the U.S. House of Representatives passed H.R. 4, which is entitled the Securing America's Future Energy (SAFE) Act of 2001. This bill, which has been placed on the Senate legislative calendar, includes provisions in Section 203, Dual Fueled Automobiles, which alter the AMFA CAFE credit incentive program by extending it for an additional four model years to 2008 and by extending the 1.2 mpg limitation on the maximum allowable CAFE credit that can be earned by a specific manufacturer's fleet through model year 2008 as well. The deadline for making a decision whether to extend the program beyond 2008 would be December 31, 2005, with the report on the effects of the program due on September 30, 2004.

In July 2001, Secretary Mineta sent a letter to Congress asking that the freeze on CAFE standards be lifted immediately so NHTSA could resume its CAFE rulemaking responsibilities. However, the freeze was not lifted until December 2001, when the Appropriations Act for the Department of Transportation, for the first time in six years, did not include a rider freezing CAFE standards. NHTSA immediately resumed its CAFE rulemaking responsibilities. The FY 2003 DOT budget request includes \$1,000,000 to support CAFE program activities to meet those responsibilities.

#### *D. U.S. Dependence on Imported Petroleum*

The United States met 15 percent of its oil needs in 1955 through imports. The import share reached 36.8 percent by 1975, the year CAFE standards were authorized by Congress, and then peaked at 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. Imports totaled 43.6 percent in 1992 and are anticipated to be at or over 50 percent in 2001. The Middle East

controls about 65 percent of the world's oil reserves and about 35 percent of the world's natural gas reserves. North American reserves of oil amount to just 6-7 percent of world reserves, and the Department of Energy estimates that the U.S. will import 62 percent of its oil by the year 2010. Since the petroleum "shocks" of the 1970s, the inflation-adjusted price of crude oil has generally declined. Since the oil shocks of the 1970s several events combined to keep oil prices low: the end of the Cold War; a diminution in the market power of OPEC due to an increase in petroleum production from non-OPEC nations; and the cementing of U.S. security ties to the most important oil-exporting nations. The growing dependence of the U.S. on imported petroleum offsets the positive developments that have occurred in the global petroleum market over the past 20 years and the potential impact of a petroleum shock on the U.S. is growing.

The transportation sector remains overwhelmingly dependent on petroleum-based fuels and on technologies that provide virtually no flexibility for employing alternative to petroleum. Transportation currently accounts for approximately two-thirds of all U.S. petroleum use and roughly one-fourth of total U.S. energy consumption. Highway transportation petroleum consumption has risen from 121 billion gallons per year in 1979 to 155 billion gallons per year in 1999 (28 percent over 20 years). Given the dependency of our nation's transportation network on petroleum use, substitution of conventional petroleum fuels by non-petroleum-based fuels, including alternative fuels, could reduce America's vulnerability to disruptions in petroleum supply.

Increased use of alternative fuels can yield other economic benefits as well as improving the nation's energy security. Displacing petroleum with alternative and replacement transportation fuels helps hold down petroleum prices in two ways. First, reducing the demand for petroleum decreases the world price for oil—a 1 percent decrease in U.S. petroleum demand could, in the long term, reduce world oil price by about 0.5 percent. Short-run impacts could be even greater, due to the short-run inelasticity of oil supply and demand. An additional benefit of increased alternative or replacement fuel use is the potential to reduce the impact of a supply shortage on prices. As evidenced in the industrial and utility sectors, the existence of alternatives to oil provides potential substitutes for oil in the event of a production cutback. Since it is precisely the non-responsiveness of transportation oil demand to oil

production cutbacks that makes oil price shocks possible, increasing competition for oil by using alternative fuels reduces the ability of oil suppliers to constrain supply in order to increase the price of oil.

#### *E. Availability and Use of Alternative Fuels*

Alternative fuel use in the U.S. has grown significantly since the passage of AMFA alternative fuel incentives. In 1992, alternative fuel use in the U.S. amounted to 230 million gasoline gallon equivalents; in 2000, alternative fuel use is estimated to be 368 million gasoline gallon equivalents, an overall increase of 60 percent. With the exception of methanol and E95 blend ethanol, all of the alternative fuels in use have seen notable increases in use between 1992 and 2000. An increasing number of CNG and LNG vehicles are available from original-equipment manufacturers and electricity has also enjoyed a large increase, due to the OEM offerings of electric vehicles in the Southwest. Alternative fuel use in alternative fuel vehicles has been rising at a rate three times faster than the total highway use of gasoline and diesel. Nonetheless, alternative fuel use only accounts for 0.23 percent of total highway fuel use.

The National Energy Policy Development Group, in its May 17, 2001, report on the National Energy Policy states that, "The lack of infrastructure for alternative fuels is a major obstacle to consumer acceptance of alternative fuels and the purchase of alternative fuel vehicles." The lack of infrastructure is one of the main reasons why most alternative fuel vehicles actually operate on petroleum fuels. As the report noted, "ethanol vehicles offer tremendous potential if ethanol production can be expanded." However, the report also states that, "a considerable enlargement of ethanol production and distribution capacity would be required to expand beyond their current base in the Midwest in order to increase use of ethanol-blended fuels."

The National Renewable Energy Laboratory reports that there are 5,236 alternative fuel refueling sites as of May 2001, with alternative fuel refueling sites in all 50 states. Unfortunately, while most dual-fuel vehicles use ethanol as an alternative fuel, less than three percent of U.S. alternative fuel refueling stations sell ethanol. As of May 2001, there were 121 public E85 refueling outlets in operation, up from 37 in 1995. For LPG, the most widely available alternative fuel, although it has availability in all states, there are only 3,270 outlets in the U.S. For other

gaseous alternative fuels, there are 1,237 Compressed Natural Gas (CNG) outlets in the U.S and 44 Liquefied Natural Gas (LNG) refueling sites.

The Federal government, specifically DOE, the General Services Administration and the Department of Agriculture are involved with efforts to promote the use and expansion of alternative fuels and the alternative fuel infrastructure. A major focus of these efforts is the development of different feedstocks for ethanol and on partnerships that result in the expansion of the ethanol fuel infrastructure. DOE administers the Clean Cities Program, the Office of Fuels Development (OFD) alternative fuel program, and, in conjunction with the General Services Administration (GSA), the Federal AFV USER Program. Efforts by DOE are underway in Minnesota to help construct a number of ethanol refueling sites. In August 2001, the USDA announced that its agencies will use ethanol fuels in their fleet vehicles where practicable and reasonable in cost.

As ethanol fuels are generally more expensive than gasoline, cost remains an impediment to the more widespread demand that would stimulate development of the necessary infrastructure. Although the trend in alternative fuels is in the direction of E85 use, the infrastructure has been slow to develop because these vehicles also use conventional fuel. However, even if relatively few of these vehicles are actually being operated on E85, the existence of a dual fuel capable fleet could spur an increase in the number of E85 refueling sites, and provide consumers an alternative if there are gas shortages or gas prices increase significantly. The small number of outlets available today points out the need to intensify the E85 refueling infrastructure. In addition, it is safe to say that many people who have purchased flexible-fuel vehicles do not know they could use E85. More public education in areas where E85 refueling stations exist is needed to inform people so that they are aware they can use E85.

Future alternative fuel use may be affected by supply as well as demand. Water quality concerns involving the use of MTBE and the rapidly increasing number of E85 flexible-fuel vehicles may, if ethanol production is diverted to the production of an MTBE substitute, lead to insufficient ethanol to meet demand. Current ethanol supply capacity, as well as that represented by ethanol plants now planned or under construction, indicates that domestic ethanol production is now about 1.72 billion gallons per year. Plants under

construction can add another 123 million gallons per year, and plants in the engineering and planning stages can add another 149 million gallons per year. If all the present and building plants are producing ethanol as planned in 2003, total ethanol production capacity that year will be about 1.99 billion gallons of ethanol per year. Capacity in 2010 could reach 2.6 billion gallons per year. However, if MTBE is banned as a gasoline additive and fuel producers replace MTBE with ethanol, it is uncertain if there will be enough refinery capacity to both replace MTBE and to fuel flexible-fuel vehicles a substantial portion of the time with E85.

### III. Agency Proposal

Section 32905(f) directs NHTSA to take one of the following actions on or before December 31, 2001: Either complete a rulemaking extending the dual-fuel incentive program or issue a notice of termination ending it. The agency's ability to extend the program is not unlimited—it may only extend the incentives for not more than 4 consecutive model years immediately after model year 2004 \* \* \*."

On December 31, 2001, NHTSA issued a notice of intent to issue a notice of proposed rulemaking that was published in the **Federal Register** on January 7, 2002 (67 FR 713). In that notice, the agency explained that it was providing notice of its intention to issue a notice of proposed rulemaking to extend the dual fuel incentive program from one to four years.

The agency is proposing to extend the dual-fuel incentive program for four model years, from the 2005 through the 2008 model years. NHTSA has tentatively concluded that extension of the dual-fuel incentive program for four model years would be appropriate and consistent with the goals of both the incentive program and the CAFE program as a whole.

The dual-fuel incentive program, which envisions a reduction in petroleum dependence through the development of alternative fuels, accepts an interim increase in the consumption of petroleum fuels in pursuit of that end. When Congress conceived the incentive program, it was aware of the risk that manufacturers would avail themselves of gains in fleet fuel economy by building dual-fueled vehicles regardless of whether the vehicles ever used an alternative fuel. Concern about this possibility and the increase in the use of petroleum that could result, led to the enactment of two limits on the incentive program. One of these limits, now at issue, was to make the incentive available for the 1993–

2004 model years, with the possibility of an extension of up to four model years, i.e., through the 2008 model year. The other limit was to place a cap of 1.2 mpg on the maximum increase in fleet fuel economy available from the use of the incentives for the 1993–2004 model years and 0.9 mpg for any of the model year(s) to which the program was extended by NHTSA. The existence and nature of these limits indicates that Congress understood that the incentive program could result in increased petroleum use, that any increases in petroleum use would be limited to the life of the program, and that, if the program were extended, that the extent of increased petroleum use would be controlled.

The existence of the dual-fuel incentives has spurred a large increase in the production of these vehicles in recent years. Technologies have been developed to the degree that dual-fueled vehicles are as reliable and as useful as their conventionally fueled counterparts. Fleet operators and others with access to gaseous fuels are, to a limited extent, using gaseous dual-fueled vehicles. Liquid fueled dual-fueled vehicles capable of operating on E85 or gasoline are being produced in significant numbers. These E85 vehicles may use either gasoline or E85 interchangeably with no input required from the vehicle operator, save the selection of the fuel to be used when filling the tank. With the exception of decreased range resulting from the slightly lower energy content of E85, a liquid dual-fueled vehicle performs as well on E85 as it does on gasoline.

Production of E85 vehicles steadily increased through the 2000 model year, but slightly decreased in the 2001 model year, as dual-fuel technology has matured and manufacturers rely on the incentives to assist them in meeting CAFE requirements. For example, no liquid fuel dual-fueled light trucks were produced in 1997. However, over 1.4 million dual-fueled light trucks were produced in the 1998–2001 model years. In the 2000 model year, close to 7.6 percent, and in the 2001 model year, 4.6 percent of all light trucks produced were dual-fueled vehicles. About 1.4 percent of passenger cars produced in the 2000 model year and 0.8 percent produced in the 2001 model year were dual-fueled vehicles (compared to .025 percent in 1993). As of the 2001 model year, 217,000 E-85 dual-fueled passenger cars and 1,446,000 E-85 dual-fueled light trucks had been produced. Comments submitted in response to the agency's request for information prior to preparation of NHTSA's report to Congress indicate that manufacturers

plan to produce increasing numbers of dual-fueled vehicles as part of their overall strategy for meeting CAFE requirements.

NHTSA notes that almost all of the dual-fueled vehicles produced in the U.S. have been built since the 1997 model year. While the incentive program has been in place since the 1993 model year, manufacturer efforts in the first several years of the incentive program were primarily directed at the development of methanol-fueled (M85) vehicles. While these efforts met with some success, methanol's corrosive properties, problems with the quality of methanol fuels and increased demand for methanol in conventional fuel additives led to a change in direction toward the development and production of ethanol (E85) vehicles. The first production E85 dual-fueled vehicles appeared in the 1998 model year and are the only vehicles that have been produced in significant quantities since the inception of the incentive program.

In terms of stimulating dual-fueled vehicle production, the incentive program appears to be meeting the expectations of Congress. Reliable dual-fueled vehicles that perform well while operating on an alternative fuel are becoming available in increasing numbers. In some instances, manufacturers are producing enough dual-fueled vehicles to enable them to obtain close to the maximum benefit under the incentive. Although these vehicles, the vast majority of which are E85 dual-fueled vehicles, have only begun to be produced in significant numbers, the comments submitted in response to NHTSA's May 9, 2000 request for comments indicate that the incentive program is the principal impetus for their development and manufacture. The incentive program has therefore begun to satisfy one component of AMFA's overall goal of encouraging the development of alternative fuel vehicles.

The success of the incentive program in stimulating the production of vehicles has not yet resulted either in increased demand for alternative fuels or a corresponding increase in availability of these fuels. Despite the presence of approximately 1.7 million E85 capable dual-fueled vehicles in the U.S. fleet, owners of these vehicles are unlikely to be able to use E85 fuel, particularly if they live in one of the 32 states without any E85 fuel stations. At present, there are less than 140 E85 stations in the U.S. The majority of these stations are located in the Midwestern and north central states with 60 stations in Minnesota, 13 in Illinois, 10 in Iowa, 8 in Michigan, 7

apiece in South Dakota, Nebraska and Kentucky and 5 in Missouri.<sup>5</sup> While the number of E85 stations has increased during the course of the incentive program, the growth that has occurred has not yet resulted in a degree of expansion suggesting that E85 is likely to serve as a viable alternative to petroleum fuels in the near future.

In one sense, the lack of development of an alternative fuel infrastructure is indicative of the technology and marketing of dual-fueled vehicles. Dual-fueled vehicles perform as well when operated on gasoline as conventionally fueled vehicles. It is possible that owners of these vehicles often remain unaware that the vehicle can be operated on an alternative fuel or, in those areas where alternative fuel is available, where they can purchase alternative fuel. Although some manufacturers have made efforts to improve owner awareness of the unique capability of these dual-fueled vehicles, the fact remains that the dual-fuel capabilities of these vehicles are often not well known.

Owner unawareness of dual-fuel capability is not the only obstacle to increased alternative fuel use. As noted above, there are presently very few E85 stations in the United States. Even in those locations where E85 is available, it has not historically been price competitive with gasoline, particularly when the price is adjusted to reflect E85's lower energy content. The lower energy content of E85 also results in a slight reduction in driving range when compared with gasoline. Those consumers who are aware of their vehicle's ability to use an alternative fuel most likely will not choose to use alternative fuels unless they are more attractive than gasoline.

Development of an alternative fuel infrastructure is also dependent on the supply of alternative fuels. As noted above, current ethanol production in the United States is approximately 1.7 billion gallons per year. As that capacity increases, ethanol production is projected to reach approximately 2 billion gallons per year. A substantial percentage of this production capacity is used to produce additives for conventional gasoline or to produce gasohol (90 percent gasoline/10 percent ethanol). As NHTSA notes in its report to Congress, about 400 million gallons of ethanol were available for use in E85 fuel for dual-fueled vehicles in 2000. The agency also notes that it anticipates that the amount of ethanol available for

E85 dual-fueled vehicles would rise to approximately 1 billion gallons in 2010.

Future availability of ethanol for the E85 fuel used by most dual-fueled vehicles is further complicated by changes in the formulation of petroleum fuels. Much of the ethanol produced now is used for conventional fuel additives. This use may increase dramatically due to concerns about methyl tertiary butyl ether (MTBE). MTBE is an additive that has been used in U.S. gasoline as an octane enhancer since 1979. Because MTBE use in gasoline reduces certain emissions, it has been used in higher concentrations since 1992 in certain geographic areas to fulfill the oxygenate requirements set by Congress in the 1990 Clean Air Act Amendments. Recent concerns about MTBE in groundwater resulting from leaking underground storage tanks has led to a reexamination of policies regarding its use.

While a variety of approaches are being considered, there is a possibility that the use of ethanol as an MTBE substitute may spur a substantial increase in demand for ethanol. If this were to occur, the increased demand for ethanol as an additive might restrict the availability of ethanol as a fuel until production capacity is increased. However, once the demand for ethanol-based additives stabilized, the increased production capacity might make more ethanol available as fuel. NHTSA is concerned that the increased demand for ethanol additives might restrict the availability of ethanol fuel, particularly in the next few years. As temporary shortages of ethanol might impact the success of the incentive program in the near term, NHTSA believes that a full four-year extension of the program might be necessary to allow ethanol production to grow sufficiently to meet the demand for additives to petroleum fuel and ethanol fuel itself.

The agency's proposal to extend the incentive program for four years is an attempt to reconcile the promise of an increasingly large fleet of dual-fueled vehicles with the constraints preventing the development of the dual-fuel infrastructure envisioned by Congress. The existence of the incentive program has provided considerable impetus to the development and refinement of both gaseous and liquid fueled dual-fueled vehicles. After efforts in the early years of the incentive program revealed technological barriers to practical methanol fueled vehicles, industry efforts turned to the development of ethanol capable vehicles. The maturation of ethanol capable dual-fueled vehicle technology did not occur until well after the incentive program

<sup>5</sup> A list of alternative fuel stations maintained by the Department of Energy may be accessed at <http://www.afdc.nrel.gov/refueling.html>.



began in the 1993 model year. As dual-fueled vehicle production has only recently begun to result in significant numbers of dual-fueled vehicles in actual use, NHTSA believes that that termination of the incentive program before the end of the 2008 model year would be premature. The added numbers of dual-fueled vehicles now in use, in combination with those that will be produced in the 2002 through 2008 model years, may spur increased consumption and availability of alternative fuels. In addition, the Federal government, and specifically DOE, the General Services Administration and the Department of Agriculture are involved with efforts to promote the use and expansion of alternative fuels and the alternative fuel infrastructure. These programs may also bear fruit in the form of increased alternative fuel use. Unfortunately, NHTSA does not now have the opportunity to wait and examine the impact these vehicles may have.

The agency's tentative decision to extend the incentive program for four years is based on its assessment that the energy and other costs of the incentive program are justified by the potential benefits. We are unable to predict with certainty how much alternative fuel use, which is a critical element to the realization of benefits, will increase.<sup>6</sup> Adoption of the proposed four-year extension entails a risk that manufacturers might be producing dual-fuel vehicles that operate only on petroleum fuel. On the other hand, if the agency were to allow the program to terminate, there would be an equal risk that late-blooming alternative fuel technology and production would be wasted and the opportunities for eventual reductions in petroleum use would be lost. A four-year extension is, in NHTSA's view, a reasonable reconciling of those risks. Such an extension will provide opportunities for further development of measures to encourage alternative fuel use and, if those policies are successful, result in the development of a domestic fuel supply and infrastructure with either little or no increase in petroleum use. As noted above, the maximum incentive benefit available in the 2005 through 2008 model years is an 0.9 mpg increase in a manufacturer's fleet average. This

limitation on the maximum benefit modifies the impact of the incentive program's special fuel economy calculation for dual-fueled vehicles. Manufacturers will be required to increase the efficiency of their conventionally fueled fleet to make up for the reduction in the dual-fuel incentive. If alternative fuel use has not increased, the 0.9 mpg cap will restrict the negative impacts of the incentive program.

#### IV. Benefits and Costs

In the preliminary economic assessment, the agency examined two scenarios examining the impact of extending the incentive program on consumers by projecting the increased fuel costs resulting from less efficient conventionally fueled vehicles being available in the marketplace. One scenario, scenario 1, is based on the 2001 model year combined fuel economy of GM, Ford, and Daimler/Chrysler light trucks of 20.07 mpg. Scenario 1 examined the 2001 model year fuel economy for these manufacturers without operation of the incentive and with the incentive in place. (20.52 mpg versus 20.07 mpg.) As the incentive program allows the production of less fuel efficient vehicles, the lower average fuel economy will result in the average light truck purchaser's vehicle consuming more fuel (on average 308 gallons) over its lifetime and costing \$129 more (present discounted value) to operate in fuel over the vehicle's lifetime. Scenario 2 examined the potential credit of 0.9 mpg that could be taken during the extension years, so it compared 20.97 mpg versus 20.07 mpg. From a light truck purchaser's perspective, the lower average fuel economy will result in their vehicle consuming more fuel (on average 411 gallons) over its lifetime and costing \$244 more (present discounted value) to operate in fuel over the vehicles' lifetime.

Scenario 1 could result in an additional 1.7 billion gallons of gasoline being used over the lifetime of one model year's fleet of light trucks at a present discounted value of \$727 million. Scenario 2 could result in an additional 2.3 billion gallons of gasoline being used over the lifetime of one model year's fleet of light trucks at a present discounted value of \$1,375 million.

Because there are a variety of ways to improve fuel economy, and our ability to collect and analyze data had been restricted under the CAFE freeze for the preceding six fiscal years, we are unable at this time to determine what are the benefits to the light truck purchaser to

offset the increase in fuel costs. The light truck purchaser may get more choices of large light trucks and sport utility vehicles in the market, perhaps the ability to choose a larger engine, or perhaps savings in initial vehicle prices if weight reductions due to material substitutions, or fuel economy technologies are not added to the vehicle. It is entirely possible that the value vehicle purchasers place on these attributes exceeds the cost of the extra gasoline these vehicles use.

#### V. Rulemaking Notices and Analyses

##### A. Executive Order 12866 and DOT Regulatory Policies and Procedures

Executive Order 12866, "Regulatory Planning and Review" (58 FR 51735, October 4, 1993), provides for making determinations whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines a "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

This proposal is economically significant. While the proposal does not require the production of alternative fuel vehicles, it allows manufacturers producing dual-fuel vehicles to produce less efficient conventionally fueled vehicles. The impact of the production of these less efficient vehicles may result in additional annual fuel costs of more than \$100 million. Accordingly, it was reviewed under Executive Order 12866. The rule is also significant within the meaning of the Department of Transportation's Regulatory Policies and Procedures.

Because this proposed rule is economically significant, the agency has prepared a Preliminary Economic Analysis (PEA). This analysis is summarized above in the sections on Benefits and Costs. The PEA is available

<sup>6</sup>Many of those responding to NHTSA's May 9, 2000 request for comments suggested that a number of measures be implemented to make alternative fuels more attractive to consumers. These suggested measures, which included reductions in fuel taxes on alternative fuels, tax credits for alternative fuel use or alternative fuel vehicles and other market incentives, are initiatives that are beyond NHTSA's authority.

in the docket and has been placed on the agency's website along with the proposal itself.

#### B. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small governmental jurisdictions). The Small Business Administration's regulations at 13 CFR part 121 define a small business, in part, as a business entity "which operates primarily within the United States." (13 CFR 121.105(a)). No regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the effects of this proposed rule under the Regulatory Flexibility Act. I certify that this proposed rule would not have a significant economic impact on a substantial number of small entities. The rationale for this certification is that there are not currently any small motor vehicle manufacturers in the United States building vehicles that would be affected by the extension of the dual-fuel incentive credit.

#### C. National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has performed a preliminary Environmental Assessment and determined that implementation of this proposed rule will not have a significant impact on the quality of the human environment. Adoption of this proposed rule is likely to result in increased vehicle emissions and an increase in greenhouse gases, depending on the amount of alternative fuel consumed by dual-fueled vehicles manufactured in response to the rule. Such increases will stem largely from the production of larger, less fuel efficient vehicles made possible by the propose extension. However, under any scenario, the amount of increased emissions

represents a very small percentage of overall emissions resulting from the consumption of petroleum fuels by highway vehicles.

#### D. Executive Order 13132 (Federalism)

Executive Order 13132 requires NHTSA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under Executive Order 13132, the agency may not issue a regulation with Federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, the agency consults with State and local governments, or the agency consults with State and local officials early in the process of developing the proposed regulation. NHTSA also may not issue a regulation with Federalism implications and that preempts State law unless the agency consults with State and local officials early in the process of developing the proposed regulation.

The agency has analyzed this proposed rule in accordance with the principles and criteria set forth in Executive Order 13132 and has determined that it would not have sufficient federalism implications to warrant consultation with State and local officials or the preparation of a federalism summary impact statement. The proposal to extend the dual-fuel incentive program through the 2008 model year may result in additional conventional fuel costs for state and local governments. At the same time, extension of the incentive program will ensure that dual fuel vehicles, which state and local governments are required to use by other federal mandates, will be available at lower costs. Any increased costs that would not be offset by the continued availability of lower cost dual fuel vehicles, however, are not direct costs. The agency's proposal would not otherwise have any substantial effects on the States, or on the current Federal-State relationship, or on the current distribution of power and responsibilities among the various local officials.

#### E. Civil Justice Reform

This proposed amendment would not have any retroactive effect. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending, or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

#### F. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995, a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. This proposed rule would not require any new collections of information as defined by the OMB in 5 CFR part 1320. Data regarding production of dual-fuel vehicles would be submitted to the agency under the existing procedures found in 49 CFR part 537.

#### G. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104-113, section 12(d) (15 U.S.C. 272) directs us to use voluntary consensus standards in our regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers (SAE). The NTTAA directs us to provide Congress, through OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

There are no voluntary consensus standards available at this time. However, NHTSA will consider any such standards if they become available.

#### H. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of more than \$100 million in any one year (adjusted for inflation with base year of 1995). Before promulgating a rule for which a written statement is needed,

section 205 of the UMRA generally requires NHTSA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows NHTSA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the agency publishes with the final rule an explanation why that alternative was not adopted.

This proposed rule would not result in the expenditure by State, local, or tribal governments, in the aggregate, of more than \$100 million annually.

#### *I. Plain Language*

Executive Order 12866 requires each agency to write all rules in plain language. Application of the principles of plain language includes consideration of the following questions:

- Have we organized the material to suit the public's needs?
- Are the requirements in the rule clearly stated?
- Does the rule contain technical language or jargon that is not clear?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
- Would more (but shorter) sections be better?
- Could we improve clarity by adding tables, lists, or diagrams?
- What else could we do to make this rulemaking easier to understand?

If you have any responses to these questions, please include them in your comments on this NPRM.

#### *J. Regulation Identifier Number (RIN)*

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

## **VI. Preparation and Submission of Comments**

### *When Is the Comment Closing Date?*

NHTSA has determined that it is necessary to provide a comment period of less than 60 days because of the statutory requirement to issue a final rule by December 31, 2001.

### *Will the Agency Consider Late Comments?*

We will consider all comments that Docket Management receives before the close of business on the comment closing date indicated above under **DATES**. To the extent possible, we will also consider comments that Docket Management receives after that date. If Docket Management receives a comment too late for us to consider it in developing a final rule (assuming that one is issued), we will consider that comment as an informal suggestion for future rulemaking action.

### *How Do I Prepare and Submit Comments?*

Your comments must be written and in English. To ensure that your comments are correctly filed in the Docket, please include the docket number of this document in your comments.

Your comments must not be more than 15 pages long. (49 CFR 553.21). We established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit two copies of your comments, including the attachments, to Docket Management at the address given above under **ADDRESSES**.

In addition, given the statutory deadline of December 31, 2001, for issuance of the final rule, for those comments of 4 or more pages in length, we request that you send 10 additional copies, as well as one copy on computer disc, to: Mr. Kenneth Katz, Office of Consumer Programs, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590. We emphasize that this is not a requirement. However, we ask that you do this to aid us in expediting our review of all comments. The copy on computer disc may be in any format, although we would prefer that it be in WordPerfect 8 or Word 2000.

You may also submit your comments to the docket electronically by logging onto the Dockets Management System website at <http://dms.dot.gov>. Click on "Help & Information" or "Help/Info" to obtain instructions for filing the document electronically.

### *How Can I Be Sure That My Comments Were Received?*

If you wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon

receiving your comments, Docket Management will return the postcard by mail.

### *How Do I Submit Confidential Business Information?*

If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT**. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above under **ADDRESSES**. When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in our confidential business information regulation. (49 CFR part 512.)

### *How Can I Read the Comments Submitted by Other People?*

You may read the comments received by Docket Management at the address given above under **ADDRESSES**. The hours of the Docket are indicated above in the same location.

You may also see the comments on the Internet. To read the comments on the Internet, take the following steps:

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### **List of Subjects in 49 CFR Part 538**

Energy conservation, Gasoline, Imports, Motor vehicles.

In consideration of the foregoing, NHTSA proposes to amend 49 CFR part 538 as follows:

**PART 538—MANUFACTURING INCENTIVES FOR ALTERNATIVE FUELED VEHICLES**

1. The authority citation for part 538 of Title 49 would continue to read as follows:

**Authority:** 49 U.S.C. 32901, 32905, and 32906; delegation of authority at 49 CFR 1.50.

2. Section 538.1 would be revised to read as follows:

**§ 538.1 Scope.**

This part establishes minimum driving range criteria to aid in identifying passenger automobiles that are dual-fueled automobiles. It also establishes gallon equivalent

measurements for gaseous fuels other than natural gas. This part also extends the dual-fuel incentive program.

3. Section 538.2 would be revised to read as follows:

**§ 538.2 Purpose.**

The purpose of this part is to specify one of the criteria in 49 U.S.C. chapter 329 “Automobile Fuel Economy” for identifying dual-fueled passenger automobiles that are manufactured in model years 1993 through 2004. The fuel economy of a qualifying vehicle is calculated in a special manner so as to encourage its production as a way of facilitating a manufacturer’s compliance with the Corporate Average Fuel Economy Standards set forth in part 531 of this chapter. The purpose is also to establish gallon equivalent

measurements for gaseous fuels other than natural gas. This part also specifies the model years after 2004 in which the fuel economy of dual-fueled automobiles may be calculated under the special incentive provisions found in 49 U.S.C. 32905(b) and (d).

4. Section 538.9 would be added to read as follows:

**§ 538.9 Dual fuel vehicle incentive.**

The application of 49 U.S.C. 32905(b) and (d) to qualifying dual fuel vehicles is extended to the 2005, 2006, 2007, and 2008 model years.

Issued on March 6, 2002.

**Stephen R. Kratzke,**

*Associate Administrator for Safety Performance Standards.*

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