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Alternative Fuel Vehicle Badging, Fuel Compartment Labels and Consumer Information on Alternative Fuel Usage; Proposed Rule

**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**49 CFR Part 575**

[NHTSA–2010–0134]

RIN 2127–AK75

**Alternative Fuel Vehicle Badging, Fuel Compartment Labels and Consumer Information on Alternative Fuel Usage**

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

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

**SUMMARY:** NHTSA is proposing to require badges, labels and owner’s manual information for new passenger cars, low speed vehicles (LSVs) and light-duty trucks rated at not more than 8,500 pounds gross vehicle weight in order to increase consumer awareness regarding the use and benefits of alternative fuels. In the Energy Independence and Security Act of 2007 (EISA), Congress directed the Secretary of Transportation to develop and implement varied and wide-ranging consumer information and education initiatives related to fuel economy, greenhouse gas, alternative fuels and thermal management technologies. NHTSA is implementing these new information and education initiatives through several different rulemakings.

This proposed rule would implement specific statutory mandates that manufacturers be required to: Identify each vehicle capable of running on an alternative fuel by means of a permanent and prominent display affixed to the exterior of the vehicle; add proposed text describing the capabilities and benefits of using alternative fuels to the owners’ manuals provided for alternative fuel vehicles; and identify each vehicle that is capable of running on an alternative fuel by means of a label in the fuel filler compartment.

**DATES:** Comments must be received on or before April 21, 2014. See the **SUPPLEMENTARY INFORMATION** section on “Public Participation” for more information about written comments.

**ADDRESSES:** You may submit your comments, identified by Docket ID No. NHTSA–2010–0134, by any of the following methods:

*http://www.regulations.gov:* Follow the online instructions for submitting comments.

*Fax:* NHTSA: (202) 493–2251.

*Mail:* Docket Management Facility, M–30, U.S. Department of

Transportation, 1200 New Jersey Avenue SE., West Building, Ground Floor, Rm. W12–140, Washington, DC 20590, Attention Docket ID No. NHTSA–2010–0134.

*Hand Delivery:* Department of Transportation, 1200 New Jersey Avenue SE., West Building, Ground Floor, Rm. W12–140, Washington, DC 20590, Attention Docket ID No. NHTSA–2010–0134 between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal holidays.

*Instructions:* Regardless of how you submit comments, you should mention Docket ID No. NHTSA–2010–0134 or the Regulatory Identification Number (RIN) 2127–AK75 for this rulemaking. You may call the Docket Management Facility at 202–366–9826. For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the **SUPPLEMENTARY INFORMATION** section of this document. Note that all comments received will be posted, except as noted below, without change to *http://www.regulations.gov*, including any personal information provided.

*Docket:* All documents in the dockets are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Docket Management Facility, M–30, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building, Ground Floor, Rm. W12–140, Washington, DC 20590. The Docket Management Facility is open between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except federal holidays.

*Privacy Act:* Anyone is able to search the electronic form of all comments received in any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT’s complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78) or you may visit *http://www.dot.gov/privacy.html*.

**FOR FURTHER INFORMATION CONTACT:**

*For technical issues:* Gregory Powell, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590. Telephone: (202) 366–5206.

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**SUPPLEMENTARY INFORMATION:**

**List of Acronyms and Abbreviations**

- AFDC Alternative Fuels and Advanced Vehicles Data Center
- Alternative Fuel Motor vehicle fuel defined by 49 CFR 32901(a)(1)
- B20 Biomass-based diesel blend or biodiesel blend that contains a mixture of not more than 20% biodiesel in volume and 80% petroleum-based diesel
- B100 100% biodiesel
- Biodiesel A fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats and which meets the specifications of ASTM D 6751
- BEV Battery electric vehicle
- CAFE Corporate average fuel economy
- CBI Confidential business information
- CFR Code of Federal Regulations
- CNG Compressed natural gas
- DOE Department of Energy
- DOT Department of Transportation
- DVD Digital video disc
- E85 A mixture of 85% ethanol and 15% gasoline
- EISA Energy Independence and Security Act of 2007
- EO Executive order
- EPA Environmental Protection Agency
- EREV Extended range electric vehicle
- EV Electric vehicle
- FCV Fuel cell vehicle
- FE Fuel economy
- FFV Flexible fuel vehicle
- FHWA Federal Highway Administration
- FTC Federal Trade Commission
- GHG Greenhouse gas
- GVWR Gross vehicle weight rating
- HEV Hybrid electric vehicle
- ISO International Organization for Standardization
- LPG Liquefied petroleum gas
- LSV Low speed vehicle
- MPG Miles per gallon
- MY Model year
- NAICS North American Industry Classification System
- NFPA National Fire Prevention Association
- NHTSA National Highway Traffic Safety Administration
- NPRM Notice of proposed rulemaking
- NTAA National Technology Transfer and Advancement Act of 1995
- OCR Optical character recognition
- OMB Office of Management and Budget
- PHEV Plug-in hybrid electric vehicle
- PRA Paperwork Reduction Act
- RFA Regulatory Flexibility Act
- SAE Society of Automotive Engineers

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**I. Executive Summary**

In this notice, NHTSA is proposing to require badges, labels and owner’s manual information for new passenger cars, low speed vehicles, and light-duty trucks rated at not more than 8,500 pounds gross vehicle weight in order to increase consumer awareness regarding the use and benefits of alternative fuels, as required by the Energy Independence and Security Act of 2007 (EISA).<sup>1</sup> The overarching goal of EISA is to move the United States toward greater energy independence and security, given that the United States imports a substantial amount of its petroleum, two-thirds of which is used to fuel vehicles in the form of gasoline and diesel, which can be vulnerable to supply disruptions and price volatility. Renewable alternative fuels produced in the United States are less vulnerable to the supply disruptions and price variability associated with imported fuels. Helping the public to better understand the benefits of these alternative fuels and to better recognize the vehicles that use them should increase their use, thereby replacing petroleum use and increasing national and energy security. Thus, in EISA, Congress directed the Secretary of Transportation, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency (EPA), to develop and implement consumer information and education initiatives related to fuel economy, greenhouse gas (GHG), alternative fuels and thermal management technologies, all aimed at reducing our nation’s dependence on imported petroleum. This requirement has been codified at 49 U.S.C. 32908(g), hereafter referred to as simply “32908(g).” The Secretary’s authority to develop and implement these programs is delegated to the Administrator of NHTSA.<sup>2</sup>

32908(g) requires the agency to undertake rulemaking to address consumer information on automobile fuel economy and the use of alternative fuels in three different ways, which the agency is implementing in three distinct phases.

In the recently-completed first phase, NHTSA established requirements for automobile manufacturers to label new automobiles sold in the United States with information about their performance in terms of fuel economy, greenhouse gas emissions, and smog-forming emissions, with rating systems to help consumers compare automobiles in terms of this performance at the point of purchase. NHTSA established these requirements in a joint rulemaking with the EPA,<sup>3</sup> which also has authority (under 49 U.S.C. 32908(b)) to regulate new automobile fuel economy labels. The agencies sought in that joint rulemaking both (1) to implement NHTSA’s 32908(g) authority by providing the new rating system to help consumers compare vehicles’ fuel economy, GHG, and other emissions performance at the point of sale, and (2) to implement revisions sought by EPA and NHTSA to update the existing labels and help them better convey information for advanced technology vehicles entering the marketplace, such as compressed natural gas vehicles (CNG), plug-in hybrid electric vehicles (PHEV), battery electric vehicles (BEV), and fuel cell vehicles. The final rule establishing the new labeling requirements was published on July 6, 2011,<sup>4</sup> and can be found on NHTSA’s Web site at <http://www.nhtsa.gov/fuel-economy>.

This notice initiates the second phase of rulemaking to implement the EISA requirements for consumer information and education about alternative fuels. 32908(g) requires NHTSA to develop regulations to require new automobiles to display certain information about their capability to operate on alternative fuels. First, NHTSA must require

vehicle manufacturers to affix new automobiles sold in the United States with a “permanent and prominent display” that indicates the vehicle is capable of operating on an alternative fuel;<sup>5</sup> second, NHTSA must require manufacturers to attach a label to the fuel tank filler compartment of vehicles capable of operating on alternative fuels that indicates the form of alternative fuel that the vehicle is capable of operating on; and third, NHTSA must require manufacturers to include in the owner’s manual, of vehicles that are capable of operating on alternative fuels, information which describes that capability and the benefits of using alternative fuels, including their renewable nature and environmental benefits.<sup>6</sup>

NHTSA is therefore proposing the following specific requirements in this rulemaking, as directed by EISA. To implement the permanent and prominent display mandate, the rule proposes to require a badge specifying in natural language which alternative fuel the vehicle is capable of operating on. The badge would be positioned on the rear of the vehicle, either directly below or to the right of the vehicle model name. To implement the fuel compartment label mandate, the rule proposes to require a label on the exterior of the fuel cap or fuel compartment access door that clearly states the alternative fuel type, and depending on the type, the proper/safe capacities for replenishing the fuel supply. To implement the owner’s manual mandate, the rule proposes to require manufacturers to include standardized text that describes the capabilities and benefits of using alternative fuels. Sections II and III of this proposal provide more detailed information about each of these requirements.

The agency has estimated the total costs of the proposal in Table I–1 and Table I–2 below.

**TABLE I–1—ESTIMATED INDUSTRY COSTS FOR PROPOSAL IN FIRST MODEL YEAR (2012\$)**

	Low	High
Permanent and Prominent Display Badge .....	\$6,713,112	\$13,292,937
Tooling (all fuel types) .....	41,064	284,287
Fuel Compartment Label .....	.....	827,436
Owner’s Information .....	.....	348,352
<b>Total .....</b>	<b>7,929,963</b>	<b>14,753,011</b>

\* Values derived from Projected MY2017 Industry Volume of Alternative Fuel Vehicles (Including LSVs)

<sup>1</sup> 49 U.S.C. 32902(g), Public Law 110–140.

<sup>2</sup> 49 CFR 1.95; CFR 501.2(a)(8).

<sup>3</sup> 79 FR 39478, July 6, 2011

<sup>4</sup> 76 FR 39478. The NPRM for this rulemaking was published at 75 FR 58708 and the rulemaking docket number is NHTSA–2010–0087, which can be accessed at [regulations.gov](http://www.regulations.gov).

<sup>5</sup> As defined by 49 U.S.C. 32901(a)(1).

<sup>6</sup> 49 U.S.C. 32908(g)(1).

TABLE I-2—ESTIMATED ANNUAL INDUSTRY COSTS FOR PROPOSAL AFTER THE FIRST MODEL YEAR (2012\$)

	Low	High
Permanent and Prominent Display Badge .....	\$6,713,112	\$13,292,937
Fuel Compartment Label .....		827,436
Owner's Information .....		328,081
Total .....	7,868,629	14,448,453

\* Values derived from Projected MY2017 Industry Volume of Alternative Fuel Vehicles (Including LSVs)

The agency believes that the benefits of this proposal will be higher than the costs, as the national and energy security benefits gained from even a modest increase in consumer purchases of alternative fueled vehicles would likely outweigh the relatively low anticipated cost of the proposed requirements. As information on the effects of these badges on consumer purchases is not available, a quantitative assessment of the benefits was not possible at this stage. Further discussion of the anticipated costs and benefits of the proposal can be found in Section IV.

In the subsequent third phase of implementing the 32908(g) requirements, NHTSA will develop a consumer information campaign to improve understanding of automobile performance in terms of fuel economy, GHG and other pollutant emissions, as well as to inform consumers of the benefits of using alternative fuels and where fueling stations are located. Given the complexity of the consumer research needed to implement this provision, the agency anticipates that this rulemaking will be proposed in 2015, after NHTSA completes research about appropriate and effective consumer messaging.

**II. What research did the Agency conduct regarding possible options for this proposal?**

As part of the development of this NPRM, NHTSA sought and considered available existing information and research from federal agencies, automotive manufacturers and suppliers. NHTSA made several visits to passenger car and light truck retailers and public auto shows to learn more about how individual manufacturers already use badges and labels to identify alternative fuel vehicles. In addition, NHTSA conducted online research of currently available manufacturer production labels, badges, consumer education materials and information provided to owners. NHTSA staff also held discussions with manufacturers, trade groups and suppliers to increase agency awareness and understanding of

existing materials.<sup>7</sup> Some manufacturers also directed the agency to industry label and badge suppliers for additional information.

Additionally, in order to benefit from the expertise of other federal agencies active in alternative fuel vehicle issues, NHTSA consulted with the Federal Highway Administration (FHWA), the Federal Trade Commission (FTC), and the Department of Energy (DOE). The agency discussed potential content of proposed owner's manual information with the FTC to understand further the requirements and content of the FTC (until recently) required<sup>8</sup> alternative fuel point of sale label found on all new alternative fuel vehicles sold in the U.S. The agency believes it may be helpful to consumers to provide consistency with information contained on the FTC Alternative Fuel label. The agency discussed the required content of the FTC label, including what points of the label were important for the consumer, with the intent of including similar information where possible. Consultation with the FHWA focused on current symbols used for alternative fuels.

Finally, the agency also consulted with DOE regarding content of the DOE/EPA fueleconomy.gov<sup>9</sup> Web site and the DOE alternative fuels and advanced vehicles data center<sup>10</sup> Web site. While most of the experience that these agencies have accumulated does not relate directly to the issues in this NPRM, NHTSA has done its best to extrapolate from the experience of these agencies to our current rulemaking. The interactions with FHWA gave NHTSA

an improved understanding of approved symbols as described in greater detail in Section II.A. Regarding consultation with DOE, the agency was informed of many useful tools and information that were determined to be more applicable to the consumer education campaign, which will constitute the third phase of implementing the 32908(g) requirements.

The agency notes that it did not conduct original research on consumer messaging in developing the proposal for this phase of the EISA consumer information requirements. The EISA requirements for badging, fuel tank compartment labeling, and owner's manual information are fairly straightforward. Unlike the fuel economy labeling requirements, the requirements being proposed in this rulemaking are not intended to facilitate direct consumer comparison of multiple vehicles or pieces of vehicle equipment; instead, they are simply intended to inform consumers about the alternative fuel capabilities of the vehicles already in front of them. Because the agency is trying to provide clear, basic information through this rulemaking and not trying to aid or influence consumer choice, the agency concluded that original research would not contribute sufficiently to improving the usefulness of the required information in order to justify the expenditure of resources.

NHTSA has identified several states at the time of this proposal<sup>11</sup> that promote the use of alternative fuel vehicles. Some have implemented programs, such as California's Clean Air Vehicle program, that provide High Occupancy Vehicle (HOV) lane access for labeled or specially plated alternative fuel vehicles. These programs often require the vehicle owner to apply a badge, sticker, or special license plate that identifies the vehicle as an alternative fuel, low emission, or "clean-" vehicle, but do not regulate the manufacturers of alternative fuel vehicles or provide consumer information on specific types

<sup>7</sup> NHTSA's records of these meeting are available in the docket for this rulemaking.

<sup>8</sup> In April of 2013, the Federal Trade Commission issued final amendments to the Alternative Fuels Rule, eliminating the point of sale labels that were previously required by the FTC on alternative fuel vehicles (AFVs), citing that similar information is incorporated on recently revised fuel economy and emissions point of sale labels required by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Transportation. ("FTC Amends Alternative Fuels Rule to Make Compliance Easier" last accessed: January 2, 2014)

<sup>9</sup> www.fueleconomy.gov (last accessed January 27, 2014).

<sup>10</sup> www.afdc.energy.gov/afdc/ (last accessed January 27, 2014).

<sup>11</sup> The states include Arizona, California, Colorado, Florida, Georgia, Hawaii, Maryland, New Jersey, New York, North Carolina, Tennessee, Utah and Virginia.

and benefits of alternative fuel vehicles. However, states may have an interest in this proposal, and we welcome comment from state and local officials and other interested persons.

Further, several there are several Federal requirements regarding the acquisition of alternative fuel vehicles for Federal vehicle fleets. Specifically, Energy Policy Act (EPA) 1992 sets statutory requirements for the acquisition of AFVs by Federal agencies. Executive Order 13423 directs Federal agencies to use PHEVs when commercially available at a cost reasonably comparable to non-PHEVs, while Executive Order 13514 establishes vehicle sustainability goals that encourage the purchase of AFVs. As with the state programs noted above, these and similar programs may benefit from vehicle badging, and we welcome comment from relevant officials and other interested persons.

The sections below describe in more detail how NHTSA developed this proposal. The agency seeks comments on the information presented in this proposal and whether other relevant information should be considered for the final rule. We encourage the submission of comments to the docket. For comments that recommend additional information be considered, it is requested the commenter include an explanation of how the agency should incorporate that information into the final rule.

#### *A. Alternative Fuel “Permanent and Prominent Display”*

Based on the information gathered by the agency, manufacturer-specific alternative fuel vehicle badges vary widely in design from manufacturer to manufacturer, sometimes as a result of the efforts to link the badging with overarching corporate goals regarding advanced technologies and alternative fuel usage.

After identifying that some manufacturers have already invested substantially in developing badges to help establish and promote a positive image for their companies and to promote the use of alternative fuels, the agency next assessed whether standardization of existing labels or badging for alternative fuel vehicles would in fact be beneficial, and if so, what form that standardization should take.

As one example, Ford uses a “Road and Leaf” symbol that depicts, as the title implies, a road leading to a green leaf. The symbol may appear on their vehicle’s lift-gates, front doors and engine appearance covers, or on other areas of the vehicle. Ford then

incorporates this symbol into many other badges on vehicles across its model line-up that are equipped with different “environmentally-conscious” technologies. Some examples of this include: The “Road and Leaf” incorporated into a “Flex-Fuel” badge to indicate ethanol-operating capability; a “B20” badge to indicate that a diesel vehicle is capable of operating on a small percentage of biodiesel; and an “Ecoboost” badge to indicate that a vehicle uses direct-injection, turbocharging and downsizing engine technologies to deliver performance similar to a larger displacement engine with the higher fuel efficiency of a smaller displacement engine. In addition, the symbol is applied to its hybrid and battery electric vehicles. (See Figures II.A–1 through II.A–6 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

Another example of a corporate-wide program is the “Flex Fuel” badge used by GM. In 2006, GM conducted an extensive E85 awareness campaign promoting the ethanol capabilities of its vehicles under the banner of “Live Green, Go Yellow.” The “Live Green, Go Yellow” campaign kicked off during Super Bowl XL in television ads promoting the use of the clean, alternative fuel in GM’s flexible fuel vehicles. In conjunction with this campaign, GM began applying “Flex Fuel” badges to vehicles capable of ethanol operation and using yellow-colored fuel filler caps for those vehicles as a tie-in to the larger campaign.<sup>12</sup> (See Figures II.A–7 through II.A–8 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

Ford and GM explained to NHTSA in meetings with the agency that they undertake these cross-product campaigns to promote their investment in environmentally friendly and alternative fuel technologies, which they believe will help foster consumer enthusiasm for their vehicles with these technologies. If consumers are more likely to purchase these vehicles as a result of this marketing investment, then manufacturers will be more likely to recoup their investment in technologies that reduce petroleum consumption (and increase their perception as a socially-responsible corporation), potentially leading to more investment in technologies that reduce petroleum consumption and benefiting the U.S.

<sup>12</sup> “GM: “Live Green Go Yellow”; [http://www.greencarcongress.com/2006/01/gm\\_live\\_green\\_g.html](http://www.greencarcongress.com/2006/01/gm_live_green_g.html) (last accessed January 27, 2014).

through reduced petroleum consumption.

In addition to the examples from Ford and General Motors, the agency also learned of campaign-derived, exterior badges used by manufacturers such as Hyundai and Nissan. The “Blue drive” exterior badge was developed in support of Hyundai’s corporate branding campaign to represent “Hyundai’s comprehensive overhaul of thinking green.”<sup>13</sup> (See Figure II.A–9 in “Examples of Existing Alternative Fuel Badges and Symbols,” Docket NHTSA–2010–0134). At its April 2011 introduction, the redesigned MY 2012 Versa was “the first Nissan model in the U.S. to use the new Nissan “Puredrive” designation. The automaker will put that label onto models that use Nissan’s most advanced technologies to promote eco-friendly driving and to cut CO2 emissions.”<sup>14</sup> (See Figure II.A–10 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

Other alternative fuel vehicle manufacturers appear to take a less comprehensive approach or may do very little in regard to badges. For example, Honda currently applies labeling in response to the requirements of some states for manufacturers of gaseous fueled vehicles, which are based on recommendations developed by the National Fire Protection Association (NFPA).<sup>15</sup> (See Figure II.A–11 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

Some manufacturers do not produce any alternative fuel vehicles for sale in the United States. These manufacturers do not have any current campaigns to promote alternative fuels technologies.

The agency also conducted additional research regarding vehicle badge text sizing and coloring. The agency took a closer look at these two design aspects to obtain a better understanding of how they may factor into this proposal. The agency surveyed a collection of twenty vehicles with unique vehicle model and technology-related badges. This collection included badges dedicated to differing technologies such as stability control, engine size or type, driveline or

<sup>13</sup> Hyundai BlueDrive campaign information <http://www.hyundaiusa.com/about-hyundai/environment/> (last accessed January 27, 2014)

<sup>14</sup> “Nissan Versa gets radical new look, better gas mileage” USA Today. <http://content.usatoday.com/communities/driveon/post/2011/04/nissan-versa-radical-new-style-11000-july-sale-new-platform/1> (last accessed: January 27, 2014).

<sup>15</sup> NFPA 52: Vehicular Gaseous Fuel Systems Code. <http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=52> (last accessed January 27, 2014).

alternative fuel capability. In all, 34 badges were evaluated representing 19 different vehicle models and nine different vehicle brands.

Overall, the agency learned the average size of text found on vehicle badges across both model and

technology specific badges was approximately 18.4 millimeters. The text sizes ranged from approximately 4.75 millimeters to 31 millimeters for technology-specific badges with an average of approximately 16.4

millimeters. Model name badges were slightly more consistent with a range of 15 millimeters to 42 millimeters and an average of approximately 20.3 millimeters. Please see Table II-1 for badge and measurement details.

TABLE II-1—VEHICLE BADGE TEXT APPROXIMATE SIZES

Make	Model	Model name		Technology badge		Comment
		High (mm)	Low (mm)	High (mm)	Low (mm)	
Audi	Q7	35	27	23	23	TDI (Diesel) Badge.
BMW	530i	22	22	(*)	(*)	No Technology Badge.
Chevrolet	Malibu	17	17	31	17	Hybrid badge.
Chevrolet	Express (Van)	26	26	13	13	Stabilitrak—Foil with Overlay.
Chevrolet	Uplander	20	20	17	4.75	Flex Fuel (yellow).
Chevrolet	Express (Van)	**26	**26	27	27	Standard CNG Diamond Symbol.
Chevrolet	Suburban	20	20	(*)	(*)	Flex Fuel (green).
Chevrolet	Impala	20	20	**17	**4.75	Flex Fuel (yellow) overall badge height is approximately 21 mm.
Dodge	Caravan	20	20	11	5	Flex Fuel with E85 Ethanol.
Dodge	Avenger	15	15	**11	**5	Flex Fuel—same as Caravan. Badge height is 15 mm.
Ford	Fusion	15	15	15	15	Hybrid badge letters. Road and Leaf symbol is approximately 50 mm.
Ford	Focus	15	15	(*)	(*)	Height is based on sub-model “SE” designation.
Ford	Explorer	22	22	14	14	Size is for roll stability control (RSC) designation—Advance Trac text above RSC is 10 mm.
Ford	F-150	18	18	10	10	Flex Fuel—Two Rows of 10 mm text.
Honda	Accord	22	15	25	25	V6 Badge.
Honda	Insight	15	15	14	14	Hybrid badge—overall height is ~20 mm.
Jeep	Liberty	42	32	21	21	Height is based on “3.7L” engine designation—4x4 badge same.
Toyota	Camry Hybrid	15	15	5	5	Three rows of 5 mm text—Hybrid Synergy Drive.
Toyota	Highlander	23	23	20	19	4WD Badge.
Volkswagen	Jetta	17	17	17	17	2.5L Engine designation.

\* Indicates no badge.

\*\* Duplicate measurement not included in calculations.

Average Text Height (mm)

Ranges Model and Technology Badges—High to Low	21.0	19.7	17.5	15.3
Averages Model and Technology Badges	20.3		16.4	
Overall	18.4			

With respect to badge color, the agency found that most badges surveyed had a chrome or silver finish. Most of the badges surveyed had letters (particularly the vehicle model names) finished in chrome. The majority of the technology badges consisted of chrome letters; however, in some cases the text was displayed in a dark color, usually black, recessed into a chrome background.

Based on information obtained from manufacturers and through research as part of the development of this proposal, NHTSA learned that some vehicle manufacturers have made significant investments in promoting alternative fuel and other advanced technologies that reduce petroleum

consumption. These manufacturers view their efforts as contributing positively to their brand image, through both traditional campaigns and, in some cases, tying-in those campaigns by applying badges to their vehicles. The agency believes that, based on manufacturers’ experience with how badging designs deliver alternative fuel information to consumers, it is important to carefully consider the views of the manufacturers, as well as their investments developing and promoting alternative fuel usage.

NHTSA also conducted research on whether widely-accepted symbols exist for alternative fuels that the agency might consider for use in alternative fuel vehicle badging. This included

investigation of symbols used by the FHWA and those defined jointly by the International Organization for Standardization (ISO) and the Society of Automotive Engineers (SAE).

The FHWA currently specifies symbols associated with alternative fuels as part of their “General Service Signs” included in the Manual on Uniform Traffic Control Devices.<sup>16</sup>

<sup>16</sup> The National Manual on Uniform Traffic Control Devices (MUTCD) defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. See 23 CFR Part 655, Subpart F. The MUTCD is also available at <http://mutcd.fhwa.dot.gov/index.htm> (last accessed January 27, 2014). Within the MUTCD, FHWA prescribes a number of standardized symbols for

These symbols are intended for application to official interstate signage typically found in advance of interstate highway exit ramps, and include symbols (and sometimes supporting language) for vehicle electricity charging stations, and ethanol (E-85 in particular) and propane fueling stations, among others. However, the FHWA's General Service Signs symbols do not cover all alternative fuels. (See Figure II.A-12 in "Examples of Existing Alternative Fuel Badges and Symbols," in Docket NHTSA-2010-0134).

ISO and SAE have developed a fuel symbol for use on vehicle controls, indicators, and warning lamps in passenger cars, light and heavy commercial vehicles, and buses, to help standardize fuel identification and increase consumer understanding. The symbols depict a typical fuel station pump and guidelines for specifying the fuel type that should be represented at the base of the symbol. There are SAE/ISO symbols for multiple fuel types, including some, but not all, of the alternative fuels covered by this proposal (e.g., liquefied petroleum gas (LPG), CNG, diesel, hydrogen, etc.).<sup>17</sup> (See Figure II.A-13 in "Examples of Existing Alternative Fuel Badges and Symbols," in Docket NHTSA-2010-0134).

NHTSA and the EPA jointly required symbols designating vehicle fuel type on the new fuel economy and environment labels discussed above. These symbols identify seven different vehicle technologies: gasoline, diesel, ethanol flexible fuel vehicles, compressed natural gas, battery electric, fuel cell, and plug-in hybrid vehicles, and theoretically could be used as a starting point for badging purposes. However, as with the FHWA symbols, some potential alternative fuels are not currently addressed.

The National Fire Protection Association (NFPA) currently provides guidance on labeling of compressed natural gas vehicles that has been incorporated into some state laws, as noted in the Honda labeling discussed previously. (See Figure II.A-11 in "Examples of Existing Alternative Fuel Badges and Symbols," in Docket NHTSA-2010-0134). The NFPA-recommended label has the letters

"CNG," in white or silver, centered in a diamond shape with blue background. The NFPA label is intended to inform first responders (and others that may come in contact with or attempt to repair a damaged vehicle) that a vehicle may carry different fire risks than that of a conventional-fuel vehicle, and should be handled with those different risks in mind. Some states mandate the use of the "blue diamond," presumably to maximize the safety of crash response by assisting first responders, who have been trained to recognize the meaning of the symbol. It would presumably also assist first responders if manufacturers added the label to their vehicles voluntarily. NHTSA recognizes that there may be safety benefits associated with standardizing the use of such symbols.

However, NHTSA believes the purpose of the EISA requirement is to inform the general public of the type of alternative fuel the vehicle uses regardless of their level of familiarity with alternative fuels. While the use of an acronym in the NFPA labels is sufficient for first responders because they are already familiar with this fuel type and its shorthand, we are not convinced that it would effectuate EISA's goal of consumer education better than the natural language "natural gas" badge proposed here. NHTSA therefore believes the "natural gas" badge proposed in this rule will provide consumer education benefits not currently provided by the NFPA label. NHTSA also believes the standardization provided by the proposed "natural gas" badge is an additional benefit not served by the NFPA label, which is not mandatory in most states.

NHTSA seeks comment on any potential overlap or conflicts between the proposed badge for natural gas and the existing NFPA "CNG" label. Specifically, NHTSA seeks comment on whether the existing NFPA label already serves the consumer education purpose of this proposal due to a high level of consumer familiarity with the "CNG" acronym. If commenters support NHTSA considering the existing NFPA label for consumer education purposes, NHTSA requests that commenters provide data that shows existing consumer familiarity with the NFPA label and the CNG acronym.

In summary, the agency found that, while there appear to be consensus standards for symbols for some alternative fuels, those standards do not cover the range of fuels that NHTSA believes it needs to address in this proposed rulemaking. Moreover, the agency is not persuaded at this time that

the symbols required by those standards, even if they did cover the full range of alternative fuels, would necessarily be complementary to the exterior vehicle appearance. The FHWA General Service Signs symbols are used for fuel and charging stations and might not integrate well with existing exterior badges if placed on a vehicle. Further, both the FHWA symbols and the SAE/ISO fuel symbols may not clearly communicate the differences between alternative fuels beyond the short and standardized acronyms located on the fuel pump symbol. As a result, the agency does not believe that the symbols established by the consensus standards are particularly useful for adoption as permanently affixed vehicle badges in this proposed rulemaking, as these symbols were not developed for use on vehicle exteriors and/or as a component of larger campaigns. After assessing whether standardization of existing manufacturer labels or badging would best serve the informative purpose of this proposal, the agency concluded that the existing market examples do not lead to a clear conclusion that one approach is superior to another.

#### *B. "Owner's Manual Information" for Alternative Fuel Capable Vehicles*

While reviewing information currently provided to owners, the agency learned that vehicle manufacturers producing vehicles capable of operating on alternative fuels provide owners with information regarding the alternative fuel capability, typically in the owner's manual. Manufacturers generally provide information that they believe is important for owners to understand regarding safe operation and maintenance of their alternative fuel vehicles. However, the agency found that manufacturers currently provide very little to no substantive information regarding the energy security and environmental benefits of alternative fuels.

In looking for information that could be required for inclusion in owner's manuals, NHTSA also considered alternative fuel information developed by other federal government agencies. The agency found various forms and depths of alternative fuel information from federal agencies. Federally-developed alternative fuel information is disseminated through agency Web sites and printed materials. This information can be highly scientific or very cursory depending on the target audience or the message conveyed.

The DOE's Alternative Fuels and Advanced Vehicles Data Center

highway signs referring to alternative fuel availability, as discussed above. See <http://mutcd.fhwa.dot.gov/html/2009/part2/part2i.htm> (last accessed January 27, 2014).

<sup>17</sup> See SAE J2402: "Road Vehicles—Symbols for Controls, Indicators, and Tell-tales", published January 2010, symbols number(s) G.09, Z.03. SAE J2402 is available on file with the agency and can be purchased at [http://standards.sae.org/j2402\\_201001/](http://standards.sae.org/j2402_201001/) (last accessed January 2, 2014).

(AFDC),<sup>18</sup> for example, describes itself as “a comprehensive clearinghouse of information related to advanced transportation technologies” and states that it “offers transportation decision makers a collection of unbiased alternative fuel information, publications, data, and tools.” NHTSA believes this could be a useful source for information to describe a vehicle’s capability to operate on alternative fuels and the benefits of using alternative fuels, including their renewable nature and environmental benefits, given that agency’s expertise in these issues.

Until April 2013, the FTC required vehicle manufacturers to affix a label to new alternative fuel vehicles offered to consumers for sale or lease. This label contained a series of key points to inform consumers about alternative fuels either prior to or at the point of vehicle purchase or lease. Vehicle dealers were required to keep the label on the vehicle until it was either sold or leased.

Some vehicle manufacturers provide training information to dealer sales personnel regarding alternative fuels. For example, Chrysler produces information intended as an aid in answering questions consumers may have regarding alternative fuel vehicles, in order to ease pre-purchase concerns or correct possible misinformation.

### C. Fuel Compartment Label for Alternative Fuel Vehicles

The agency gathered and identified many examples of fuel compartment labeling including labels for ethanol, hydrogen, compressed natural gas and electricity. The labeling ranged from an adhesive label with text, an adhesive label containing text and a graphic symbol, to a fuel tank “cap” which is labeled with text indicating the appropriate fuel type, and sometimes combinations of those elements. (See Figures II.C–1 through II.C–2 in “Examples of Existing Fuel Compartment Labels,” in Docket NHTSA–2010–0134).

In addition to the adhesive label examples and text on the fuel cap, the agency found that in some cases, if a vehicle is alternative fuel capable, a specific, colored fuel tank cap is used. For the most part, these caps were colored yellow to indicate ethanol capability.<sup>19</sup> (See Figures II.C–3 through

II.C–4 in “Examples of Existing Fuel Compartment Labels,” in Docket NHTSA–2010–0134).

In discussions with manufacturers,<sup>20</sup> the agency learned that, at the time this proposal was developed, some do not provide any labeling information at the fuel compartment filler (i.e., charge port) for electric vehicles. One manufacturer of electric vehicles indicated that, while not currently present, labeling at the charge port may be necessary to assist consumer understanding of connection type and ratings.

Fuel compartment labels for compressed natural gas and hydrogen vehicles in production today, or planned for near-term introduction, were similar in nature to the NFPA-recommended labels found on the exterior of the vehicles that were described in Section II.A. Manufacturers using labels for these gaseous fuels derived the labels from standards to promote safety in fuel handling for owners and, potentially, emergency responders.

For more traditional liquid fuel types like gasoline and diesel, manufacturers provided labels and colored fuel caps, with the intention to reduce the likelihood of a vehicle being fueled with an incorrect or incompatible fuel type, which could lead to possible severe damage to a fuel or exhaust system, or engine.

## III. What is the Agency proposing?

### A. Who would be affected by this Proposal?

This proposal would affect companies that manufacture in the U.S. market automobiles rated at not more than 8,500 pounds gross vehicle weight<sup>21</sup> which are capable of operating on the following alternative fuels:<sup>22</sup>

- Methanol<sup>23</sup>
- Denatured ethanol<sup>23</sup>
- Other alcohols<sup>23</sup>
- Natural gas
- Liquefied petroleum gas
- Hydrogen
- Coal-derived liquid fuels
- Fuels (except alcohol) derived from biological materials
- Electricity (including electricity from solar energy)

cap was colored green, but in most cases the cap color was black.

<sup>20</sup> NHTSA’s records of these meetings are available in the docket for this rulemaking.

<sup>21</sup> 49 U.S.C. 32908 (a)(1).

<sup>22</sup> As defined by 49 U.S.C. 32901 (a)(1).

<sup>23</sup> Note: To be considered an alternative fuel, alcohol derived fuels need to be blended at levels of at least 85 percent of the total mixture when blended with gasoline or other fuels.

This proposal would apply to manufacturers of new vehicles (passenger cars, low speed vehicles, and light-duty trucks). As the purpose of these provisions arguably is to provide information on all alternative fuel capable vehicles on the road, regardless of their origin, NHTSA believes that it may also be appropriate to apply these requirements to vehicle alterers.<sup>24</sup> However, the agency has limited information on the universe of alterers that could be subject to this rule, including how the inclusion of alterers might affect the cost-benefit and small business impact analyses. The agency therefore seeks comment on the all aspects of the appropriateness, potential benefits, and practicability of extending these requirements to alterers.

### B. Alternative Fuel “Permanent and Prominent Display”

EISA states that the Department of Transportation (by delegation, NHTSA) shall develop requirements for vehicle manufacturers to label vehicles with a “permanent and prominent display that an automobile is capable of operating on an alternative fuel.” To meet this statutory requirement, NHTSA considered how manufacturers will meet the requirement that the display be “permanent and prominent,” and also the content of the display. According to Merriam-Webster Online dictionary,<sup>25</sup> “permanent” means “continuing or enduring without fundamental or marked change,” while “prominent” means “standing out or projecting beyond a surface or line,” and “display” means “to put or spread before the view” or “to make evident.” For purposes of this proposal, the agency is interpreting “permanent and prominent display” as a display that is intended to be affixed to a vehicle for the vehicle’s entire useful life while providing clear, visible information that the vehicle is capable of operating on an alternative fuel.

NHTSA seeks comment on the assumptions, reasoning, and conclusions described in this section as underlying this proposal.

In terms of “permanence,” manufacturers currently develop badges for vehicle model names, manufacturer brand logos and other vehicle information to specifications intended to allow the badge to remain attached to the vehicle over its useful life. NHTSA would expect that any badges developed

<sup>24</sup> An alterer in this context would be someone that converts for sale or re-sale a conventional-fueled vehicle to one capable of operating on an alternative fuel.

<sup>25</sup> <http://www.merriam-webster.com/> (last accessed January 27, 2014).

<sup>18</sup> <http://www.afdc.energy.gov/afdc/about.html> (last accessed: January 2, 2014).

<sup>19</sup> While not an alternative fuel, the agency also received examples showing the color green used to indicate a vehicle operates on diesel fuel. Fieldwork performed by the agency confirmed inconsistent use of color for fuel filler caps for diesel fuel across various vehicle manufacturers. In some cases, the



for this proposal, or that already meet this proposal, would be of similar specifications and able to last for the vehicle's useful life without specifying actual test procedures to measure this requirement.

In terms of "prominence," NHTSA is proposing to require the alternative fuel badge to be on the vehicle exterior, at the rear of the vehicle and in proximity to the vehicle model name or model designation. In terms of proximity, NHTSA proposes the badge be positioned either directly below or to the right of the vehicle model name or model designation found on the rear of the vehicle. In the case where no model name or designation is intended for the rear of the vehicle, NHTSA proposes the badge be placed at the lower right corner of the vertical trunk lid, closeout panel, rear hatch or rear fender,<sup>26</sup> depending on the vehicle type and configuration. NHTSA does not intend to require that the proposed badges take visual or physical precedence over existing vehicle manufacturer brand logos, model names, or designations. Vehicle manufacturers have demonstrated expertise in the design of badges and the placement of badges such that they provide clear and visible identification of the company logo. NHTSA considered whether to propose less obtrusive displays, such as clear-background adhesive window labels, but has tentatively concluded that such displays would be insufficiently "prominent" to fulfill EISA's intent. If commenters suggest that an approach other than exterior vehicle badging should be used, NHTSA requests that they provide specific detail on what their preferred approach would entail and why exterior vehicle badging would be less permanent than the commenter's preferred approach, less informative for consumers than the commenter's preferred approach, or more burdensome for manufacturers than the commenter's preferred approach.

The next question that NHTSA considered was the content of the display—whether NHTSA should require vehicles to be labeled generally as simply "alternative fuel" or "alternative fuel capable," whether vehicle labels should reference the specific alternative fuel, and whether the display should consist of a symbol (or symbols) or in the form of natural language.<sup>27</sup> These are not questions answered directly by Congress in EISA.

<sup>26</sup> Specifically in the case of LSVs where there may be no trunk, closeout panel or rear hatch as part of the vehicle design.

<sup>27</sup> Webster's Third New International Dictionary: Natural language: A language that is the native speech of a people.

NHTSA does not believe that Congress intended for vehicles to be labeled generally as "alternative fuel" or "alternative fuel capable." 49 U.S.C. 32901(a)(1) has long enumerated specific alternative fuels, which were already defined when Congress created the "permanent and prominent display" requirement. Thus, NHTSA believes that, rather than repeating the existing enumerated list of alternative fuels in 32908(g), Congress intended for that list to be referenced by 32908(g). Additionally, if the purpose of EISA is to promote energy conservation and the use of non-petroleum fuels, NHTSA does not believe that a generic alternative fuel vehicle label would promote the same level of consumer understanding about the variety of alternative fuel options available to consumers. NHTSA believes that more specific labels would clearly differentiate among technologies and specifically identify advanced technologies, such as BEVs, PHEVs, and FCVs, for which manufacturers generally have made significant investments in research development, capital equipment and facilities. While some manufacturers do currently incorporate similar label elements in a variety of alternative fuel or advanced technology vehicles, they also typically include distinctive elements for each technology to identify and promote those technologies. Because of these considerations, NHTSA tentatively concludes that vehicle labels should specify which alternative fuel a vehicle is capable of, rather than simply identifying it as "alternative fuel."

The agency has developed a lead proposal and one alternative proposal that use natural language. The agency considered an alternative that used symbols, but is not proposing that option. The agency assessed the natural language approach and approaches using symbols and recognizes there are advantages to both approaches.

Existing symbols, for the most part and regardless of source, having already endured development and approval processes, are generally accepted in certain contexts to represent alternative fuels. They are relatively design-neutral, which should help them to harmonize better with manufacturer-developed designs that manufacturers may wish to continue applying. They also may help consumers' recognition of alternative fuel symbols insofar as they may already be used at fueling stations, in roadside signage, and at other locations on an alternative fuel capable vehicle.

Based on the finding that there is not a single source for widely-recognized alternative fuel symbols for vehicles,

NHTSA considered whether to try to develop a set of symbols for badging purposes. If the agency attempted to specify a set of symbols for the variety of alternative fuels, we believe that it would need to be accompanied either by evidence that the symbols were intuitively comprehended by most people, or by a significant education effort to inform consumers of their meaning. The variety of fuels covered by the term "alternative fuel" imposes educational challenges, and the agency believes that the fact that Congress mandated educational efforts in EISA regarding the use and benefits of alternative fuels points to a general lack of public knowledge about alternative fuels.

Even if the symbols were developed and consumer research indicated there was general comprehension of the symbols, the agency is concerned that there is a risk that a significant number of consumers will not interpret the symbols consistently if they were eventually implemented. At this time, the agency believes a considerable amount of research would be required to develop symbols representing alternative fuels that are easily comprehended by most people. The agency believes that even if considerable research was conducted to develop the symbols, consumers still would not interpret them consistently, and therefore the agency does not believe that symbols for alternative fuel vehicle badging are the best solution for meeting the EISA requirement. Additionally, as discussed above, many manufacturers have already invested considerable resources in developing their own symbols, and the agency does not wish to impact that investment unnecessarily by requiring manufacturers to replace their symbols with standardized ones if the agency is not confident that consumers will be able to determine what standardized symbols mean.

Natural language, on the other hand, should be more readily understandable for consumers (even if some of the alternative fuels remain somewhat limited in vehicle use and not commonly seen on the roads), and less subject to inaccurate interpretation. Manufacturers already employ natural language in many cases to identify vehicle model names, vehicle manufacturer names, and unique vehicle model designations. In addition, because natural language is straightforward, research would not be required. Natural language would meet EISA statutory requirements. However, the agency seeks comment on this

assessment and the proposal to require natural language descriptions.

With these tentative conclusions in mind, NHTSA’s proposal for a “permanent and prominent display” is as follows:

1. “Permanent and Prominent Display” Content Proposal

Based on the available badging and consumer information reviewed by the agency, there appear to be virtually no standardized practices associated with displaying a vehicle’s alternative fuel capability. Some vehicle manufacturers have developed unique badges, and in some cases consumer campaigns, to promote alternative fuel capability for their specific, advanced technologies that decrease petroleum consumption. Through this proposal NHTSA remains committed to promoting manufacturer investment in alternative fuel vehicles and to avoid the redundancy of both manufacturers and NHTSA investing time and effort in developing alternative fuel-specific symbols for each vehicle. Based on the agency findings, all fuel types may not be represented in a

symbolic form and, over time, new alternative fuel types may be introduced to the market. Adding new fuel types may involve revisiting and republishing standards, a time consuming process. In addition, the symbols identified while researching this proposal were fundamentally developed for use on controls, the vehicle instrument cluster, and road signs, versus the vehicle exterior. The agency believes the symbols may have taken a different form if designed from the outset as an exterior badge, where aesthetics and complementing an overall theme may take a higher priority than they would for controls, warning lamps or road signs. Overall, this proposal is intended to provide a degree of standardization across the industry without encroaching on manufacturer investment, creativity and resources utilization in promoting alternative fuels.

In order to accomplish these goals, NHTSA is proposing as follows: The agency has tentatively concluded that the regulation should specify that manufacturers must provide a “permanent and prominent display,” as

discussed above, which includes in some form the alternative fuel type in natural language. The required natural language terms for alternative fuels are defined in the following table. NHTSA believes that this requirement to standardize terminology for alternative fuel vehicles (and to label all alternative fuel vehicles) could be easily implemented by manufacturers, and would foster consumer recognition of alternative fuel vehicles on the roads without encroaching on existing programs that promote vehicles capable of operating on alternative fuels or established brand equity, since manufacturers will still be able to incorporate the natural language into their own preferred designs/branding. This approach is also consistent with the agency’s interpretation of EISA that, at minimum, the type(s) of alternative fuel on which a vehicle is capable of operating should be identified. Table III–1 provides detail of the proposed natural language text associated with the alternative fuels covered by this proposal.

TABLE III–1—PROPOSED “PERMANENT AND PROMINENT DISPLAY” LANGUAGE

Alternative fuel <sup>28</sup>	Proposed badge natural language minimum description
Methanol <sup>29</sup> .....	Methanol.
Denatured Ethanol <sup>29</sup> .....	Ethanol.
Other Alcohols <sup>29</sup> .....	Name of other alcohol derived fuel.
Natural Gas .....	Natural Gas.
Liquefied Petroleum Gas .....	Propane.
Coal Derived Liquid Fuels .....	Coal to Liquid.
Hydrogen .....	Hydrogen.
Fuels (except alcohol) derived from biological materials .....	Biodiesel <sup>30</sup> or name of other fuel derived from biological materials.
Electricity (Battery Electric Vehicle) .....	Electric.
Electricity (Plug-In Hybrid Electric Vehicle) .....	Plug-In Hybrid Electric.

As identified, the proposed badge natural language description is the minimum language to be included and does not preclude the inclusion of other information related to the alternative fuel capable vehicle such as dual-fuel capability or acceptable blend level such as E85, if applicable.

In surveying current production vehicle badge designs, the agency does see the need to propose a minimum letter height measurement and to have the alternative fuel name presented in a manner providing clear contrast between the letters and their

background color in order to ensure readability.

Based on the survey of current production vehicle model and technology badges, the agency proposes a minimum for the defined “natural language minimum description” be no less than 15 millimeters. This fundamentally aligns with the minimum average text size found on technology related badges currently in production and is intended as a minimum size when the “natural language minimum description” is presented as a standalone badge containing no other text. In cases where the “natural language minimum description” is accompanied by other language, as one badge, the agency proposes a minimum text size of 5 millimeters for the “natural language minimum description” and the accompanying text with an overall minimum badge height of 15 millimeters. The agency proposes

these minimum sizes to help ensure readability, based on the precedents set by the survey of current production vehicle badges (which are assumed, for the most part, to include readability from a reasonable distance as design criteria), while still providing ample latitude in the overall badge design.

In addition, the agency proposes the defined “natural language minimum description” is presented with a clear difference, or the use of differences, between the lightest and the darkest parts of the fuel name. While conducting research for this proposal, the agency observed that current production vehicle model names and manufacturer brand logos are predominantly finished in chrome or, in some cases, shades of silver; a trend that applies historically as well. The agency presumes these finishes and colors provide maximum flexibility for application to the wide array of vehicle

<sup>28</sup> As defined by 49 U.S.C. 32901(a)(1).

<sup>29</sup> Note: To be considered an alternative fuel, alcohol derived fuels need to be blended at levels of at least 85 percent of the total mixture when blended with gasoline or other fuels.

<sup>30</sup> The agency notes that it recognizes only ‘neat’ biodiesel (B100) as an alternative fuel. 63 FR 15322 (Mar. 31, 1998).

colors available to consumers without hindering readability or attractiveness. With this in mind and to align with vehicle badging trends, the agency proposes the letters of the alternative fuel name to be finished in chrome or a silver color. If the alternative fuel name in the badge contains a background color independent of the vehicle color, the agency proposes this background color should provide clear contrast to the alternative fuel name.

As proposed, the minimum size and letter finish are applicable to only the alternative fuel badge “natural language minimum description” and not applicable to any other text that may be included on the badge.

As an example of what this might look like, during research for this proposal, the agency identified a current production flex-fuel badge at a retailer location where, along with the prominent “flex-fuel” designation, the badge included the word “ethanol” in the overall badge design. The agency would consider that badge to meet the minimum requirements of the proposed regulation. (See Figure III.B–1 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

The agency believes that this approach would both permit and promote manufacturer investment in their own badging and brand equity for alternative fuel vehicles, and would not interfere with broader manufacturer campaigns to promote both alternative fuel vehicles and vehicle petroleum consumption-reducing technologies. Any activity, whether required by the government or undertaken voluntarily by the industry, which promotes the benefits and availability of these vehicles, could help to drive sales and reduce the overall consumption of petroleum-based fuels.

However, there is still some risk that despite standardization of the natural language designation for the alternative fuel type, other inconsistencies across manufacturers’ representations could slow consumer understanding about different alternative fuel vehicles. In addition, NHTSA has evaluated all the existing or planned vehicle manufacturer badges and is aware that some of these badges may still require some re-tooling to incorporate the specific fuel type in natural language. Despite these issues, the agency has tentatively decided that this approach is preferable to a more prescriptive approach, some of which are discussed below as regulatory alternatives.

## 2. Alternative Display Content Considered by the Agency

NHTSA also considered whether to specify a standardized word or symbol design for each type of alternative fuel and require that the applicable design be used on all alternative fuel capable vehicles sold in the United States, supplanting any existing manufacturer-applied badging for alternative fuel capability. NHTSA considered three different ways to develop the standard design for each alternative fuel, as discussed below.

For the first alternative, NHTSA considered using and/or adapting the FHWA or SAE/ISO symbols discussed above in a way that could make them more applicable for automobile badging. These symbols, having already been through development and approval processes, are generally accepted in certain contexts to represent alternative fuels. They have the benefit of being relatively design-neutral, which could help them harmonize better with manufacturer-developed designs, and they could also help consumers’ recognition of alternative fuel symbols, insofar as they may already be used at fueling stations, in roadside signage, and at other locations on an alternative fuel capable vehicle (See Figures II.A–9 & 10 in “Examples of Existing Alternative Fuel Badges and Symbols,” in Docket NHTSA–2010–0134).

However, because symbols do not exist for some of the fuel types in either the FHWA or the SAE/ISO set of symbols, the agency would still need to develop symbols for those other fuel types, similar to the other alternatives discussed below. In addition, because the symbols were developed for use on controls, the vehicle instrument cluster and road signs, rather than for use as a vehicle badge, the agency remains concerned that the symbols may have taken a different form if designed from the outset as an exterior badge, where aesthetics and complementing an overall vehicle theme may take a higher priority, and specified guidelines for application to controls, warning lamps and road signs are not applicable.

For the second alternative, NHTSA considered developing new symbol designs to represent each of the alternative fuel vehicle types covered by this proposal. This approach could be used to fill in the gaps in the approach above, or to start from scratch developing designs specific to this application. However, NHTSA is concerned that significant new research would be necessary for such an approach, which could lead to additional delay in the development of

this regulation. In addition, the approach would need to be coupled with a customer education program in order for it to be effective, creating further delay, and without the guarantee that the symbols developed would ever be immediately recognizable by consumers.

For the third alternative, NHTSA considered soliciting proposed designs for each alternative type from interested parties, and choosing one of those particular designs as the standard design for each type of alternative fuel vehicle. This approach could significantly benefit a manufacturer whose existing design was chosen, as they would have already invested in tooling and would have significant lead time and cost advantage over other manufacturers. This approach would also eliminate the effort, and associated cost, for any other manufacturers who do not currently have such a program, as they would not have to invest in development of their own design. However, NHTSA is concerned that a design-mandated approach may not be compatible with future ideas that manufacturers may develop regarding exterior design and may limit creativity in their advertising approaches for alternative designs.

All of these alternatives could potentially create burden for manufacturers who have made efforts to develop brand equity for their own alternative fuel strategies including the use of symbols to provide a representative meaning or to represent something abstract through their vehicle badges. In addition, some manufacturers have even obtained trademark rights to these symbols and names, so selecting a single manufacturer design as the standard could introduce the need for potential trademark and copyright arrangements among manufacturers, which could be exceedingly burdensome for other manufacturers whose design was not chosen. It may be inappropriate for NHTSA to give manufacturers the advantage of being “ahead” of other manufacturers if their symbol is the one chosen. NHTSA does not wish to discourage vehicle manufacturers from investing in promoting alternative fuel vehicle technologies and other petroleum-fuel consumption reduction technologies; doing so would not be consistent with the agency’s and EISA’s goals.

The agency seeks comment generally on this aspect of the proposal and these alternatives, and specifically on the following questions:

- Do commenters believe that the proposed natural language descriptions for the alternative fuels covered by this

proposal are appropriate and recognizable? If not, what do commenters suggest, and why?

- Do commenters believe the agency should conduct research regarding the potential advantages of using symbols instead of natural language (after finalization of natural language badging in the current rulemaking) to develop a new series of symbols for alternative fuel vehicles, that might be included in a later rulemaking? If so, why? What research should the agency undertake? How far in the future should the agency be aiming to develop and promulgate such a series of symbols for this requirement, if the agency chose to pursue this path?

- Do commenters believe the agency should require additional labels/badges and/or other locations to enhance the information being presented for the use and safety of first responders. In particular, to address potential badge illegibility in the event of rear impact crash.

### C. "Owner's Manual Information" on Alternative Fuel Capability and Benefits

EISA requires DOT (by delegation, NHTSA) to develop regulations to require vehicle manufacturers producing vehicles capable of operating on alternative fuels to include text in the vehicle owner's manual information describing the capability and benefits of using alternative fuels, such as their renewable nature and environmental benefits. According to Merriam-Webster Online dictionary,<sup>31</sup> "capability" means "the facility or potential for an indicated use or deployment," "benefits" means "something that promotes well-being" and "renewable nature" suggests "capable of being replaced by natural ecological cycles or sound management practices." In the context of owner's manual information regarding alternative fuel vehicles and alternative fuels generally, manufacturers currently appear to locate most of the information that they provide in the owner's manual in text format, but the information provided on alternative fuels generally does not address the topics enumerated by EISA. For purposes of this proposal, the agency is interpreting "owner's manual . . . information that describes [the] capability and the benefits of using alternative fuels, including the renewable nature and environmental benefits of using alternative fuels," as requiring more owner's manual text than what is currently provided by the

majority of manufacturers who produce alternative fuel vehicles.

As for the "permanent and prominent display" of alternative fuel capability, NHTSA considered whether it should simply create general guidelines for these topics and allow manufacturers to develop their own text, or whether the agency should specify the text that manufacturers would be required to use. NHTSA has tentatively concluded that specifying required text rather than simply providing guidelines for manufacturers to develop their own text would be the best approach. Manufacturers would be required to include the NHTSA-specified text with the owner's manual information of every alternative fuel vehicle that they produce for sale in the United States, but would also be permitted to develop additional text to describe their own vehicles if they choose. NHTSA believes that this approach will help to ensure that the owner's manual information for all alternative fuel vehicles covers the required topics as thoroughly and accurately as NHTSA believes is necessary to implement EISA's intent, and will also avoid the potential for gaps in information that might occur if the agency simply prescribed guidelines. NHTSA recognizes that this approach may reduce some amount of flexibility for manufacturers, but we believe that the benefits of standardization, in this case, likely outweigh the drawbacks.

Thus, assuming that NHTSA will specify required owner's manual text, the second question that NHTSA considered was whether the required text should be general enough to cover all alternative fuel vehicles, or whether it should be specific to each individual type of alternative fuel vehicle. NHTSA has tentatively concluded that requiring generic text to cover all alternative fuel vehicles rather than specifying individualized text for each type of alternative fuel vehicle would be the best approach. Again, manufacturers would be permitted to develop additional text to describe their own vehicles if they choose.

NHTSA believes that this approach should benefit both consumers and vehicle manufacturers by maintaining consistent owner's manual information across all alternative fuel types in print form and reducing complexities associated with specific text for an individual fuel type, while still allowing alternative fuel information to evolve as new fuels become more prominent in the marketplace, production processes change or alternative fuel generation methods transform technologically and/or regionally. Using standardized,

somewhat generic text with references to additional, more dynamic sources like internet Web pages avoids published information becoming obsolete and less useful to consumers. And again, we anticipate that standardized generic text describing the benefits of alternative fuels will reduce the burden on manufacturers, who would not be required to develop, or seek approval for, their own alternative fuel owner's manual information.

Additionally, in order to benefit from the expertise of other federal agencies active in alternative fuel vehicle issues, NHTSA consulted with the FTC to discuss potential alignment of content for proposed owner's manual information with the (until-recently) required<sup>32</sup> FTC-alternative fuel label found on all new alternative fuel vehicles sold in the U.S. The agency believes it may be helpful to consumers to provide information that is consistent with the FTC label which was in the marketplace between 1995<sup>33</sup> and April 2013.

The agency recognizes that there are many details and unique characteristics associated with each of the alternative fuels covered by this proposal, and that some consumers may prefer additional information specific to their type of alternative fuel vehicle. However, we believe that requiring all of that information to be provided in the owner's manual may not be necessary, as the extent and depth of this information for each of these fuels is vast, and can change over time. Therefore, the agency believes that giving a foundation of more generic alternative fuel vehicle information to consumers, while providing a reference to government-funded and supported sources of additional information, is a better approach to implementing this statutory obligation.

Therefore, the agency is proposing to require the following standardized text, largely derived from the FTC developed alternative fuel label,<sup>34</sup> to be included in the owner's manual information of all vehicles which are capable of operating

<sup>32</sup> In April of 2013, the Federal Trade Commission issued final amendments to the Alternative Fuels Rule, consolidating the point of sale labels required on alternative fuel vehicles (AFVs) with those required by the U.S. Environmental Protection Agency (EPA), eliminating the need for two different labels and reducing the burden of complying with the Rule. ("FTC Amends Alternative Fuels Rule to Make Compliance Easier" last accessed: January 2, 2014).

<sup>33</sup> <http://www.ftc.gov/news-events/press-releases/1995/05/alternative-fuels-final-rule-issued> (last accessed: January 2, 2014).

<sup>34</sup> 16 CFR 309.20.

<sup>31</sup> <http://www.merriam-webster.com/> (last accessed January 2, 2014).

on any of the alternative fuels covered by this proposal:

“{Section Heading;} Capabilities and Benefits of Using Alternative Fuels

This vehicle is recognized by the U.S. Department of Transportation as an alternative fuel vehicle, because it is capable of operating on a biofuel, electricity, hydrogen, natural gas, propane or other fuel that is not derived primarily from petroleum. Alternative fuel vehicles may provide benefits both to their users and to the nation as a whole over their useful lifetime by operating on non-petroleum-based alternative fuels. Some of the benefits of alternative fuel usage in this vehicle may include:

**Energy and National Security:** Driving this vehicle on alternative fuels may help to reduce our country's dependence on foreign oil. The United States imports a substantial amount of its petroleum, the majority of which is used to fuel vehicles in the form of gasoline and diesel. Petroleum imports can be vulnerable to supply disruptions and price shocks depending on conditions in the countries that supply us with oil. By using alternative fuels, you may be helping the country be less vulnerable to the supply disruptions and price variability associated with imported oil, and supporting U.S. alternative fuel producers.

**Environmental Benefits—Renewability and Emissions:** Many alternative fuels are renewable, which means that their sources can be replenished—like plant-based ethanol, or solar-powered electricity. Renewable fuels may have less environmental impact than conventional fuels. Additionally, compared with vehicles fueled by conventional, petroleum-derived diesel and gasoline, many alternative fuel vehicles are estimated to reduce the life cycle greenhouse gas emissions of carbon dioxide.

**Fuel Type and Availability:** Alternative fuels are increasing in availability. To learn more about the availability of alternative fuel that can power this vehicle, please visit the Department of Energy's Alternative Fueling Station Locator at <http://www.afdc.energy.gov/afdc/locator/stations/> to determine the location of refueling and/or recharging facilities that meet your driving needs.

**Additional Information Resources**

For more information about alternative fuels and alternative fuel vehicles, please visit the Department of Energy's Alternative Fuels & Advanced Vehicles Data Center at <http://www.afdc.energy.gov>.

For information about vehicle safety, please visit [www.safercar.gov](http://www.safercar.gov).

The agency proposes that this text follow the same font and type size specification as other standard “body” text found throughout the owner's manual. In addition, the agency proposes that the text be located inside a text box, bordered with a 1-pt. solid black line, with no other text in box. We believe that this will help the text stand out to consumers and encourage them to review it.

The agency seeks comment on this proposed text with regard to whether it meets the EISA statutory requirements, whether the depth of the information is sufficient, whether the fuel type should be specified, and whether the references to other government Web sites for the most up-to-date information regarding alternative fuels are helpful. Should the agency require the inclusion of more or less information on alternative fuel capability and benefits in the standardized text? Are there additional benefits that should be added directly in the text? Should the text vary (in part or in its entirety) depending on the type of alternative fuel? If so, how should the text vary? Should the agency include different or additional references to Web sites or link technology such as the QR™ code found on the recently revised fuel economy label? If so, what type of technology and to what Web sites? Commenters should include specific suggested changes (and their reasons for the suggested changes) for the agency's consideration.

**D. Fuel Compartment Alternative Fuel Identification**

EISA requires DOT (by delegation, NHTSA) to develop regulations to require a label to be attached to the fuel compartment of vehicles capable of operating on alternative fuels, with the form of alternative fuel stated on the label. EISA adds that a label attached in compliance with the requirements of 49 U.S.C. 32905(h) would be deemed to meet the requirements. According to Merriam-Webster Online dictionary,<sup>35</sup> “attached” means “permanently fixed,” while “compartment” suggests “a separate division or section.” In the context of this requirement, most manufacturers offering alternative fuel vehicles either already have or intend to have, in the near future, some form of labeling plan in place for the fuel compartment of those vehicles. These labeling plans may be driven by one or multiple reasons. In some cases, vehicle manufacturers are labeling the fuel filler

compartment in order to obtain dual-fuel vehicle credits under 49 U.S.C. 32905(h).<sup>36</sup> In other cases, the labeling may be to provide key safety information to consumers or first responders. And in yet other cases, fuel cap coloring may be employed to indicate the vehicle's fuel-type compatibility to avoid miss-fueling. However, not all alternative fuel vehicles currently have such labeling, and not all manufacturers have plans to add such labeling. Of the manufacturers who do provide labels, the labeling is not consistent in either content or location. For purposes of this proposal, the agency is interpreting “a label . . . attached to the fuel compartment of vehicles capable of operating on alternative fuels, with the form of alternative fuel stated on the label,” as requiring greater consistency than what the majority of manufacturers are currently providing for their alternative fuel vehicles.

The agency considered whether it should develop specific labels for manufacturers to employ, or simply provide general guidelines like those of 32905(h) and 32908(g)(3) that direct manufacturers to attach labels indicating which alternative fuel a vehicle can operate on, but do not otherwise specify the content or form of the label. NHTSA has tentatively concluded that the label can take the form of an adhesive-type label or language “screen-printed” directly on the exterior of the fuel cap or the fuel compartment access door, in a similar style to those found in production today to meet the 32905(h) requirement, that is specified and designed to remain affixed to the inside of the fuel compartment access door or fuel cap over the entire useful life of the vehicle. NHTSA believes this will best fulfill EISA's intent to provide consumers with clear, consistent and useful information. The labeling should clearly state the specific alternative fuel type(s) and, for gaseous or electrically fueled vehicles, the proper/safe capacities for replenishing the fuel supply.

If a manufacturer is already applying labeling pursuant to 32905(h), NHTSA would not require an additional separate label for compliance, but existing labels may require modification to comply with the proposed label content.

The agency is proposing a list of content requirements for the label. Table

<sup>36</sup> We note that because the 32905(h) requirement does not apply to dedicated alternative fuel vehicles (such as, e.g., pure NGVs or BEVs), manufacturers have no specific incentive to ensure fuel compartment labeling for these vehicles under the current requirements.

<sup>35</sup> <http://www.merriam-webster.com/> (last accessed January 2, 2014).

III-2 represents the proposed label content requirements that must be included for each alternative fuel type:

TABLE III-2—PROPOSED FUEL FILLER COMPARTMENT ALTERNATIVE FUEL LABELING CONTENT

Defined alternative fuel <sup>37</sup>	Alternative fuel name for use in labeling	Maximum blend level (liquid)	Charging voltage level(s)
Methanol <sup>38</sup> .....	Methanol .....	X	.....
Denatured Ethanol <sup>38</sup> .....	Ethanol .....	X	.....
Other Alcohols <sup>38</sup> .....	[Name of Alcohol Derived Fuel] .....	X	.....
Natural Gas .....	CNG .....	.....	.....
Liquefied Petroleum Gas .....	LPG .....	.....	.....
Coal Derived Liquid Fuels .....	Coal Derived Liquid Fuels .....	X	.....
Hydrogen .....	Hydrogen .....	.....	.....
Fuels (except alcohol) derived from biological materials.	Biodiesel or [Name of other Biologically derived fuel]	X	.....
Electricity (Battery Electric Vehicle) .....	Electricity .....	.....	X
Electricity (Plug-In Hybrid Electric Vehicle) .....	Electricity/[Other Fuel Type(s)] .....	X*	X

\* For dual fuel capable non-electric power source.

The agency is providing the following discussion points regarding Table III D-1 in an effort to provide clarity of the proposed label content.

The “Alternative Fuel Name for Use in Labeling” is the text that must appear in the labeling.

The “Maximum Blend Level (Liquid)” is intended to identify the appropriate maximum acceptable mixture levels of liquid fuels that may contain a blend of fuel types such as ethanol or biodiesel.

The “Charging Voltage Level(s)” is intended to indicate both the recommended charging voltage and additional voltage levels that can be used for recharging an electric vehicle: battery only or plug-in hybrid.

The agency developed this table of proposed label content based on alternative fuel labeling currently being applied pursuant to 32905(h) and existing requirements for gaseous fuel vehicles. NHTSA believes that this meets the statutory intent of EISA.

Like the alternative fuel permanent and prominent display, in order to ensure readability, the agency is proposing a minimum letter height measurement and to have the alternative fuel name along with any supporting information presented in a manner that provides clear contrast between the letters and their background color.

Based on the survey of current production fuel filler compartment adhesive labels and information found on fuel caps, the agency proposes a minimum for the text height of 5 millimeters and “bold face” when applying language to an adhesive label or a fuel filler cap.

In addition, the agency proposes that the fuel filler compartment information is presented with a clear difference between the lightest and the darkest parts of information. Ideally, this would be black text on a white background, white text on a black background or a combination of colors very similar in contrast.

The agency is not currently proposing, but does seek comment on, whether we should also, or alternatively, require vehicle manufacturers to color-code the fuel cap (or charging port, or other equivalent) for a specific alternative fuel type. If commenters believe that such an additional or alternative requirement would be beneficial, we ask that they provide specific rationale for the benefits of adding this requirement, and quantify the benefits to the extent feasible; we also ask that commenters provide specific recommendations as to what color coding for each fuel they believe would be helpful and why.

We also seek comment on the above proposal for fuel compartment alternative fuel identification, and whether commenters believe that there may be more effective or helpful ways to implement this requirement while still meeting the language and intent of EISA.

*E. When does NHTSA propose that the new requirements would be implemented?*

NHTSA proposes that all components of this NPRM would apply to vehicles manufactured on or after the first September 1 that is at least six months after the publication date of a final rule implementing this proposal. This proposed timing is intended to allow a minimum of six months lead time for implementation. The agency anticipates

finalizing this proposal in the first quarter of 2015. Therefore, we expect that the effective date of this proposed rule would be September 1, 2016, which would provide manufacturers additional lead time. The agency believes the lead time proposed may be necessary; however the agency intends to allow optional early compliance if a manufacturer wishes all vehicles from an affected model year (MY) to be badged and/or labeled the same because we understand that manufacturers may produce MY 2017 vehicles as early as January 1, 2016. This proposed timing would allow for these vehicles to be introduced to the market with the proposed badges in place.

With regard to badging, the agency learned from one badging supplier that the lead time associated with the tooling and production of an externally applied badge is approximately 16 to 18 weeks from design to vehicle production application.<sup>39</sup> In addition, the agency believes that the flexible nature of the proposal for a permanent and prominent display for alternative fuel capability would require little design effort even among vehicle manufacturers that do not currently badge their vehicles. Moreover, since the agency is aware that all vehicle manufacturers currently have business relationships with badge suppliers to produce “permanent and prominent displays” of manufacturer names, model lines and other unique model designations, some of which are related to alternative fuel capabilities, as part of their regular production and marketing strategies, the agency does not anticipate that manufacturers will need to develop or seek out new

<sup>37</sup> 32901(a)(1).

<sup>38</sup> Note: To be considered an alternative fuel, alcohol derived fuels need to be blended at levels of at least 85 percent of the total mixture when blended with gasoline or other fuels.

<sup>39</sup> Based on discussion with Douglas Corporation, January 22, 2010. A record of this discussion is available in the docket for this rulemaking.

relationships, which might otherwise create a need for additional lead time.

With regard to owner's manual information, the Alliance of Automobile Manufacturers suggested that a two full model year lead time could be necessary for incorporation of this information.<sup>40</sup> The agency believes this amount of lead time is more than should be necessary in this situation. First, the agency is proposing standardized language that all vehicle manufacturers producing vehicles capable of operating on the alternative fuels covered by this proposal will be required to include. Standardized language should alleviate the lead time that might be required for "clean sheet" development by each manufacturer of owner's manual information language if the agency provided only guidelines for what the language should contain rather than specifying it directly.

Additionally, the agency believes that a somewhat shorter time frame for incorporation than that suggested by the Alliance can be achieved. Today, in most cases, owner's manual information is developed, reviewed and approved in an entirely digital environment, which significantly reduces lead time. Moreover, the agency is aware that some manufacturers have moved, or are in the process of moving, to completely digital delivery of owner's manual information, where owner's manual information is delivered via a digital video disc (DVD) or some other digital format.<sup>41</sup> In some of these cases, official vehicle manufacturer owner's manual information is available via the internet.<sup>42</sup>

For fuel compartment labeling, the agency believes the proposed time frame to be reasonable for two reasons. First, as discussed above, in developing this proposal the agency discovered that many manufacturers producing alternative fuel vehicles already label their fuel compartments in order to obtain dual-fuel vehicle credits, pursuant to the requirements in 49 U.S.C. 32905(h). In this NPRM, the agency is simply proposing to require manufacturers to do what many manufacturers are already doing—thus, for the manufacturers already labeling their vehicles, no lead time should

theoretically be required. For the manufacturers not currently labeling their alternative fuel vehicles, a supply base for meeting the requirements of 49 U.S.C. 32905(h) is already established, so those manufacturers should be able to leverage this existing supply base and thus mitigate lead time needs.

Further, manufacturers not already in compliance with this component of this proposal are, for the most part, not producing alternative fuel capable vehicles at the present time. The agency recognizes, however, that some vehicle manufacturers will begin production of alternative fueled vehicles during the proposed optional and required compliance time frame.

The agency seeks comment on whether the proposed lead time for each of the requirements is reasonable. If a commenter wishes the agency to provide additional lead time, the agency requests that the commenter provide specific explanations for which elements and why more lead time might be needed. For example, if a commenter sought more lead time for the owner's manual requirements, the agency would be seeking details of the owner's manual publication process and associated timing, along with current and future media that will be used for the owner's manual information.

#### IV. What are the estimated costs and benefits of the proposal?

In determining estimated industry costs associated with this proposal, the agency first set out to determine a projected MY 2017 volume for vehicles capable of operating on the alternative fuels covered by this proposal. Next, the agency investigated potential "ball-park" piece cost and labor cost for labels and exterior vehicle badges. And finally, the agency looked at labor rates for personnel that may be involved with the development of owner's manual information.

To develop a projected alternative fuel vehicle volume for the U.S. market, we used specific data from NHTSA's Corporate Average Fuel Economy (CAFE) program database, current and historical industry volumes from Wards Auto (online), sales outlooks from Pike Research for low speed vehicles (LSVs) and the Energy Information Administration's 2012 Annual Energy Outlook for light duty vehicles. Finally, the agency considered public announcements from manufacturers regarding anticipated future volumes of alternative fuel vehicles such as FFVs, PHEVs, BEVs and FCVs.

For label and badge piece cost and labor costs, the agency spoke with suppliers of both badges and labels

currently used in vehicle production. These suppliers have continued and wide-ranging label and badge supply experience inside and outside the automotive industry. In some cases, the suppliers currently produce either badges or labels for multiple vehicle manufacturers.

The agency seeks comment on all cost estimates developed for this proposal; specifically, the estimated piece costs for alternative fuel badges and labels, the estimated costs associated with producing pages of owner's manual information, and any additional costs which may not be included in these estimates. Specific citations to sources for comments on cost estimates would be most helpful to NHTSA.

#### A. How did NHTSA project alternative fuel vehicle volumes?

As part of the research conducted for development of this proposal, the agency attempted to determine a projected volume of MY 2017 alternative fuel vehicles that could be affected by this proposal. The agency utilized the overall industry sales projections of light duty cars and trucks developed by the Energy Information Agency (EIA) for its 2012 Annual Energy Outlook (AEO) Early Release reference case.<sup>43</sup> When needed, the agency evaluated and applied manufacturer or specific vehicle model market share to further refine MY 2017 projections for specific alternative fuels; an example being E85 capable or "flex-fuel" vehicles. A summary of the volume projections by alternative fuel type can be found in Table IV-1.

Using the CAFE program database, the agency learned that the vast majority of FFVs are produced by General Motors, Ford and Chrysler with very few other manufacturers producing FFVs. The agency used this finding to develop an estimated volume for MY 2017 ethanol capable flex-fuel vehicles and based the estimate primarily on announced volume projections from Ford, General Motors and Chrysler where these manufacturers indicated 50 percent of their fleet will have E85 flex-fuel capability by 2012.<sup>44</sup>

To develop projected volume for these manufacturers, the agency applied market share values of 18 percent for General Motors, 15.5 percent for Ford and 11 percent for Chrysler, taken from

<sup>40</sup> Alliance letter to NHTSA RE: NHTSA Consumer Information Rulemaking, June 25, 2010. Available at Docket No. NHTSA-2010-0134.

<sup>41</sup> "Chrysler Phases Out Paper Owner's Manual" <http://wheels.blogs.nytimes.com/2009/09/23/chrysler-does-away-with-paper-owners-manual/> (last accessed January 2, 2014).

<sup>42</sup> "Owners Manuals for Ford Vehicles," <https://owner.ford.com/servlet/ContentServer?pagename=Owner/Page/OwnerGuidePageVehicleLookup&BackToLogin=Owner/Page/OwnerGuidePage&ord=14632762> (last accessed December 9, 2013).

<sup>43</sup> AEO2012 Early Release Overview—<http://www.eia.gov/forecasts/aeo12/er/> (last accessed: January 2, 2014).

<sup>44</sup> "Detroit Three's Flex-Fuel Builds Increasing" Wards Auto, October 27, 2011 <http://wardsauto.com/news-amp-analysis/detroit-three-s-flex-fuel-builds-increasing> (last accessed: January 2, 2014).

Wards Auto for MY 2011–13, to the total MY 2016–17 industry sales projected by the 2012 Annual Energy Outlook (AEO) Early Release reference case<sup>45</sup> yielding a projected MY 2017 market volume for these manufacturers. The agency then applied the 50 percent FFV fleet value to each manufacturer’s projected market-share based volume to determine a projected MY 2017 FFV volume. To prevent double-counting, the agency excluded the volume of other alternative fuel vehicles covered by this proposal and produced by these manufacturers.

The agency also included MY 2017 projections for several current vehicle models that are E85 capable, that are produced by other vehicle manufacturers, and that have production volumes greater than 2000 units. For the most part, these vehicles were large pickup truck and SUV FFV models from Nissan and Toyota. Recognizing that the MYs 2012–2025 Corporate Average Fuel Economy (CAFE) and Greenhouse Gas (GHG) Emission standards become progressively more stringent each model year and that both programs provide incentives for FFVs, it is probable that manufacturers will increase the number of FFV vehicles that they produce in MY 2017 compared to MY 2012. To avoid underestimating cost in this proposal, the agency increased the projected number of vehicles that might be affected by the proposed rule by the equivalent of 50% of the projected MY 2017 production volume of Toyota and Nissan large pickups and SUVs. To estimate the projected MY 2017 production volume of Toyota and Nissan large pickups and SUVs, the

agency applied the MY 2013 market share of these vehicles to the projected MY 2017 total industry volume projections.<sup>46</sup> The agency notes that it is not aware of any announcement by either of those companies to produce this quantity of FFVs. Nevertheless, the agency believes that adding the equivalent of 50 percent of Toyota’s and Nissan’s volume is a reasonable approach for estimating the additional number of vehicles that might be affected by this proposal, because other manufacturers may choose to produce FFVs.

Overall, using the market share based methodology brings simplicity and allows any industry-wide volume increase or decrease to be easily reflected. Using this projection methodology, the agency predicts almost 98 percent of the overall projected MY 2017 alternative fuel vehicle fleet will be E85 capable with an estimated 3,818,555 vehicles produced that year.

In addition to ethanol capable vehicles, cost estimates for this proposal also need to account for the number of vehicles capable of operating on other alternative fuels covered by this proposal. For the U.S. market, this primarily includes compressed natural gas, liquefied petroleum gas, hydrogen and electricity fueled vehicles. Through its research, the agency is not aware of any manufacturers planning to produce a significant number of vehicles capable of operating on alternative fuels such as methanol, coal-derived liquid fuels or fuels (except alcohol) derived from biological materials.<sup>47</sup>

The agency did employ a different methodology for developing volume projections of alternative fuel vehicles covered by this proposal that use fuels other than ethanol. The agency utilized published sales data for battery electric vehicles (BEV) and plug-in electric vehicles (PHEV), as these vehicles have entered commerce and accumulated at least one year of sales data.<sup>48</sup> In addition, the agency incorporated the sales volume of electric low speed vehicles (LSVs) into the volume projections for BEV as these are covered by this proposed rule.<sup>49</sup>

The agency also evaluated and utilized manufacturers’ revised or publicly announced projected vehicle volumes for alternative fuel vehicles powered by electricity, compressed natural gas, liquefied petroleum gas and hydrogen. As a result, the agency utilized a “projected volume” approach instead of the market share approach that is used for ethanol vehicle volumes. This projected volume approach is believed to be more practicable as the market share of current models are likely to change as other competitive models enter the market, and because future models currently have no market share. However the agency did project slight increases for vehicles already entered into commerce, such as BEVs and PHEVs, based on expanding regional availability in the United States and increased production volumes.

Therefore, the cost estimates in this proposal are based on the alternative fuel vehicle volumes represented by fuel type in the following table.

TABLE IV–1—MY 2017 ALTERNATIVE FUEL VEHICLE VOLUME PROJECTION

Fuel type	Volume	Percent alt fuel volume	Percent industry volume
Ethanol .....	3,818,555	97.77	22.428
Natural Gas .....	4,300	0.11	0.025
Electric (BEV) * .....	32,209	0.82	0.189
Electric (PHEV/EREV) .....	47,639	1.22	0.280
Hydrogen .....	274	0.01	0.002
LPG .....	2,750	0.07	0.016
Biodiesel ** .....	.....	0.00	0.000
<b>Total .....</b>	<b>3,905,727</b>	<b>100.00</b>	<b>22.940</b>

\* Includes LSVs.

\*\* DOT only considers B100 to be an Alternative fuel.

<sup>45</sup> DOE Annual Energy Outlook Early 2012 Release—<http://www.eia.gov/oiaf/aeo/tablebrowser/#release=EARLY2012&subject=15-EARLY2012&table=48-EARLY2012&region=1-0&cases=early2012-d121011b> (last accessed: January 2, 2014).

<sup>46</sup> Ibid.

<sup>47</sup> The agency notes that it recognizes only ‘neat’ biodiesel (B100) as an alternative fuel. 63 FR 15322 (Mar. 31, 1998).

<sup>48</sup> For reference, the agency used sales information from Wards Auto for these vehicle types.

<sup>49</sup> For LSVs, the agency utilized sales and project data available from a report developed by Pike Research titled, “Neighborhood Electric Vehicles: Low-Speed Electric Vehicle for Consumers and Fleet Markets: Demand Drivers and Barriers, Technology, Key Industry Players and Market Forecasts,” Published 2Q 2011.



As discussed, these volumes are estimates based on varied sources of information; some historical and some forward-looking. The agency acknowledges that actual production volumes in the future are likely to be different than the projections developed for this proposal, however, the agency believes the projections have been developed using the best available information at the time of development of this proposal; for example AEO vehicles sales projections and Wards Auto data. The agency notes that the forecast information is from the same sources that have been used in other

agency rulemakings and the sources are recognized and used by industry in developing future projections.

The agency also recognizes the many factors that will affect these volume projections some of which include prices of petroleum and non-petroleum derived fuels, infrastructure for alternative fueling accessibility, overall consumer acceptance of alternative fuel vehicle characteristics and finally, the need for vehicle manufacturers to meet more stringent CAFE and greenhouse gas emissions standards.

In light of these many significant variables, the agency seeks comment on

these volume projections, including alternative fuel type applications, for MY 2017 and any subsequent model years to gain potentially better information to the overall costs and production-intent alternative fuel type applicability associated with this proposal.

*B. What total costs does NHTSA estimate for the proposal?*

The agency has estimated the total costs of the proposal in Table IV–2 and Table IV–3 below.

TABLE IV–2—ESTIMATED INDUSTRY COSTS FOR PROPOSAL IN FIRST MODEL YEAR (2012\$)

	Low	High
Permanent and Prominent Display Badge .....	\$6,713,112	\$13,292,937
Tooling (all fuel types) .....	41,064	284,287
Fuel Compartment Label .....	.....	827,436
Owner's Information .....	.....	348,352
Total .....	7,929,963	14,753,011

\* Values derived from Projected MY2017 Industry Volume of Alternative Fuel Vehicles (Including LSVs).

TABLE IV–3—ESTIMATED ANNUAL INDUSTRY COSTS FOR PROPOSAL AFTER THE FIRST MODEL YEAR (2012\$)

	Low	High
Permanent and Prominent Display Badge .....	\$6,713,112	\$13,292,937
Fuel Compartment Label .....	.....	827,436
Owner's Information .....	.....	328,081
Total .....	7,868,629	14,448,453

\* Values derived from Projected MY2017 Industry Volume of Alternative Fuel Vehicles (Including LSVs).

The estimated costs per requirement are described in detail in the following discussion.

1. What costs does NHTSA estimate for the proposal for “Permanent and Prominent Display” of Alternative-Fuel capability?

The agency spoke with a supplier of badges to the automotive industry to gain a better understanding of badge development and implementation options, along with potential piece costs for those options.<sup>50</sup> During the discussion, the supplier suggested multiple options that could align with the lead and alternative proposals for meeting the statutory obligations of a “permanent and prominent display” of a vehicle’s capability to operate on an alternative fuel.

The first consisted of plastic molded into a specified design. This molded part would be chrome plated and finished with additional decorative or colored aspects per the specified design. Some key aspects of this design are its durability and commonality with model or brand badges found on vehicles in production today. A key consideration for this badge technology is the need to ensure that the rear surface of the badge, the surface that would adhere to a vehicle via an adhesive, has a contour that would be adaptable to most any vehicle due to the rigidity of the plastic molded part.

Another badge technology option is a foil-type material containing the natural language or design, which is covered in a protective urethane coating. The urethane coating provides thickness to the badge and could provide some limited contouring on the surface to add emphasis to components of the design or language contained on the urethane

encased foil. The urethane-coated design does provide some cost and tooling advantages over the chrome-plated, ABS plastic molded part, albeit at the possible expense of attractiveness or readability as a badge employing these materials typically results in the text being “protected” by a relatively thick layer of material. In either of the two material approaches, the badge is intended to remain affixed and readable over the useful life of the vehicle.

Consistent with the proposal for application of a badge containing natural language, the agency has developed estimated costs associated with the projected alternative fuel vehicle volume for MY 2017 as the basis for annual costs. These costs are considered annual costs with the potential to increase linearly with an increase of alternative fuel vehicles in the marketplace.

<sup>50</sup> NHTSA’s records of these meetings are available in the docket for this rulemaking.

The following table contains estimated aggregated labor cost for affixing badges to vehicles in a production environment. The labor value was estimated at \$0.35 per badge based on a labor rate of approximately \$21 per hour<sup>51</sup> and allowing for one minute of time to apply the badge to the vehicle in the production environment, parameters which the agency considered reasonable for the labor involved.

TABLE IV-4—POTENTIAL BADGE LABOR COST MY2017 (2012\$)

Fuel type	Labor cost	Labor hours
Ethanol .....	\$1,336,494	63,642.58
Natural Gas .....	1,505	71.67
Electric (BEV) ...	11,273	536.81
Electric (PHEV/EREV) .....	16,674	793.98
Hydrogen .....	96	4.57
LPG .....	963	45.83
Total .....	1,367,004	65,095.44

The following table shows estimated tooling costs for badges based on information provided by an automotive

industry badge supplier.<sup>52</sup> The costs are shown as low and high range values for each badge material type (urethane and ABS plastic/chrome). The estimated tooling costs are expected to be a one-time cost for developing the tooling required to produce either badge type versus a continuous year-over-year aggregated piece cost because, once developed, the designs are not intended to change over time.<sup>53</sup> In addition, these tooling costs would also apply to any future alternative fuel badges that would enter the U.S. market as tooling development is required for each badge design.

TABLE IV-5—MY 2017 ESTIMATED BADGE TOOLING COST (2012\$)

	Foil/urethane		ABS plastic/chrome	
	Low	High	Low	High
Per Fuel Type .....	\$6,844	\$8,950	\$31,587	\$47,381

The following table shows estimated annual aggregate industry material cost for manufacturing badges in a production environment (without labor cost). The ranges of costs were developed based on information

provided by an automotive industry badge supplier.<sup>54</sup> The low and high cost range values for manufacturing the two types of badge materials (foil/urethane and ABS plastic/chrome) are multiplied by the estimated alternative fuel vehicle

volumes to arrive at an annual aggregate “permanent and prominent display” cost. The potential estimated labor values discussed in Table IV-4 would need to be combined with these values to arrive at total estimated annual cost.

TABLE IV-6—MY 2017 ESTIMATED “PERMANENT AND PROMINENT DISPLAY” AGGREGATED INDUSTRY MATERIAL COSTS (2012\$)

	Foil/urethane		ABS plastic/chrome	
	Low	High	Low	High
Ethanol .....	\$5,226,788	\$9,247,395	\$7,639,152	\$11,659,758
Natural Gas .....	5,886	10,413	8,602	13,130
Electric (BEV) .....	44,087	77,999	64,434	98,347
Electric (PHEV/EREV) .....	65,208	115,367	95,303	145,463
Hydrogen .....	375	664	548	837
LPG .....	3,764	6,660	5,501	8,397
Biodiesel .....	.....	.....	.....	.....
Totals .....	5,346,108	9,458,498	7,813,542	11,925,932

2. What costs does NHTSA estimate for the “Owner’s Manual Information” on alternative fuel capability and benefits?

The agency generated the following cost estimates for the development and

implementation of the owner’s manual information describing the capabilities and benefits of alternative fuel usage.

<sup>51</sup> United States Bureau of Labor Statistics, May 2012, Production Occupations, 51-2099 Assemblers and Fabricators, All Other, hourly mean wage: \$21.14 per hour. <http://www.bls.gov/oes/current/oes512099.htm> (last accessed January 27, 2014).

<sup>52</sup> Conversation between NHTSA staff and a representative of the Douglas Corporation,

December 22, 2010. A record of this meeting is available in the docket for this rulemaking.

<sup>53</sup> However, the agency acknowledges production tooling does have a limited useful life and can require maintenance during this useful life. For purposes of this proposal, the agency is recognizing the initial cost to develop tooling to produce badge designs. Any subsequent costs are dependent on

factors involving production techniques, machine tool maintenance and other variables across, potentially, multiple suppliers that the agency is not able to estimate for this proposal.

<sup>54</sup> Conversation between NHTSA staff and a representative of the Douglas Corporation, December 22, 2010. A record of this meeting is available in the docket for this rulemaking.

TABLE IV-7—ESTIMATED ALTERNATIVE FUEL OWNER’S MANUAL INFORMATION ANNUAL PRINTING COST (2012\$)

Startup Costs	Rate	Hours	Cost
Entry Level Technical Writer .....	\$22.60	16.00	\$362
Supervisory Technical Writer .....	33.59	8.00	269
Associate General Counsel .....	99.17	5.00	496
Labor Cost .....			1,126
Number of Manufacturers (est. 18) .....			20,271
Annual Costs	Rate	Pages	Cost
Printing—per page .....	\$0.042	2.00	\$0.084
Printing per pagex vehicle volume Table IV-1 .....			328,081
<b>Total Cost .....</b>			<b>348,352</b>

3. What costs does NHTSA estimate for fuel compartment alternative fuel identification?

The agency is proposing the application of an adhesive label to the inside of the fuel compartment door or “screen-printing” language to the fuel filler cap for vehicles capable of operating on an alternative fuel. The fundamentals of this proposal are consistent with labeling currently in production from some manufacturers producing alternative fuel capable vehicles.

To develop cost estimates for this proposal, the agency spoke to suppliers of the fuel compartment alternative fuel

labels currently in production to learn more about lead time and piece cost pricing.<sup>55</sup> Using the estimated MY 2017 alternative fuel vehicle volume discussed above as a basis, the agency developed the following industry annual cost estimate including and excluding labor.

For purposes of this cost estimate, the agency estimated the cost associated with producing a separate, adhesive-type label. The agency believes this provides an upper bound estimate as an alternative to implement a “screen-printed” label on the fuel filler cap which could potentially be implemented at no piece cost increase because printing information on the fuel

tank cap is nearly standard industry practice. In addition, there would be no additional assembly labor cost for attaching the fuel filler cap.

For estimates involving an adhesive label, the agency assumed a per-label cost of \$0.037 and used the labor value of \$0.175 per label. The labor value is one-half the labor value used for the cost estimate for a “permanent and prominent display.” The agency views the fuel tank compartment label application as a less precise labor operation, yielding a reduced estimated labor cost. Based on discussion with industry, NHTSA believes that this is an appropriate value for application of the label as proposed.<sup>56</sup>

TABLE IV-8—MY 2017 FUEL COMPARTMENT ADHESIVE LABEL AGGREGATED INCREMENTAL ANNUAL COST (2012\$)

Fuel type	Vehicles	\$ w/o labor	\$ w/labor
Ethanol .....	3,818,555	\$140,721	\$808,968
Natural Gas .....	4,300	158	911
Electric (BEV) .....	32,209	1,187	6,823
Electric (PHEV/EREV) .....	47,639	1,756	10,092
Hydrogen .....	274	10	58
LPG .....	2,750	101	583
<b>Totals .....</b>	<b>3,905,727</b>	<b>143,934</b>	<b>827,436</b>

The agency notes these estimates are based on a piece cost for a label production run of approximately 25,000 labels that include setup and the batch printing run. As defined by the estimated MY 2017 alternative fuel vehicle production volume estimates developed for this proposal, some alternative fuel types will not achieve this volume for the single 2013 model year. The agency acknowledges that this condition may exist for some time regarding specific fuel types, which could require a smaller batch-run of

labels that increases piece cost. However, the agency does not foresee these smaller batch runs having a significant effect on the overall cost estimates associated with the proposed label. Conversely, in some cases, a single production run of 25,000 labels would enable a sufficient supply to cover four or five model years without the need for additional sourcing.

*C. What benefits does NHTSA estimate for this proposed rule?*

As information on the effects of these badges on consumer purchases is not available, a quantitative assessment of the effects of the impacts of badges would be highly speculative. Therefore, NHTSA was not able to quantitatively assess the benefits of this rule. NHTSA notes that the statutory mandate of EISA does not require NHTSA to justify the benefits of the rule as outweighing its costs. However, the agency believes that it is important to recognize the

<sup>55</sup> Conversation with Whitlam Label Company, Inc., November 11, 2010. A record of this meeting is available in the docket for this rulemaking.

<sup>56</sup> These cost estimates do not exclude the volume of vehicles with voluntary labeling at the fuel filler

compartment that identifies the alternative fuel type, as an unknown percentage of that voluntary compliance may be due to the labeling requirement of 32905(f) to receive credits under 32906(a). As those credits decrease after 2017 and expire after

2019, current estimates of voluntary compliance may be misleading beyond the first years of this program.

anticipated qualitative benefits of this action.

The primary benefits associated with this proposed rule come from any improvements in consumer decision-making that stems from helping consumers identify which vehicles run on alternative fuels.

The current widespread presence of badges on vehicles, such as make, model and dealership information, supports that external badges influence consumers. The proposed external badges identifying vehicles that are capable of operating on an alternative fuel will heighten awareness of alternative fuel vehicles, thereby making potential consumers more aware of the diverse vehicles choices available on the market. NHTSA believes that this rule will help alternative fuel vehicle deployment by identifying early adopters of these technologies. New technologies, regardless of their relative benefits to previous technologies, are likely to face a slow diffusion process.<sup>57</sup> As part of the “diffusion of innovations”<sup>58</sup> process, the dissemination of information on early adopters of a particular innovation is a key component of that innovation’s market success.<sup>59</sup>

Vehicles currently in production with alternative fuel capabilities may not be readily distinguishable from their conventional fuel counterparts absent an identifying badge. Greater exposure to the available vehicle choices before making purchasing decisions will complement enhanced consumer information on energy costs and savings on the dealer lot (such as information provided through the recently adopted fuel economy labels).<sup>60</sup> NHTSA also believes that informed choice, while not quantifiable, is an end in itself.

Another anticipated benefit is a decrease in fueling mistakes that could occur with an increased volume and diversity of alternative fueled vehicles on the road along with a potential expansion of fueling options at conventional fueling stations. The agency is not aware of a quantification of safety or economic costs associated with these mistakes, and seeks comment on this issue.

The agency believes that the benefits of this proposal will be higher than the costs. NHTSA requests comment on the benefits described here, and on any

additional benefits and/or ways to quantify benefits.

## V. Enforcement and Compliance

In adding the 32908(g) requirements, which apply to automobiles, Congress did not amend the existing compliance and civil penalty provisions for automobiles in 49 U.S.C. Chapter 329; therefore, NHTSA tentatively concludes that those provisions apply for regulations promulgated under 32908(g).

### A. What compliance provisions govern regulations promulgated under 32908(g)?

49 U.S.C. 32911(a) states, in relevant part, that a person commits a violation of Chapter 329 if the person fails to comply with regulations and standards prescribed under Chapter 329, except sections 32902 (fuel economy standards), 32903 (fuel economy credits), 32908(b) (EPA’s fuel economy labeling requirements), 32917(b) (fleet-average fuel economy standards for executive agency automobiles), and 32918 (retrofit devices) and regulations and standards prescribed under those sections. 32908(g) does not fall within those exceptions. Therefore, a violation of 32908(g) is a violation of Chapter 329, thereby subjecting the person to penalties under 32912 as discussed below. A failure to comply with the proposed regulations might include, but would not be limited to, failing to affix a required badge or label, failing to include required text in an owner’s manual or including incorrect text, or affixing a badge that does not meet the useful life requirements specified by the agency.

We note that 32911(a) also states that the Secretary of Transportation (by delegation, the Administrator of NHTSA) shall conduct a proceeding, with an opportunity for a hearing on the record, to decide whether a person has committed a violation, and that any interested person may participate in that proceeding. NHTSA has established rules of practice and procedures for adjudicative proceedings conducted pursuant to the Motor Vehicle Information and Cost Savings Act (now codified in relevant part at 49 U.S.C. Chapter 329) which require a proceeding on the record after opportunity for a public hearing. These rules of adjudicative procedure are set forth at 49 CFR Part 511. These procedures would apply to proceedings conducted to determine violations of the regulations proposed today.

### B. What is the penalty for non-compliance with regulations promulgated under 32908(g)?

49 U.S.C. 32912(a) states that a person who violates 32911(a) is liable to the United States Government for a civil penalty of not more than \$10,000 (now \$16,000 as adjusted for inflation)<sup>61</sup> for each violation, and that a separate violation occurs for each day the violation continues. Thus, if, following the procedures laid out in 49 CFR Part 511, NHTSA finds that a person has committed a violation of any of the regulations proposed today, that person would be subject to civil penalties under 32912(a). 32912(d) states further that penalties shall be imposed under this section by written notice. 49 U.S.C. 32913 (compromising and remitting civil penalties), 32914 (collecting civil penalties), and 32915 (appealing civil penalties) would also apply to civil penalty actions for violations of the regulations proposed today.

NHTSA seeks comment on whether the agency should consider any additional information with respect to enforcement and compliance.

## VI. Public Participation

NHTSA requests comment on all aspects of this proposed rule. This section describes how you can participate in this process.

### A. How do I prepare and submit comments?

#### 1. Further Instructions for Submitting Comments to the NHTSA Docket Are Described Below

Your comments must be written and in English. To ensure that your comments are correctly filed in the docket, please include the Docket Number NHTSA–2010–0134 in your comments. Your comments must not be more than 15 pages long.<sup>62</sup> NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents, which are not subject to the page limit, to your comments.

If you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using the Optical Character Recognition (OCR) process, thus allowing the agency to search and copy

<sup>57</sup> See Timothy F. Malloy and Peter Sinsheimer, *Innovation, Regulation, and the Selection Environment*, 57 Rutgers L. Rev 183, 189 (2004).

<sup>58</sup> See Everett M. Rogers, *Diffusion of Innovations* (5th ed. 2003).

<sup>59</sup> See Malloy & Sinsheimer, *supra*, at 188.

<sup>60</sup> 76 FR 39478.

<sup>61</sup> We note that the amount of \$10,000 prescribed by 32912(a) has been updated by regulation for inflation. Per 49 CFR 578.6(h)(1), a person that violates 32911(a) is liable to the United States Government for a civil penalty of not more than \$16,000 for each violation, and a separate violation occurs for each day the violation continues.

<sup>62</sup> 49 CFR 553.21.

certain portions of your submissions.<sup>63</sup> Please note that pursuant to the Data Quality Act, in order for the substantive data to be relied upon and used by the agencies, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines.

Accordingly, we encourage you to consult the guidelines in preparing your comments. OMB's guidelines may be accessed at [http://www.whitehouse.gov/omb/fedreg\\_reproducible](http://www.whitehouse.gov/omb/fedreg_reproducible) (last accessed January 2, 2014), and DOT's guidelines may be accessed at <http://regs.dot.gov> (last accessed January 2, 2014).

## 2. Tips for Preparing Your Comments

When submitting comments, please remember to:

- Identify the rulemaking by docket numbers and other identifying information (subject heading, **Federal Register** date and page number).

- Follow directions—the agencies may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.

- Describe any assumptions and provide any technical information and/or data that you used.

- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

- Provide specific examples to illustrate your concerns and suggest alternatives.

- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

Make sure to submit your comments by the comment period deadline identified in the **DATES** section above.

### *B. How do I submit confidential business information?*

Following are specific instructions for submitting confidential business information (CBI) to the agency.

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**. When you send a comment containing CBI, you should include a cover letter setting forth the information

specified in our CBI regulation.<sup>64</sup> In addition, you should submit a copy from which you have deleted the claimed CBI to the Docket by one of the methods set forth above.

### *C. Will the Agency consider late comments?*

NHTSA will consider all comments received before the close of business on the comment closing date indicated above under **DATES**. To the extent practicable, we will also consider comments received after that date. If interested persons believe that any new information the agency places in the docket affects their comments, they may submit comments after the closing date concerning how the agency should consider that information for the final rule.

However, the agency's ability to consider any such late comments in this rulemaking will be limited due to the time frame for issuing a final rule. If a comment is received too late for us to practicably consider it in developing a final rule, we will consider that comment as an informal suggestion for future rulemaking action.

### *D. How can I read the comments submitted by other people?*

You may read the materials placed in the docket for this document (e.g., the comments submitted in response to this document by other interested persons) at any time by going to <http://www.regulations.gov>. Follow the online instructions for accessing the dockets. You may also read the materials at the NHTSA Docket Management Facility by going to the street address given above under **ADDRESSES**.

## VII. Regulatory Notices and Analyses

### *A. Executive Orders 12866 and 13563 and DOT Regulatory Policies and Procedures*

NHTSA has considered the impact of this rulemaking action under Executive Orders 12866 and 13563 and the Department of Transportation's regulatory policies and procedures. This action is not significant and therefore was not subject to review by OMB under Executive Order 12866. The benefits and costs of this proposal are described above in Section IV. Because the proposed rule would, if adopted, not be economically significant, the agency has not prepared a Preliminary Regulatory Evaluation.

### *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."<sup>65</sup> 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. It is hereby certified that this proposed rule would not have a significant economic impact on a substantial number of small entities. The following is NHTSA's statement providing the factual basis for the certification (5 U.S.C. 605(b)).

If adopted, the proposal would directly affect motor vehicle manufacturers and final-stage manufacturers that manufacture or are planning to manufacture alternative fuel vehicles. There are an estimated nine large single stage motor vehicle manufacturers and about three small U.S. manufacturers of light plug-in hybrid and electric vehicles that would be subject to the requirements of this proposal.<sup>66</sup> Similarly, there are at least six manufacturers of low-speed vehicles that are small businesses.<sup>67</sup>

A single stage automobile or light truck manufacturer (NAICS code 336111, Automobile Manufacturing; 336112, Light Truck and Utility Vehicle manufacturing) must have 1,000 or fewer employees to qualify as a small business.<sup>68</sup> We believe that all of the U.S. small vehicle manufacturers have fewer than 1,000 employees. We estimate these proposed requirements would cost each small vehicle manufacturer approximately \$1.89 to \$3.49 per vehicle, or far less than 1% of the cost of one of these vehicles, and would therefore not appear to constitute a significant economic impact. NHTSA seeks comment on this proposed certification.

<sup>65</sup> 13 CFR 121.105(a).

<sup>66</sup> Phoenix, Tesla, and Via Electric Vehicles.

<sup>67</sup> Club Car LLC, Columbia ParCar Corporation, Cruise Car Inc., STAR Electric Car Sales, Tomberlin, and Wheego Electric Car, Inc.

<sup>68</sup> 237 According to the Small Business Administration's small business size standards (see 13 CFR 121.201).

<sup>63</sup> Optical character recognition (OCR) is the process of converting an image of text, such as a scanned paper document or electronic fax file, into computer-editable text.

<sup>64</sup> 49 CFR Part 512.

### C. 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 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, or the agency consults with state and local officials early in the process of developing the proposed regulation, provides a federalism summary impact statement to the Office of Management and Budget (OMB) in the preamble, and makes any written communications to the agency from state and local officials available to the director of OMB. 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, provides a federalism summary impact statement to OMB in the preamble, and makes any written communications to the agency from state and local officials available to the director of OMB.

NHTSA has identified several states<sup>69</sup> that promote the use of alternative fuel vehicles. Some have implemented programs, such as California’s Clean Air Vehicle program, that provide High Occupancy Vehicle (HOV) lane access incentives for labeled or specially plated alternative fuel vehicles. These programs often require the owner to apply a badge, sticker, or special license plate that identifies the vehicle as an alternative fuel, low emission, or “clean-” Vehicle. This rule is not intended to preempt or in any way affect such programs, as the state programs do not regulate the manufacturers of alternative fuel vehicles or provide consumer information on specific types and benefits of alternative fuel vehicles.

<sup>69</sup>The states include Arizona, California, Colorado, Florida, Georgia, Hawaii, Maryland, New Jersey, New York, North Carolina, Tennessee, Utah and Virginia.

NHTSA does not believe that this proposed rule would have “substantial direct effects on the States, the relationship between the national government and the States or on the distribution of power and responsibilities among the various levels of government” as described in Executive Order 13132.

EISA does not expressly preempt state laws regarding consumer information or education on alternative fuel vehicles. Under Executive Order 13132, where a federal statute does not expressly preempt state law and there is no clear evidence that Congress intended for preemption to exist, the agency may find that its regulations preempt state law “only when the exercise of State authority directly conflicts with the exercise of Federal authority under the Federal statute.” When an agency foresees the possibility of a conflict between state law and federally protected interests, the agency shall attempt to avoid such a conflict through consultation with the appropriate state and local officials. NHTSA is unaware of any state laws regarding consumer information or education on alternative fuel vehicles that would directly conflict with the exercise of Federal authority in this proposed regulation.

NHTSA tentatively concludes that this proposed action would not likely have federalism implications. However, we are aware that some states may have an interest in this proposal, and we welcome information that may help the agency more fully understand how our efforts may coordinate or conflict with state programs and policies. We therefore solicit comment on this proposal from state and local officials and other interested persons.

### D. National Environmental Policy Act (NEPA)

For the purposes of the National Environmental Policy Act, NHTSA has determined that implementation of this rulemaking action would not have any significant impact on the quality of the human environment.

### E. Executive Order 12988 (Civil Justice Reform)

Pursuant to Executive Order 12988, “Civil Justice Reform,”<sup>70</sup> NHTSA has considered whether this rulemaking would have any retroactive effect. This proposed rule does not have any retroactive effect.

### F. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires

<sup>70</sup>61 FR 4729 (Feb. 7, 1996).

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 expenditures by States, local or tribal governments, in the aggregate, or by the private sector, of more than \$100 million annually (adjusted annually for inflation with base year of 1995).

Adjusting this amount by the implicit gross domestic product price deflator for 2012 results in \$136 million (115.381/81.606 = 1.41). The assessment may be included in conjunction with other assessments, as it is here. This proposal will not result in consumer costs of more than \$141 million.

### G. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (e.g., the statutory provisions regarding NHTSA’s vehicle safety authority) or otherwise impractical.

Voluntary consensus standards are technical standards developed or adopted by voluntary consensus standards bodies. Technical standards are defined by the NTTAA as “performance-based or design-specific technical specification and related management systems practices.” They pertain to “products and processes, such as size, strength, or technical performance of a product, process or material.”

Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials (ASTM), the Society of Automotive Engineers (SAE), and the American National Standards Institute (ANSI). If NHTSA does not use available and potentially applicable voluntary consensus standards, we are required by the Act to provide Congress, through OMB, an explanation of the reasons for not using such standards.

For this proposal, the only applicable voluntary consensus standards that NHTSA discovered are the joint SAE/ISO standards mentioned above in the context of research and as a potential alternative proposal. Following the path of using these standards in the context of this proposal poses challenges. The agency believes all fuel types may not be appropriately represented by these symbols and currently some symbols do not exist for specific fuel types. Adding new fuel types may involve revisiting and republishing standards; a time

consuming process. In addition, the symbols were fundamentally developed for use on controls, the vehicle instrument cluster and road signs versus the application as an exterior badge. The agency believes the symbols, possibly, would have taken a different form if designed from the outset as an exterior badge, where aesthetics and complementing an overall theme may take a higher priority, versus being developed to specified guidelines for application to controls, warning lamps and road signs. Finally, as discussed elsewhere in this proposal, NHTSA remains concerned that following this approach would discourage manufacturer investment in promoting alternative fuel vehicles, and that the redundancy issue (of both manufacturers and NHTSA investing time and effort in developing alternative fuel-specific symbols for each vehicle) make it not the best option.

#### H. Executive Order 13211 (Actions That Significantly Affect Energy Supply, Distribution or Use)

Executive Order 13211<sup>71</sup> applies to any rule that: (1) Is determined to be economically significant as defined under E.O. 12866, and is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. If the regulatory action meets either criterion, we must evaluate the adverse energy effects of the proposed rule and explain why the proposed regulation is preferable to other potentially effective and reasonably feasible alternatives considered by us.

The proposed rule seeks to establish alternative fuel vehicle labeling and information requirements that aim to promote the use of alternative fuels and reduce consumption of petroleum. We have tentatively concluded that this proposed rule will not have any adverse energy effects but will instead have positive effects. Accordingly, this proposed rule is not designated as a significant energy action.

#### I. Regulatory Identifier Number

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.

#### J. Department of Energy and Environmental Protection Agency Review

In accordance with 49 U.S.C. 32908(g)(1), we submitted this proposed rule to the DOE and the EPA for consultation and review.

#### K. Plain Language

Executive Orders 12866 and 13563 require 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 the rule easier to understand?

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

#### L. Privacy Act

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an organization, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78) or you may visit <http://www.dot.gov/privacy.html> (last visited January 10, 2011).

#### M. Paperwork Reduction Act

Under the procedures established by the Paperwork Reduction Act of 1995 (PRA), 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.

As described throughout this notice, NHTSA is proposing to require badges, labels and owner's manual information for new passenger cars and light trucks weighing less than 8,500 pounds in order to increase consumer awareness regarding the benefits and use of alternative fuels. In general, the

proposed rule would require manufacturers to disclose information supplied by NHTSA to consumers, and these requirements would not be considered a "collection of information" under the Paperwork Reduction Act.<sup>72</sup> However, for certain types of alternative fuel vehicles, manufacturers would be required to affix a badge to the vehicle, but NHTSA has not supplied the exact language to be used on the badge. These include vehicles operating on alcohol other than ethanol or methanol and vehicles operating on fuel derived from biological materials other than biodiesel. Additionally, for certain types of alternative fuel vehicles, manufacturers would be required to disclose additional information on the proposed fuel filler compartment label to assist consumers. For vehicles using liquid fuels, manufacturers would be required to include the appropriate maximum acceptable mixture levels of fuels that may contain a blend of fuel types, such as ethanol or biodiesel. For battery-only electric vehicles and plug-in hybrids, manufacturers would be required to include the recommended charging voltage and additional voltage levels that can be used for recharging the vehicles. NHTSA will seek approval of any information collection requirements proposed in this NPRM from OMB.

#### List of Subjects in 49 CFR Part 575

Consumer protection, Motor vehicle safety, Reporting and recordkeeping requirements, and tires.

For the reasons set forth in the preamble, NHTSA proposed to amend 49 CFR part 575 as follows:

- 1. Revise the authority citation to read as follows:

**Authority:** 49 U.S.C. 32302, 32304(A), 30111, 30115, 30117, 30123, 30166, 30168, and 32908, Pub. L. 104–414, 114 Stat. 1800, Pub. L. 109–59, 119 Stat. 1144, Pub. L. 110–140, 121 Stat. 1492, 15 U.S.C. 1232(g); delegation of authority at 49 CFR 1.95.

- 2. Add § 575.402 to read as follows:

#### § 575.402 Alternative Fuel Vehicle Identification and Owner's Manual Information.

(a) *Purpose and scope.* The purpose of this section is to inform consumers which vehicles are capable of operating on alternative fuels and the benefits of using alternative fuels, including their renewable nature and environmental benefits, by conveyance through a permanent and prominent display, a label attached to the fuel tank filler compartment, and standardized owner's manual information.

<sup>71</sup> 66 FR 28355 (May 18, 2001).

<sup>72</sup> 5 CFR 1320.3(c)(2)

(b) *Application.* This section applies to automobiles rated at not more than 8,500 pounds gross vehicle weight with the capability to operate on the alternative fuels as defined by 49 U.S.C. 32901(a)(1).

(c) *Definitions.* (1) *Alternative fuel* has the same meaning as defined in 49 U.S.C. 32901(a)(1).

(2) *Permanent and prominent display* means a badge affixed to the exterior of an automobile, designed for and applied with the ability to remain readable, and attached to the automobile throughout its entire useful life. The badge should be covered by the automobile manufacturer warranty during the automobile's warranted period.

(3) *Fuel compartment label* means text printed on the exterior of the fuel filler cap or an adhesive label affixed to the inside of an automobile refueling compartment, electrical charge port or connection point access door.

(d) *Requirements.* (1) *Required permanent and prominent display.* Prior to being offered for first retail sale, each manufacturer shall affix or cause to be affixed, and each dealer shall maintain or cause to be maintained, an exterior badge on each applicable automobile capable of operation on alternative fuel.

(i) *Location.* The exterior badge shall be located and readily visible at the rear of the vehicle within close proximity to the vehicle model name, model

designation and/or additional environmental/advanced technology badging, if applicable. If a vehicle is not equipped with a model name, model designation and/or additional environmental/advanced technology badging, the exterior badge shall be placed in the lower right corner of the vehicle's rear trunk-lid, closeout panel, rear hatch or rear fender depending on vehicle type body configuration.

(ii) *Content.* The badge shall reflect, at the minimum, in natural language the type of alternative fuel the vehicle is capable of operating on in accordance with the following table:

Alternative fuel *	Proposed badge natural language minimum description
Methanol **	Methanol.
Denatured Ethanol **	Ethanol.
Other Alcohols **	Name of other alcohol derived fuel.
Natural Gas	Natural Gas.
Liquefied Petroleum Gas	Propane.
Coal Derived Liquid Fuels	Coal to Liquid.
Hydrogen	Hydrogen.
Fuels (except alcohol) derived from biological materials	Biodiesel *** or name of other fuel derived from biological materials.
Electricity (Battery Electric Vehicle)	Electric.
Electricity (Plug-In Hybrid Electric Vehicle)	Plug-In Hybrid Electric.

\* As defined by 49 U.S.C. 32901(a)(1).

\*\* Note: To be considered an alternative fuel, alcohol derived fuels need to be blended at levels of at least 85 percent of the total mixture when blended with gasoline or other fuels.

\*\*\* The agency notes that it recognizes only 'neat' biodiesel (B100) as an alternative fuel. 63 FR 15322 (Mar. 31, 1998).

(iii) *Minimum letter height.* The defined natural language minimum description letter size shall be no smaller than 15 millimeters in height when the "natural language minimum description" is presented as a standalone badge containing no other text and no smaller than 5 millimeters when the "natural language minimum description" is accompanied by other text.

(iv) *Letter finish.* The defined natural language minimum description shall be finished in chrome or silver. If the alternative fuel name in the badge contains a background color independent of the vehicle color, this background color shall provide clear contrast to the alternative fuel name.

(v) *Minimum badge height.* The badge used for "permanent and prominent" display shall be no less than 15 millimeters in height.

(2) *Required owner's manual information.* The owner's manual of each vehicle capable of operating on alternative fuels shall contain the following text in the same font and type size specification as other standard text found throughout the owner's manual. In addition, the text shall be located within a box, bordered with a 1-pt. solid

black line, with no other text inside the box.

{Section Heading;} Capabilities and Benefits of Using Alternative Fuels

This vehicle is recognized by the U.S. Department of Transportation as an alternative fuel vehicle, because it is capable of operating on a biofuel, electricity, hydrogen, natural gas, propane or other fuel that is not derived primarily from petroleum. Alternative fuel vehicles may provide benefits both to their users and to the nation as a whole over their useful lifetime by operating on non-petroleum-based alternative fuels. Some of the benefits of alternative fuel usage in this vehicle may include:

• *Energy and National Security:*

Driving this vehicle on alternative fuels may help to reduce our country's dependence on foreign oil. The United States imports a substantial amount of its petroleum, the majority of which is used to fuel vehicles in the form of gasoline and diesel. Petroleum imports can be vulnerable to supply disruptions and price shocks depending on conditions in the countries that supply us with oil. By using alternative fuels, you may be helping the country be less vulnerable to the supply disruptions

and price variability associated with imported oil, and supporting U.S. alternative fuel producers.

• *Environmental Benefits—*

Renewability and Emissions: Many alternative fuels are renewable, which means that their sources can be replenished—like plant-based ethanol, or solar-powered electricity. Renewable fuels may have less environmental impact than conventional fuels. Additionally, compared with vehicles fueled by conventional, petroleum-derived diesel and gasoline, many alternative fuel vehicles are estimated to reduce the life cycle greenhouse gas emissions of carbon dioxide.

• *Fuel Type and Availability:*

Alternative fuels are increasingly in availability. To learn more about the availability of alternative fuel that can power this vehicle, please visit the Department of Energy's Alternative Fueling Station Locator at <http://www.afdc.energy.gov/afdc/locator/stations/> to determine the location of refueling and/or recharging facilities that meet your driving needs.

Additional Information Resources

• For more information about alternative fuels and alternative fuel



vehicles, please visit the Department of Energy’s Alternative Fuels & Advanced Vehicles Data Center at <http://www.afdc.energy.gov>.

- For more information about vehicle safety, please visit [www.safercar.gov](http://www.safercar.gov).

(3) *Required fuel filler compartment label.* Prior to being offered for first retail sale, each manufacturer shall affix,

or cause to be affixed, and each dealer shall maintain, or cause to be maintained, a label that complies with the requirements of 49 U.S.C. 32905(g)(3) on each applicable automobile capable of operation on an alternative fuel, as defined under 49 U.S.C. 32901(a)(1).

(i) *Location.* The label shall be located within the fuel filler compartment in the form of an adhesive label or as text on the exterior of the fuel filler cap.

(ii) *Content.* For each type of alternative fuel, the label shall include the content indicated in the following table:

Defined alternative fuel *	Alternative fuel name for use in labeling	Maximum blend level (liquid)	Charging voltage level(s)
Methanol**	Methanol	X	
Denatured Ethanol**	Ethanol	X	
Other Alcohols**	[Name of Alcohol Derived Fuel]	X	
Natural Gas	CNG		
Liquefied Petroleum Gas	LPG		
Coal Derived Liquid Fuels	Coal Derived Liquid Fuels	X	
Hydrogen	Hydrogen		
Fuels (except alcohol) derived from biological materials	Biodiesel or [Name of other Biologically derived fuel]	X	
Electricity (Battery Electric Vehicle)	Electricity		X
Electricity (Plug-In Hybrid Electric Vehicle)	Electricity/[Other Fuel Type(s)]	X***	X

\* 49 U.S.C. 32901(a)(1).

\*\* Note: To be considered an alternative fuel, alcohol derived fuels need to be blended at levels of at least 85 percent of the total mixture when blended with gasoline or other fuels.

\*\*\* For dual fuel capable non-electric power source.

(iii) *Minimum letter height and style.* The defined minimum letter size shall be no smaller than 5 millimeters in height and in “bold-face” type.

(iv) *Letter contrast.* The fuel compartment labeled text shall be presented in high contrast to the background color of the material the text is printed on.

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