

# Supporting Statement for Fuel Economy, GHG, Other Emissions, and Alternative Fuels Education Program Qualitative Research Plan

February 10, 2014

## **Section A**

### **A. Justification**

The Energy Independence and Security Act of 2007 (EISA) added a requirement to develop Consumer Information and Consumer Education programs to raise consumer awareness about certain aspects of vehicle fuel economy and alternative fuel use (*see* 49 U.S.C. § 32908<sup>1</sup>). Under EISA, the National Highway Traffic Safety Administration (NHTSA), in consultation with the Department of Energy (DOE) and the Environmental Protection Agency (EPA), is required to develop and implement by rule a consumer education program to improve consumer understanding of automobile performance in terms of fuel economy, greenhouse gas (GHG) emissions, and other emissions, and also to inform consumers of the benefits of using alternative fuels in automobiles and the location of stations with alternative fuel capacity. Separately, EISA also requires NHTSA to establish a consumer education campaign about the fuel savings that would be recognized from the purchase of vehicles equipped with “thermal management technologies,” including energy efficient air conditioning systems and glass.

In 2011 and 2012, NHTSA conducted consumer research in support of developing a CIP as defined in EISA on the topics of fuel economy, GHGs and other emissions, thermal management technologies and alternative fuels. NHTSA first conducted qualitative research to explore what consumers know, what they need to know in order to make informed purchase and behavior change decisions, and what issues they care most about when reviewing content about fuel economy, alternative fuels, GHGs and other emissions, and thermal management technologies.

In a follow-up quantitative study, NHTSA tested consumer comprehension of related information that already exists on various online government sources, including the impact of various driving and vehicle maintenance behaviors on a vehicle’s fuel economy and the benefits and drawbacks for select alternative fuels.

To test understanding of the impact behaviors have on a vehicle’s fuel economy, respondents were presented with certain actions, such as “maintaining a constant speed,” “driving with a full trunk or truck bed,” etc., and asked to rate the impact each behavior has on a vehicle’s fuel economy using a one to seven scale where one meant that the item has a very negative impact on fuel economy (fewer miles per gallon), four meant the item has no impact on fuel economy and seven meant the item has a very positive impact on fuel economy (more miles per gallon). To test comprehension of the benefits and drawbacks of certain alternative fuels, respondents were asked their level of agreement with statements such as “a

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<sup>1</sup> A full text copy of this code is included with this package as Appendix A. Also, included as a separate appendix is a copy of the relevant section of 49 U.S.C. § 32908 as Appendix B for easy reference.

vehicle that runs on alternative fuels helps improve the air quality in my town or city” and “a vehicle that runs on alternative fuels helps support economic development in the U.S.” All statements used in the study were obtained from government sources.

In addition to assessing consumer knowledge, NHTSA also used this survey to test potential advertising concepts on their ability to incite interest in the topics covered and to encourage visits to SaferCar.gov. Respondents viewed animated advertisements in a random order and evaluated each on believability, relevance, uniqueness and likelihood to visit SaferCar.gov after viewing.

Specifically, five advertisements were tested covering the following topics:

- Sudden starts and stops waste fuel
- Regular vehicle maintenance can save money and reduce CO2 emissions
- Energy efficient glass can make your vehicle more fuel efficient
- Alternative fuel powered-vehicles often use renewable fuel sources that can be produced in the U.S.
- Every gallon of fuel burned produces GHG emissions

### *Findings from Previous Research*

Through the qualitative research, NHTSA found that consumers have a general sense of the behaviors that impact fuel economy, but are often misinformed or under-informed on the actions they can take to improve their fuel economy. Much of the information they have gathered about fuel economy has come from word-of-mouth sources, such as family members or their mechanic. And, while consumers understand the importance of saving fuel, there are barriers to actual behavior change: personal driving habits, regional differences and perceptions of potential cost savings. Consumers are interested in learning more about the things they can do to improve their fuel economy, but are more likely to act if the cost savings are significant.

The results of the quantitative study confirmed much of what was found through qualitative discussions with consumers. Eighty percent of consumers surveyed agreed that that the way they drive impacts their vehicle’s fuel economy and most are able to correctly identify which behaviors improve fuel economy and which decrease fuel economy; however, there are some misconceptions. For example, 29 percent of respondents believe using the recommended motor oil in a vehicle has no impact on fuel economy, while the according to the EPA, you can improve your fuel economy by one to two percent by using the manufacturer’s recommended grade of motor oil.

When asked which of the five topics (i.e. driving behavior tips, vehicle maintenance tips, alternative fuel information, thermal management technology information and information about GHGs and other emissions) are most interesting, consumers surveyed were most likely to select driving behavior or vehicle maintenance tips. They are interested to learn things they can employ to effectively save fuel. Furthermore, the survey results suggest that tangible, personal benefits such as saving money and reducing trips to the pump motivate consumers to seek out additional information or potentially change their behaviors.

This previous research was used to inform the development of a strategic plan for the consumer information program. The final reports from this research are included with this package as Appendix C.

## *Proposed Research*

As NHTSA develops content and materials related to the consumer information program, it is important to test these materials to ensure they are effective at providing the statutorily-required important information about fuel economy, GHG emissions, other emissions, and alternative fuels. Although previous research provided some data helpful in informing draft development of these materials, such as by identifying relevant knowledge gaps among consumers and which topics they might find most interesting and compelling, this new research will be to identify any refinements needed prior to finalizing the proposed campaign direction and NPRM content. The purpose of this research is to ensure that NHTSA's communication efforts utilize materials that are interesting, appealing, and easy to comprehend, while meeting the statutory objectives. Asking consumers to share their opinions about the concepts, design, and content will help NHTSA refine materials so that the campaign effectively engages and educates consumers about the required topics.

NHTSA is seeking to conduct qualitative focus group research to guide the development and refinement of materials that will be used in this consumer information program. Specifically, the objectives guiding this research include the following:

1. Explore consumer knowledge of fuel economy, GHG emissions and other emissions, and alternative fuels information and perceptions of information currently available.
2. Test materials and content developed to assess consumer comprehension and likelihood to encourage behavior change.

The materials that will be tested in this research include the following:

- Fact Sheets
- Interactive infographic blueprint
- Driving video game user experience brief
- Video storyboard with script
- Campaign taglines

Specifically, NHTSA seeks to conduct two (2) focus groups each, homogeneous by gender, in three (3) cities (six groups in total). In order to obtain consumer feedback in different regions of the country, we recommend conducting these groups in one city in each of the following regions: Northeast, South or Midwest, and West. With consideration to the cities previously used for this research (i.e., Minneapolis, MN; Phoenix, AZ; Atlanta, GA; Fort Lee, NJ) we plan to conduct these groups in the following metro areas:

- Philadelphia, PA (high-congestion Northeast market)
- Seattle, WA (“green” West Coast market)
- Kansas City, MO (general consumer Midwest market)

For the purposes of this study, the recommended screening criteria are broad enough to include a cross-section of all vehicle drivers and purchasers throughout the U.S. Potential subjects will be asked several questions to determine their eligibility to participate in the focus groups. Respondents will be screened based on the following criteria:

- Participants must be 18 years or older.
- Participants must currently possess a valid driver's license.
- Participants must currently own or lease a vehicle.
- Participants must be the primary or a shared decision maker for vehicle purchases in their household.

A respondent screener is included in this research package as Appendix D.

Respondents in each city will be split into one of two groups: (1) Females; and (2) Males. It is our experience that in mixed-gender focus groups that cover technical or vehicle information, males will dominate the conversation and the females in the room will defer to their opinions. Splitting the groups in each city based on gender will allow us to collect information and feedback from both genders to inform the communications campaign.

Each focus group will last approximately two hours, and will include eight participants. Trends heard throughout various conversations will inform the consumer education plan and will be tested quantitatively through additional research. Throughout these groups, there will be opportunities to include quantitative aspects; however, strategic recommendations will be based on an analysis of conversations that explore whether or not consumers understand the fuel economy-related content being communicated and whether or not the messages provide consumers with the required information and encourage them to seek out additional relevant information.

A discussion guide for these focus groups is included in this research package as Appendix E. The handouts for respondents that will be used during the groups are included as Appendix F. In addition, the animated infographic that the moderator will demonstrate on-screen during the focus groups is included as Appendix G.

The following sections describe the justification for this proposed consumer research plan in detail.

**A1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

*Consumer Information, Consumer Education, 49 U.S.C. § 32908 (g)(2):*

EISA requires NHTSA to develop and implement through rulemaking a consumer education program to provide information about fuel economy, GHG emissions, other emissions, alternative fuels, and thermal management technologies.

The specific objectives of the education program, as stated in EISA, are to:

- Improve understanding of automobile performance on the basis of fuel economy and greenhouse gas emissions and other pollutant emissions over the useful life of the vehicle;
- Inform consumers of the benefit of using alternative fuel in automobiles;
- Inform consumers about locations of stations with alternative fuel capacity; and,
- Educate consumers about fuel savings that would be recognized by purchasing a vehicle equipped with thermal management technologies (*e.g.*, energy-efficient air conditioning systems and glass).

In order to effectively achieve the objectives of the consumer education program and fulfill its statutory obligations, NHTSA is requesting to conduct qualitative research with consumers to ensure the materials being developed on behalf of this program are relevant, understandable, and compelling to consumers. The research will allow NHTSA to refine materials and messaging to enhance comprehension and usefulness of this consumer information program.

The National Traffic and Motor Vehicle Safety Act of 1966, Title 15 United States Code 1395, Section 106 (b), gives the Secretary authorization to conduct research, testing, development, and training as authorized to be carried out by subsections for this title. The Vehicle Safety Act was subsequently re-codified under Title 49 of the U.S. Code in Chapter 301, Motor Vehicle Safety. Section 30168 of Title 49, Chapter 301, gives the Secretary authorization to conduct research, testing, development, and training to carry out this chapter.

**A2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

The purpose of this consumer research is to gather critical information that will allow NHTSA to fulfill its role in educating consumers about fuel economy, GHG emissions, other emissions, alternative fuels, and thermal management technologies pursuant to EISA. The findings from this proposed research will assist NHTSA in ensuring that the materials used in this campaign contain the relevant content that is easily comprehended by consumers so that they are aware of the behaviors that affect a vehicle's fuel economy and the alternative fuels and technologies that are available that may improve their vehicles' fuel economy and lower emissions.

The research will be used to inform the development of campaign materials aimed increasing awareness and improving comprehension about vehicle fuel economy, GHG emissions and other vehicle emissions, as well as alternative fuels. This research plan leverages the findings from the previous formative research NHTSA conducted. NHTSA will take appropriate steps to avoid unnecessary duplication.

**A3. Describe whether, and to what extent the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting the electronic submission of responses, and the basis for the decisions for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Qualitative data collection will be completed face-to-face, in a group discussion setting. A face-to-face setting is the best approach for this exploratory phase of research as the groups will provide a deep conversation about fuel economy, GHG emissions, other emissions and alternative fuels. The discussion will be helpful in gaining an understanding of consumers' perceptions, opinions, and beliefs regarding relevant issues. Video and audio recordings of these discussions will be available to assist in transcription and report writing, but no other automated technologies will be used. Participants will be informed of all technologies in use prior to the discussion.

**A4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

NHTSA researchers have extensively reviewed recent studies pertaining to the Fuel Economy program. EPA, in collaboration with NHTSA, has recently conducted a multi-phased consumer research project in support of the agencies' joint rulemaking to establish the fuel economy and environment label, which OMB reviewed. NHTSA intends to build upon this research, utilizing key findings and conducting further consumer research that will be instrumental in guiding NHTSA's consumer education program. This new collection will provide insights into the usefulness of materials being developed for this education campaign. NHTSA is mindful of the information that has already been collected from consumers through our own and EPA's efforts and has worked with parties within NHTSA and other agencies and third-party partners to ensure all questioning is relevant, useful and puts no undue burden on respondents.

**A5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.**

The collection of information will not impact small businesses.

**A6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

NHTSA has conducted a messaging audit, which identified existing content related to fuel economy, GHG emissions and other emissions, alternative fuel and thermal management technology information as well as formative research with consumers to understand the relevant knowledge gaps necessary to address through this consumer information program. At this point, NHTSA must explore the effectiveness of proposed materials to help ensure the consumer information program is easily comprehended by its intended target.

This exploration will help inform what content should be included in the program (*i.e.*, what content can be leveraged, what content must first be refined and what new information consumers need) and where this information is best placed.

Without exploring these themes with consumers, NHTSA risks developing a consumer education program that is neither relevant nor effective, which would seem to obviate Congress' purpose in requiring one.

**A7. Explain any special circumstances that would cause an information collection to be conducted in a manner that is not consistent with the guidelines in 5 CFR 1320.6.**

No special circumstances require the collection to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.6.

**A8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments.**

A notice for public comment for this proposed research plan was published to the Federal Register on December 19, 2012 (p. 75255-75257). No comments were received.

**A9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

Focus group participants are provided a cash honorarium as compensation for their time. This honorarium is provided as an incentive for participants to take the time to travel to the focus group facility and participate in the discussion (therefore minimizing participant out-of-pocket expenses), as well as a sign of appreciation for their thoughts and opinions. The amount necessary for a focus group honorarium generally varies by market, level of screening criteria and difficulty of obtaining participation from certain target participants. Given the general consumer nature of these groups and required participants, we estimate the honorarium to be \$75 per participant. Within each market, compensation will be equal for all participants.

**A10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation or agency policy.**

For the qualitative research, any personal information, such as name and telephone number, will strictly be used for the purposes of recruitment or conducting interviews. Participants will be face-to-face with the moderator, and NHTSA team members will observe the focus groups, but privacy will be protected to the extent of the law.

Prior to the start of the discussion, the moderator will assure participants that their responses are kept private to the fullest extent of the law and that they will not be personally identified in the report or documentation resulting from the research. Throughout the discussion, participants will only be identified by first name and any video or audio recordings of the focus groups or interviews will be in the sole possession of NHTSA.

**A11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

This research will not include any questions of a sensitive or private nature.

**A12. Provide estimates of the hour burden of the collection of information.**

For the focus group phase of this collection, NHTSA plans to conduct two focus groups per city in each of three cities (a total of six focus groups), each lasting approximately two hours. In each group, eight participants will be seated, or 16 participants per city. Therefore, a total of 48 people will participate in the group sessions across all cities. For recruiting of these participants, however, a total of 72 potential participants (12 per group, 24 per city) will be recruited via telephone screening calls, which are estimated to take 10 minutes per call. Based on experience, it is prudent to recruit up to 12 people per group in order to ensure at least 8 will actually appear at the focus group facility at the appointed time.

Thus, the total burden per person actually participating in this research is estimated to be 130 minutes (i.e., 10 minutes for the screening/recruiting telephone call plus 120 minutes in the focus group discussion session). Additionally, the total burden for each person who is recruited, but does not participate in the focus group is 10 minutes.

<b>Focus Groups</b>	<b>Participants Per City</b>	<b>Total Participants</b>	<b>Hours per Person</b>	<b>Total Participant Hours</b>
Focus Group Recruiting (2 groups per city)	24	72	1/6 Hour (10 minutes)	12
Focus Groups (2 groups per city)	16	48	2	96



In total, the annual estimated burden imposed by this collection of information is approximately 108 hours. The maximum total input cost, if all respondents were interviewed on the job, is estimated as follows:

$$\$16.71 \text{ per hour}^2 \quad \times 108 \quad = \quad \$1,804.68$$

**A13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information.**

The only cost burden consumer respondents will experience are the costs related to travel to and from focus group facilities. These costs are minimal and will ultimately be offset as focus group participants will be provided a cash honorarium (detailed in item A14).

Assuming respondents travel a maximum of 60 miles round-trip to and from the facility, the total maximum travel costs would be:

Item	Max. Participants Per Group	Max. Participants Per City	Max. Total Participants	Max. Miles Traveled	IRS Standard Mileage Rate <sup>3</sup>	Total Mileage Costs
Focus Groups (3 Cities)	12	24	72	60	\$0.555/mile	\$2,397.60

Focus group participants generally travel far less than 30 miles one-way to participate and ultimately travel costs vary per person. This serves as an estimate of the maximum costs that respondents could be expected to incur.

There will be no record keeping or reporting costs to respondents.

**A14. Provide estimates of annualized costs to the Federal government.**

The costs associated with the qualitative phase of this research include direct costs such as facility rental, technology use (i.e., software, audio and video recordings), participant incentives, and staff travel.

Below is the summary of direct costs NHTSA expects to incur as a result of this research:

- Focus Group Facility Rental & Technology - \$17,000
- Respondent Recruitment - \$9,000

<sup>2</sup> From Bureau of Labor and Statistics' median hourly wage (all occupations) in the May 2012 National Occupational Employment and Wage Estimates, Last Modified November 2013

<sup>3</sup> From Internal Revenue Services' 2012 Standard Mileage Rate for business miles driven.

- Respondent Incentives - \$5,400

*Staff Travel*

For a 3-city focus group plan, we estimate the costs of staff travel to be approximately \$3,000 per person. This figure includes airfare, hotel room, ground transportation, and other incidental expenses.

All staff travel will be billed to this project at cost and utilize government travel guidelines. Actual costs may vary and are dependent on dates of travel and research schedule.

*Partner Hours*

Staff time for our research partners is calculated using per hour billing rates. The hours estimated here are based on hours needed for past qualitative projects of a similar scope. These hours include time needed for screener and discussion guide finalization, group moderating, data analysis and reporting, as well as meetings and conference calls with the NHTSA team.

<b>Level</b>	<b>Labor Hour Rate</b>	<b>Estimated Hours</b>	<b>Total Costs</b>
Senior Vice President	225	60	\$13,500
Research Director (Senior Account Supervisor)	150	95	\$14,250
Senior Project Manager (Account Supervisor)	155	105	\$16,275
Research Assistant (Assistant Account Executive)	100	90	\$9,000
<b>Total Partner Staff Time</b>			<b>\$53,025</b>

NHTSA estimates the total cost of this focus group research to be **\$84,425**, which does not include NHTSA staff travel cost. The final cost will be dependent on actual direct costs, the number of NHTSA and partner staff that will be required to travel to each focus group location, and actual staff hours required.

**A15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.**

This is a new information collection request, resulting in a program change of adding an additional 108 burden hours to NHTSA’s overall total.

**A16. For collections of information whose results will be published, outline plans for tabulation and publication.**

NHTSA expects to receive interim reports from our research partners following the first focus group city, with a follow-up report delivered one week after focus group completion. A final focus group report will be delivered two weeks after all focus groups are completed. Additionally, NHTSA will plan to meet with research partners between focus groups to discuss key findings, evaluate the success of the groups, and make any necessary adjustments to the discussion guide.

Below is the anticipated timeline for data collection. Final dates of deliverables will be dependent on the date of OMB approval.

Date	Research Activity
<b>Week 1</b>	<ul style="list-style-type: none"> <li>• Plan approval received</li> <li>• Focus group facilities contracted</li> <li>• Recruitment begins</li> </ul>
<b>Week 2</b>	<ul style="list-style-type: none"> <li>• Recruiting continues</li> </ul>
<b>Week 3</b>	<ul style="list-style-type: none"> <li>• Focus groups held in 3 cities</li> </ul>
<b>Week 4</b>	<ul style="list-style-type: none"> <li>• Results analyzed</li> <li>• Top-line findings memo submitted to NHTSA</li> </ul>
<b>Week 5</b>	<ul style="list-style-type: none"> <li>• Analysis continues</li> </ul>
<b>Week 6</b>	<ul style="list-style-type: none"> <li>• Final qualitative report delivered, including transcripts, video files and any other materials collected or created</li> </ul>

**A17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

We do not seek approval to not display the expiration date for OMB approval for this research plan.

**A18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.**

No exceptions to the certification are required for this research plan.