NHTSA

www.nhtsa.gov

Fuel Economy, GHG, Other Emissions, and Alternative Fuels Consumer Education Program

Quantitative Survey Report

April 13, 2012

StrategyOne

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Background

The Energy Independence and Security Act of 2007 (EISA) requires the NHTSA, in consultation with Environmental Protection Agency (EPA) and Department of Energy (DOE), to develop and implement a consumer information and education program to improve consumer understanding of automobile fuel economy, GHG and other pollutant emissions, alternative fuels, and thermal management technologies.

In 2010, NHTSA contracted with StrategyOne, the independent market research arm of Edelman, to conduct consumer research in support of developing a consumer education program and fulfilling NHTSA's statutory requirements pursuant to EISA.

NHTSA engaged first in a qualitative phase of consumer research, conducting focus groups in four cities to better understand what consumers know, what they need to know, and what issues they care most about with regard to fuel economy-related content. The findings from this research were applied in developing a follow-up survey to confirm what was heard in the focus groups and test potential advertising related to this initiative.

Study Overview

Consumer Focus Groups → **Online Survey with Consumers**

Research Objectives:

- **Test consumer comprehension of existing fuel economy-related content.**
  - Among consumers, what is the existing level of knowledge regarding fuel economy and where did consumers obtain the information they already have?
  - What knowledge gaps are important to address through NHTSA's consumer education program?
  - In terms of fuel economy, GHG and other emissions, alternative fuels and thermal management technologies, what issues do consumers care most about?
  - Does the existing fuel economy-related content already collected by NHTSA add to their current levels of knowledge?
  - Is the fuel economy-related content written in a way that is clear and comprehendible?

- **Test consumer-facing messages related to NHTSA's consumer education campaign.**
  - Do these marketing messages effectively encourage consumers to seek fuel-economy related content from NHTSA?
  - What are the best methods (*i.e.,* channels of communication) for reaching consumers with these messages?

Focus Group Key Findings

Consumers have a general sense of how to improve their fuel economy but they are often misinformed or under-informed.

- While respondents in all cities were able to name some behaviors and actions they can take to achieve better fuel economy, there is a lot of misinformation. There was the occasional disagreement within the groups and outdated information that no longer applies to modern vehicles.

The main source of fuel economy information is word-of-mouth through family, friends and mechanics.

- Local mechanics, friends and fathers are key sources for driving information in general, and are main sources of current fuel economy knowledge. If a question about fuel economy arises, they are likely to turn to Google for help and are more likely to trust results from a .org URL versus a .com.

There is a desire to learn more about fuel economy, but there are barriers to actual behavior change.

- Some of the barriers to change are personal ("I drive with a lead foot and am hard on the brake, and I know it, but I don't care"), some are about cost ("But I wouldn't buy [lower rolling resistance tires] because of the fact that if you are going to use that car in the wintertime, you almost have to replace the tires. With me it's a $700 or $800 deal to go out and buy good winter tires"), and some are regional ("[In Phoenix] you have to have air conditioning in the summertime").

Focus Group Key Findings

Personal, environmental and national benefits all resonate with consumers, but personal benefits, specifically costs are more likely to capture attention and encourage potential behavior change.

- Consumers want to consider the 'big picture', but ultimately they need to see the tangible impact of their small behavior changes or alternative fuel use. They are thinking more about the dollars they are saving than reducing their emissions or easing political tensions.

Respondents are skeptical of the government as a source of information about fuel economy in general and do not necessarily see SaferCar.gov as the resource for this information.

- Many respondents feel hidden political agendas are associated with information provided on .gov websites. Keeping the tone of the web content educational and providing access to research and external sources for those who want more information can help to ease skepticism.

Quantitative Methodology

WHO

US Drivers, 18 years and older

HOW MANY

n=1,500
Margin of Error = +/- 2.53%

WHEN

Data Collection Occurred February 29, 2012 – March 7, 2012

WHERE

Online Survey

Key Findings

Summary of Key Findings

As we heard in the focus groups, consumers have a general understanding of the connection between their driving habits and their vehicle's fuel economy, but are often misinformed or under-informed on just what they can be doing to improve their gas mileage.

- When it comes to alternative fuels, consumers are aware of various fuels, but not particularly familiar and they have received conflicting information on the benefits and drawbacks of these fuels.

To improve their fuel economy or consider purchasing a vehicle with alternative fuel capabilities, consumers are motivated most by money.

- Environmental and national benefits are important supporting points that resonate with certain demographic groups, but across all groups, money is the key motivating factor.

Consumers use web searches or look to sources like Consumer Reports and their family and friends for information about vehicles and fuel economy.

- Consumers in the purchase mindset are more likely to also use new vehicle sources like Edmunds.com and Cars.com.

Fewer than half of consumers trust government agencies to provide fuel economy and alternative fuel information.

- After seeing the advertising, two-thirds believe SaferCar.gov can be a credible source for this information. However, the focus groups findings demonstrated that FuelEconomy.gov is a more intuitive source.

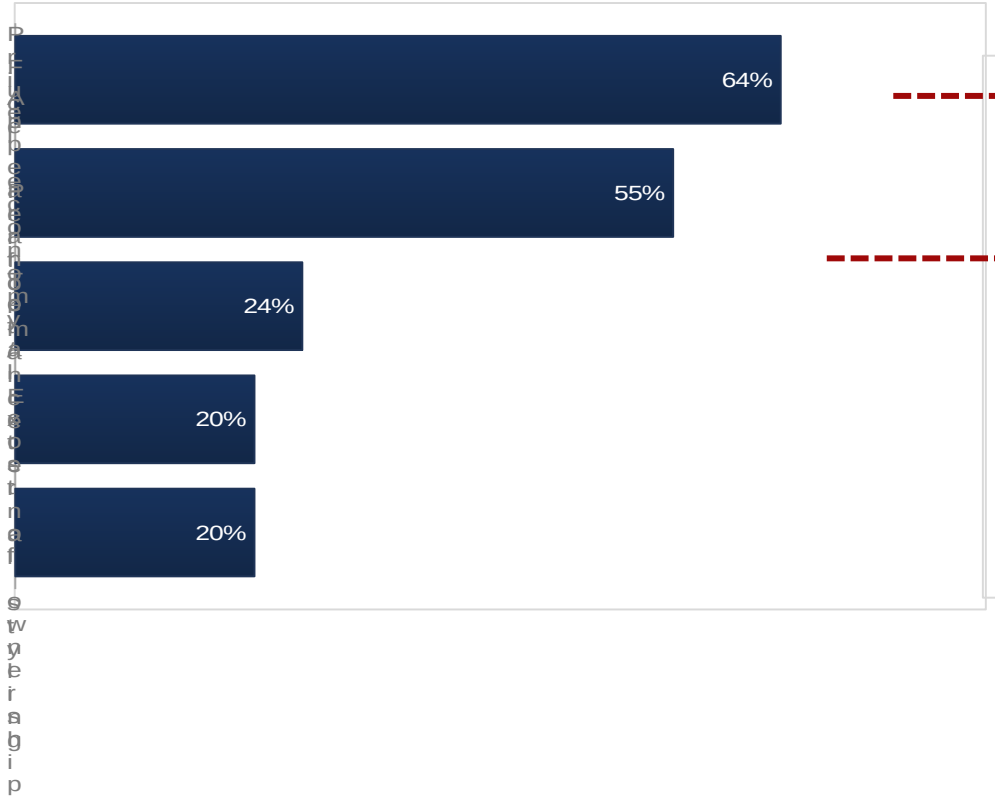
In the advertising evaluations, there were some differences in terms of ad believability and uniqueness with the 'driver behaviors' ad being rated slightly higher than others. However, while consumers are most interested in learning driving behavior and vehicle maintenance tips, no ad generates significant interest in visiting SaferCar.gov.

- Certain groups are also interested in alternative fuels (i.e., young consumers and those in the purchase mindset) and thermal management technologies (i.e., highly educated consumers).

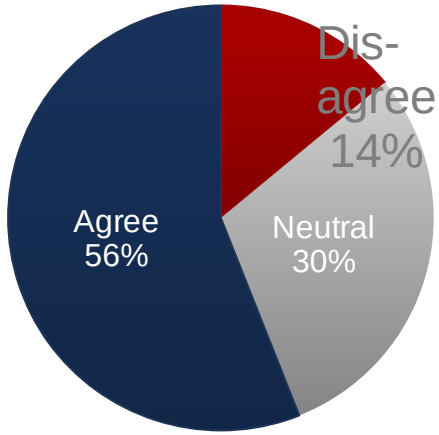
When purchasing a new vehicle, price is the most important consideration factor, followed by fuel economy.

Since only slightly more than half of consumers believe the upfront expense of purchasing a fuel efficient vehicle can be recouped at the pump, NHTSA should consider demonstrating the dollar savings that can be achieved by improving fuel economy and encourage consumers to consider the total cost of ownership, rather than just the vehicle price.

Top 5 Factors



The upfront expense of a fuel-efficient vehicle can be recouped by saving money at the pump

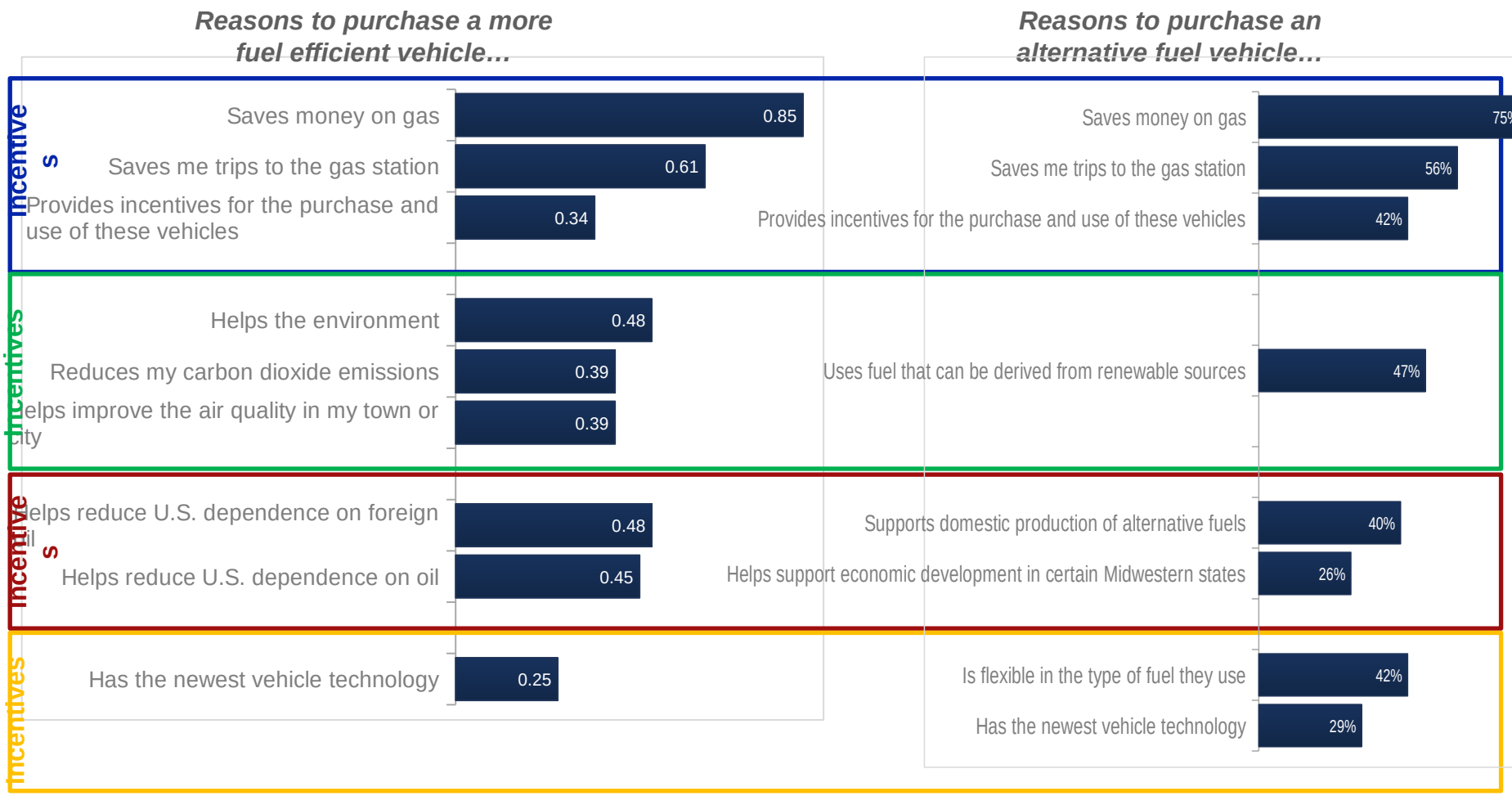


INSIGHT TO ACTION

Q11: When purchasing a new vehicle, meaning a new model year vehicle, what are the three most important factors that you consider?
Q14: How much do you agree or disagree with the following statements? *('Agree" = Top 2 Box %. "Disagree" = Bottom 2 Box %)*

Money savings is also a key reason motivating a consumer to buy a more fuel-efficient or alternative fuel vehicle.

Focusing communications on the personal, more immediate benefits can help to motivate consumers to pay more attention to the more fuel-efficient options available, while other considerations like national and environmental incentives can be used as supporting points.



Q15: Imagine you are purchasing a vehicle and have narrowed your choice to two vehicles. One vehicle has better fuel economy (i.e. more miles per gallon) than the other vehicle. Which of the following factors would motivate you to purchase the more fuel efficient vehicle?

Q21: If you were to consider purchasing a vehicle that can run on alternative fuels, which of the following factors would motivate you to purchase?

Environmental benefits are more likely to resonate with younger consumers, while reducing national dependence on oil resonates with older consumers.

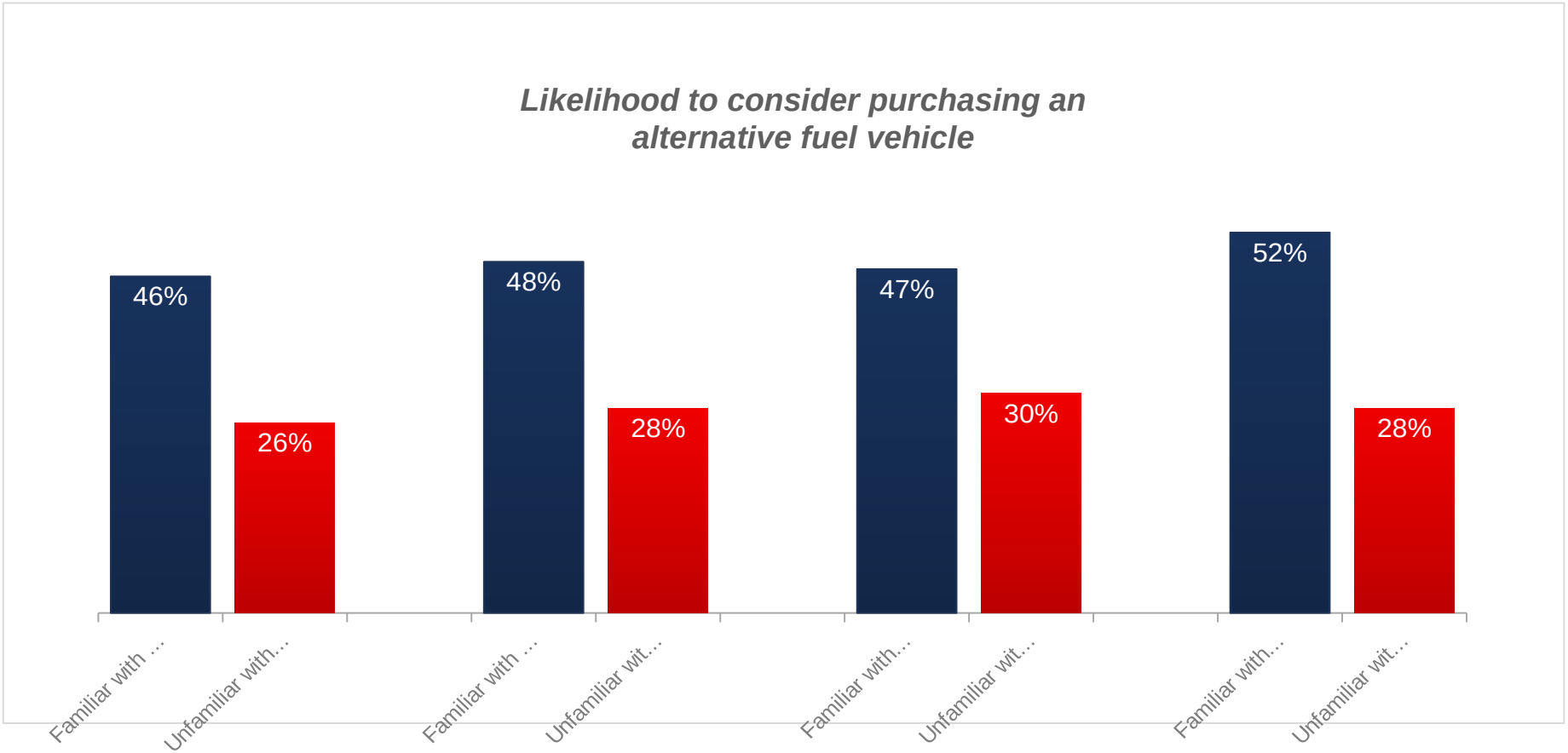
Supporting targeted communications with the points that resonate best with a particular group can help ensure messaging is more relevant.

Reasons to purchase a more fuel efficient vehicle…

	18-24	25-34	35-44	45-54	55-64	65+
Saves money on gas	84%	79%	86%	85%	88%	86%
Helps to environment	56%	49%	46%	47%	46%	46%
Reduces my carbon dioxide emissions	45%	35%	38%	40%	37%	42%
Helps reduce U.S. dependence on foreign oil	40%	42%	45%	44%	56%	56%
Helps reduce U.S. dependence on oil	43%	41%	39%	44%	52%	50%

Q15: Imagine you are purchasing a vehicle and have narrowed your choice to two vehicles. One vehicle has better fuel economy (i.e. more miles per gallon) than the other vehicle. Which of the following factors would motivate you to purchase the more fuel efficient vehicle?

In addition to personal benefits, simply increasing familiarity with alternative fuels may have an impact on consideration.



Q20: For your next vehicle purchase, how likely are you to consider purchasing a vehicle that is able to run on an alternative fuel? (Shown: Top 2 Box %)

While most drivers generally understand that the way they drive has an impact on their vehicles' fuel economy, there are some misconceptions.

For many consumers, it is unclear whether parking in the shade on a hot day, opening the windows on the highway or idling helps or hinders their vehicle's fuel economy.

81% ***agree that the way they drive their vehicles can impact its fuel economy.***

Driver behaviors that improve fuel economy…

	Improves MPG	Has no impact	Decreases MPG
Ensuring tires are inflated to the optimum pressure	84%	11%	5%
Maintaining a constant speed	82%	14%	4%
Keeping up with a vehicle's recommended maintenance schedule	81%	16%	3%
Using the recommended motor oil	67%	29%	4%
Parking in the shade on a hot day	29%	66%	5%

Driver behaviors that hinder fuel economy…

	Improves MPG	Has no impact	Decreases MPG
Driving with a full trunk or trunk bed	6%	17%	76%
Idling while waiting for someone instead of turning off the vehicle	10%	19%	71%
Driving with a roof top carrier or bicycle/ski rack	5%	27%	68%
Driving 10 MPH above the posted speed limit	7%	30%	63%
Idling to allow my vehicle to warm up on cold mornings	15%	30%	54%
Opening the windows when driving on the highway	11%	39%	51%

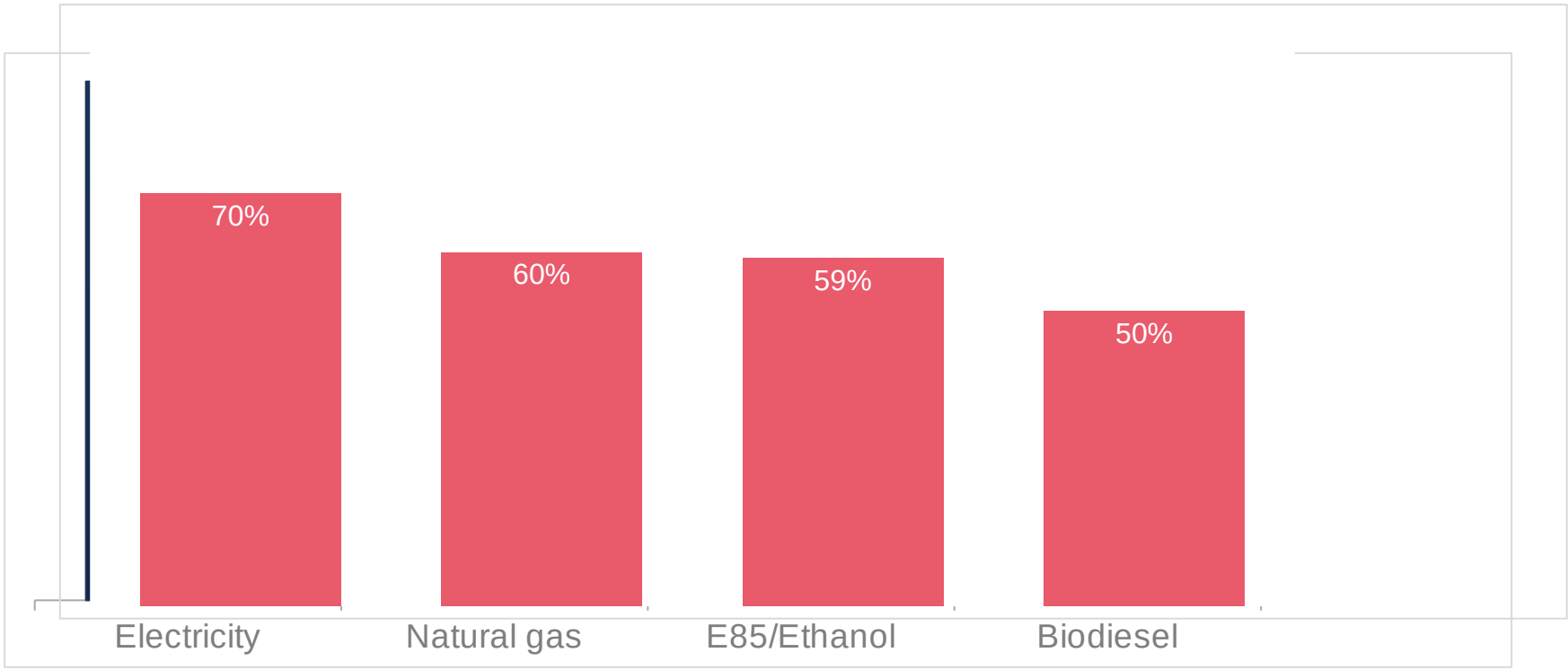
Q14: How much do you agree or disagree with the following statements? *(Shown: Top 2 Box %)*

Q16: What impact does each behavior have on your vehicle's fuel economy? Does the behavior help you get more miles per gallon, cause you to get fewer miles per gallon, or does it have no impact on your vehicle's fuel economy?

Drivers are aware of alternative fuels used to power vehicles, but the gap between familiarity and awareness demonstrates a need for education.

Closing this gap can help to increase consideration of purchasing an alternative fuel capable vehicle.

49% ***of consumers who plan to purchase a vehicle within the next year are likely to consider purchasing a vehicle that is able to run on alternative fuels.***



Q17: How familiar are you with the following alternative fuels that can be used to power vehicles?

Q20: For your next vehicle purchase, how likely are you to consider purchasing a vehicle that is able to run on an alternative fuel? *(Shown: Top 2 Box %, Data represents only those consumers who plan to purchase a vehicle in the next 12 months (n=484))*

Consumers are receiving conflicting information about the benefits and drawbacks of alternative fuels.

Education, particularly around any potential cost benefits of using alternative fuels, may also help to increase consideration of using these fuels.

	Benefits	Drawbacks
Electricity (n=306) **43%** named benefits **63%** named drawbacks		
Natural Gas (n=306) **37%** named benefits **30%** named drawbacks		
E85/Ethanol (n=306) **45%** named benefits **38%** named drawbacks		
Biodiesel (n=308) **39%** named benefits **24%** named drawbacks		

Q18: What have you heard about the benefits and/or drawbacks of using [ethanol/biodiesel/electricity/natural gas] to power a vehicle?

When looking for information regarding new vehicles and fuel economy, most turn to the Internet – both general searches and manufacturer websites – as well as third party publications like Consumer Reports.

Communications focused on the personal benefits of improving fuel economy can help to encourage consumers to seek out this information.

New Vehicle Information

27% don't look for new vehicle information

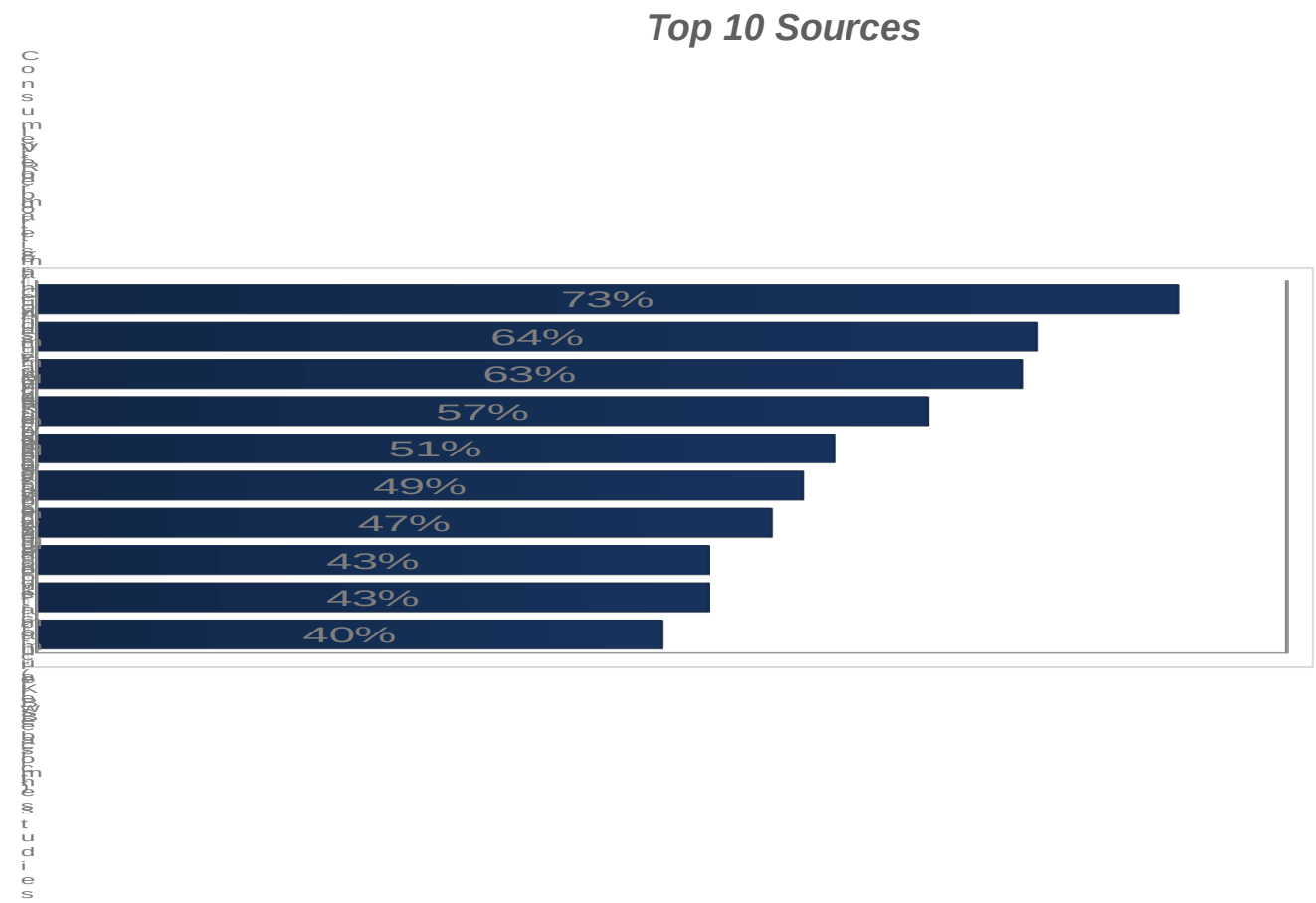
Fuel Economy Information

39% don't look for fuel economy information

Q22: When looking for information about new vehicles, what specific sources do you look to?
Q23: When looking for information about fuel or fuel economy, what specific sources do you look to?

When provided with a list of sources, Consumer Reports is a top source US drivers would turn to for fuel economy and alternative fuels information.

Partnering with and providing content to third party sources to help improve consumer fuel economy knowledge can help improve the reach of NHTSA's communications.

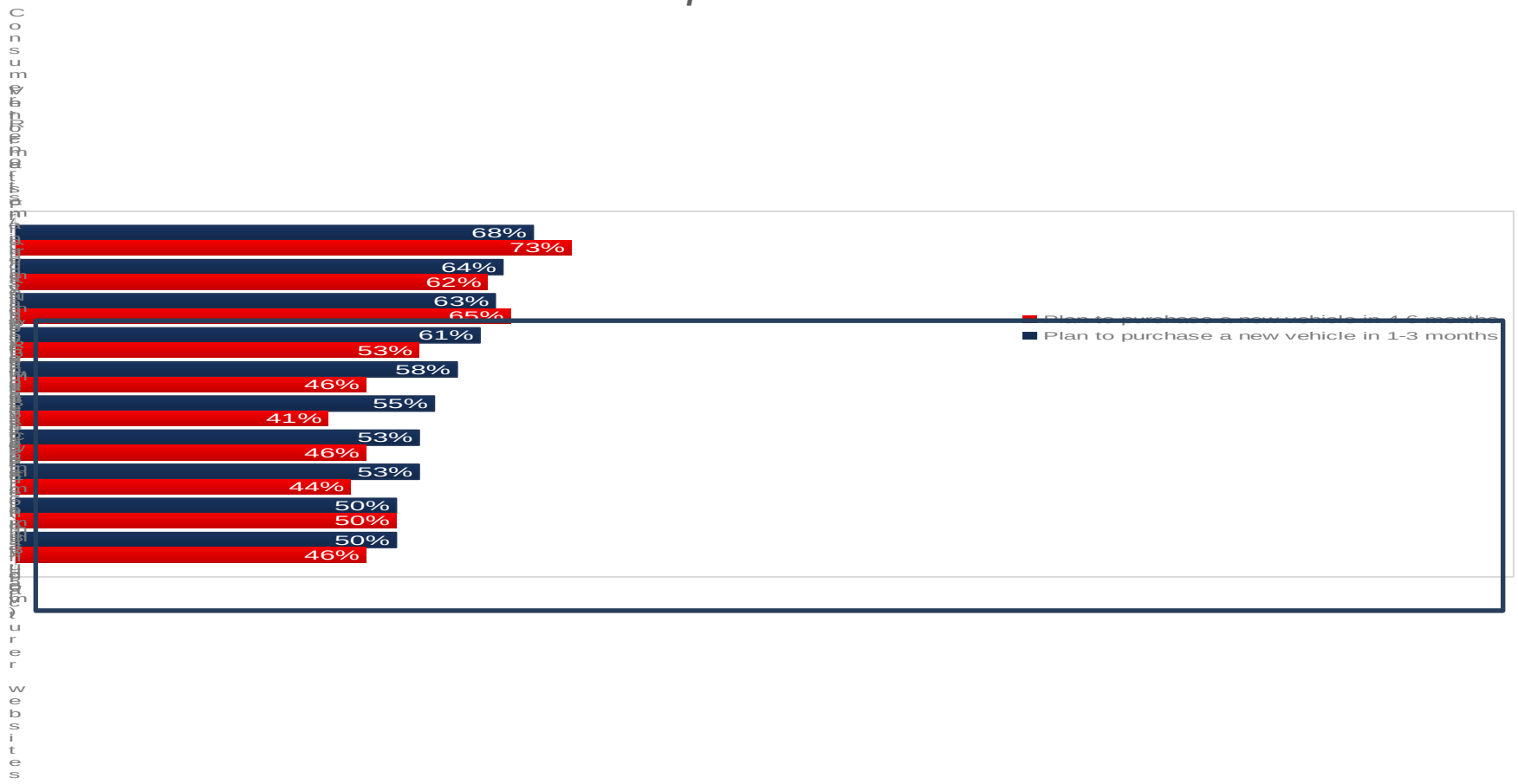


Q24: If you were looking for information on fuel economy or alternative fuels, would you be likely to use the following sources? *(Shown: % Yes)*

Other sources, like new car dealers, Edmunds.com and Cars.com, are more likely to be used by consumers who are currently considering buying a new vehicle as compare to the general US driver.

The closer consumers are to their new vehicle purchase, the more likely they are to be using these sources.

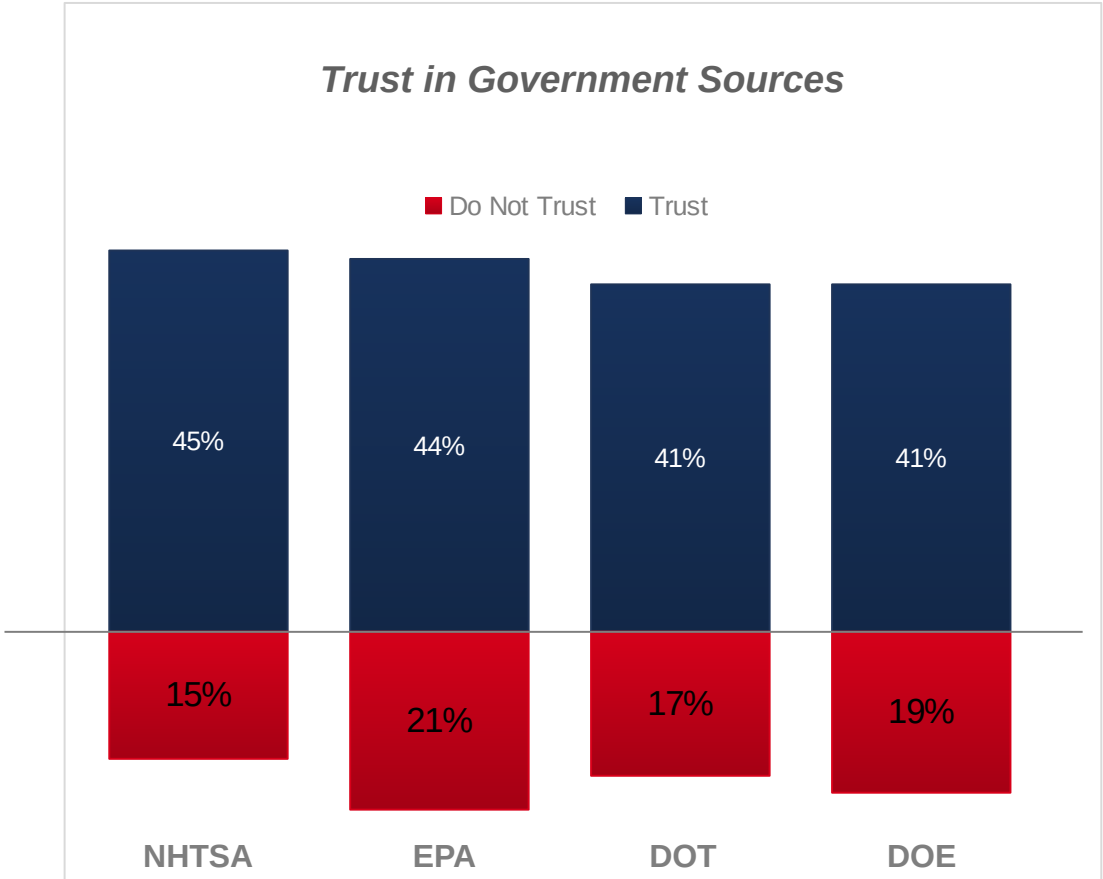
Top 10 Sources



Q24: If you were looking for information on fuel economy or alternative fuels, would you be likely to use the following sources? *(Shown: % Yes)*

Less than half of respondents trust government agencies to provide fuel economy and alternative fuels information.

Partnering with agencies and third party organizations may help to boost credibility of NHTSA as a source of this information.



Q25: How much would you say you trust the following government sources to provide you with information about fuel economy and alternative fuels? (*Shown: Top 2 Box %, Bottom 2 Box %)*

Q38: How credible do you believe SaferCar.gov is to provide you with this information?

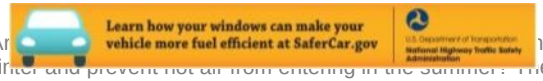
Ad Testing

In this study, we tested five animated banner advertisements. Respondents were randomly assigned one ad to evaluate first, then evaluated the remaining ads in random order. After viewing an ad, respondents were asked to rate it in terms of believability and uniqueness. We then evaluated whether the ad incited more or less interest in the topic covered. Finally, respondents rated the ad in terms of their likelihood to follow the call to action-visiting SaferCar.gov.

When looking at unbiased evaluations of the ads, 'driving behaviors' and 'thermal management technologies' perform best overall at inciting interest in the topic.

The thermal management technologies ad also performs well on uniqueness, which is understandable given the feedback from focus group participants that there are low levels of familiarity with these technologies.

**Note: Data displayed represents respondents who evaluated each ad first, unbiased.*

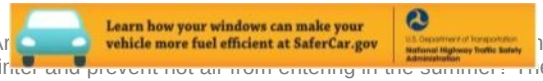
	*Unbiased Evaluations**			
	Believability *(Top 2 Box %)*	**Uniqueness** *(Top 2 Box %)*	**Interest in Topic**	**Likelihood to visit SaferCar.gov**
 "Su abits that can improve your vehicle's fuel economy by up to 33% at SaferCar.gov"	82%	59%	63%	44%
 "Re CO_2 emissions. Learn vehicle maintenance tips that can improve your fuel economy at SaferCar.gov"	75%	52%	52%	43%
 "Ar n the win be with energy efficient glass. Learn how your windows can make your vehicle more fuel efficient at SaferCar.gov"	52%	63%	57%	41%
 "Al l sou t alternative fuels at SaferCar.gov"	59%	51%	50%	46%
 "Ev ssions. Im environment. Learn how at SaferCar.gov"	59%	42%	46%	38%

Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about [this topic]? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar.gov after seeing this ad? *(Shown: Top 2 Box %)*

While most respondents found the ads to be believable, less than half are likely to visit SaferCar.gov after viewing the ads.

Creative, compelling advertising must address the motivations that are most likely to drive interest in these topics, like saving money, to encourage consumers to learn more.

**Note: Data displayed represents all respondents*

	Total Respondent Evaluations*			
	Believability *(Top 2 Box %)*	**Uniqueness** *(Top 2 Box %)*	**Interest in Topic**	**Likelihood to visit SaferCar.gov**
 "Su abits that can improve your vehicle's fuel economy by up to 33% at SaferCar.gov"	78%	54%	59%	47%
 "Re CO_2 emissions. Learn vehicle maintenance tips that can improve your fuel economy at SaferCar.gov"	79%	52%	58%	46%
 "Ar n the win be with energy efficient glass. Learn how your windows can make your vehicle more fuel efficient at SaferCar.gov"	58%	63%	55%	47%
 "Al l sou t alternative fuels at SaferCar.gov"	65%	52%	53%	45%
 "Ev ssions. Im environment. Learn how at SaferCar.gov	65%	44%	47%	41%

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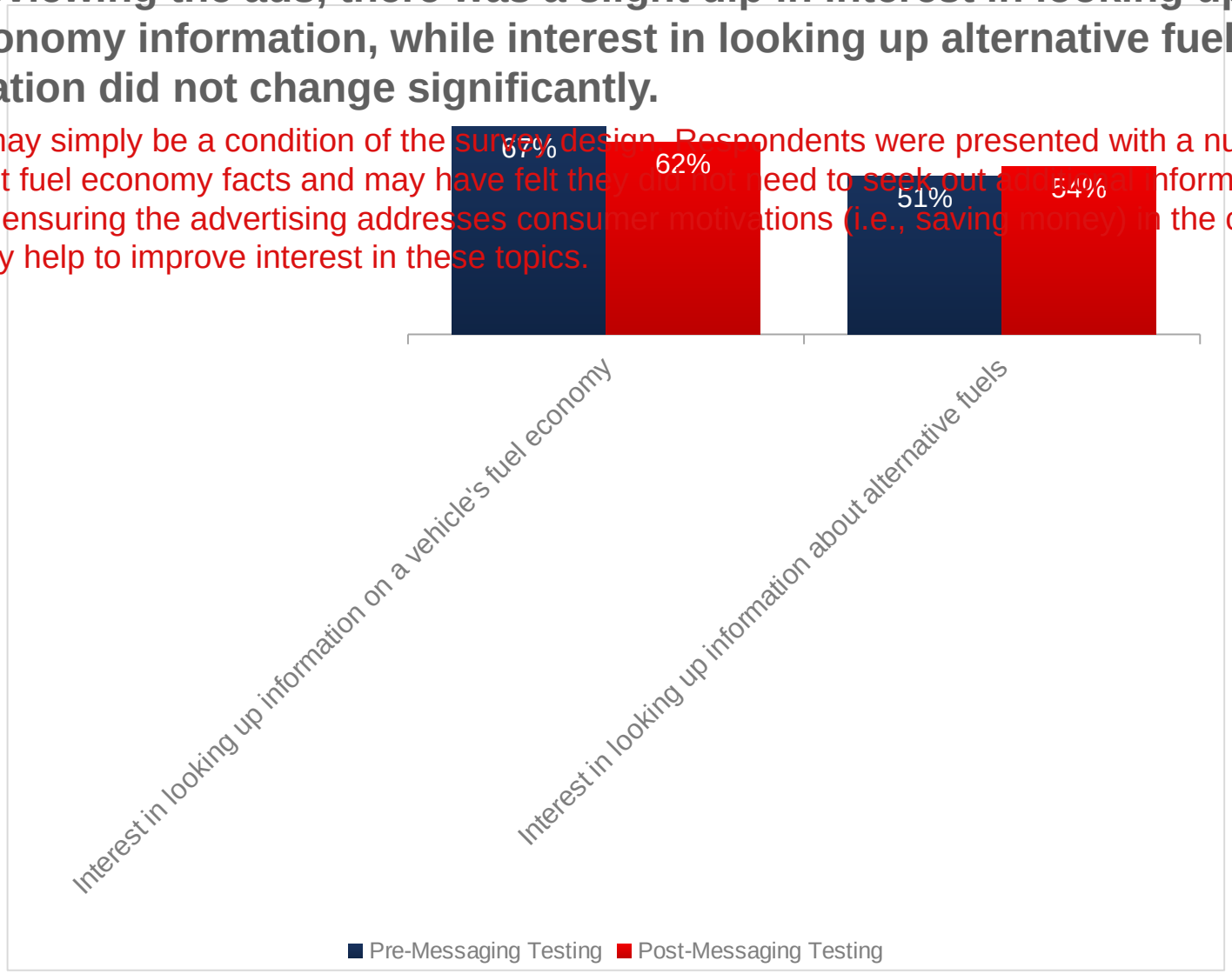
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar.gov after seeing this ad? *(Shown: Top 2 Box %)*

After reviewing the ads, there was a slight dip in interest in looking up fuel economy information, while interest in looking up alternative fuels information did not change significantly.

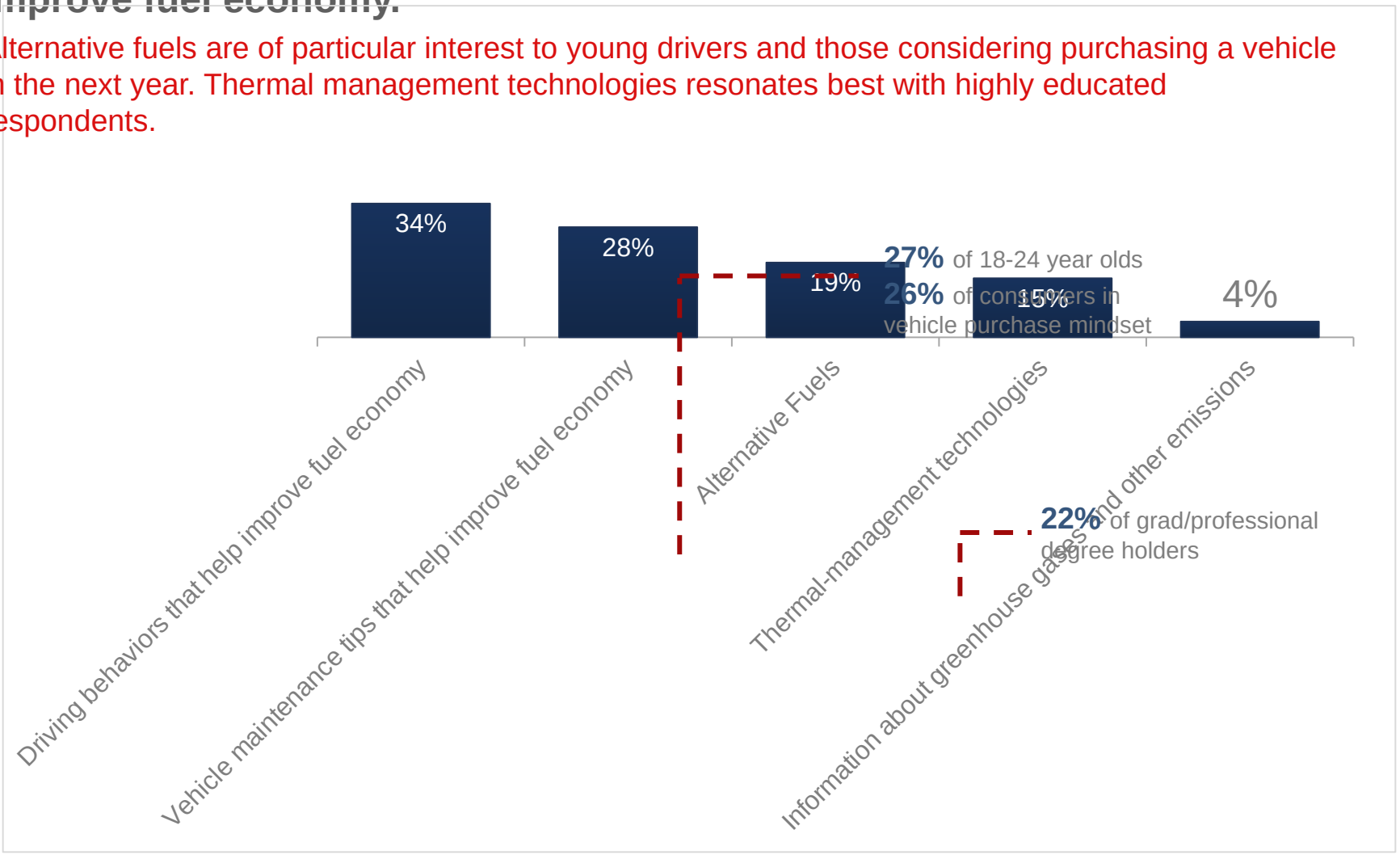
This dip may simply be a condition of the survey design. Respondents were presented with a number of different fuel economy facts and may have felt they did not need to seek out additional information. However, ensuring the advertising addresses consumer motivations (i.e., saving money) in the call to action may help to improve interest in these topics.



Q12: How interested are you in looking up information about ways to improve your current vehicle's fuel economy? *(Shown: Top 2 Box %)*
Q13: How interested are you in looking up information about alternative fuels that can be used to power passenger vehicles? *(Shown: Top 2 Box %)*
Q31: After seeing these ads, how interested are you in looking up information about ways to improve your vehicle's fuel economy? *(Shown: Top 2 Box %)*
Q32: After seeing these ads, how interested are you in looking up information about alternative fuels that can be used to power passenger vehicles? *(Shown: Top 2 Box %)*

Of all five topics covered in the advertisements, drivers are most interested in how their personal driving and maintenance habits can help improve fuel economy.

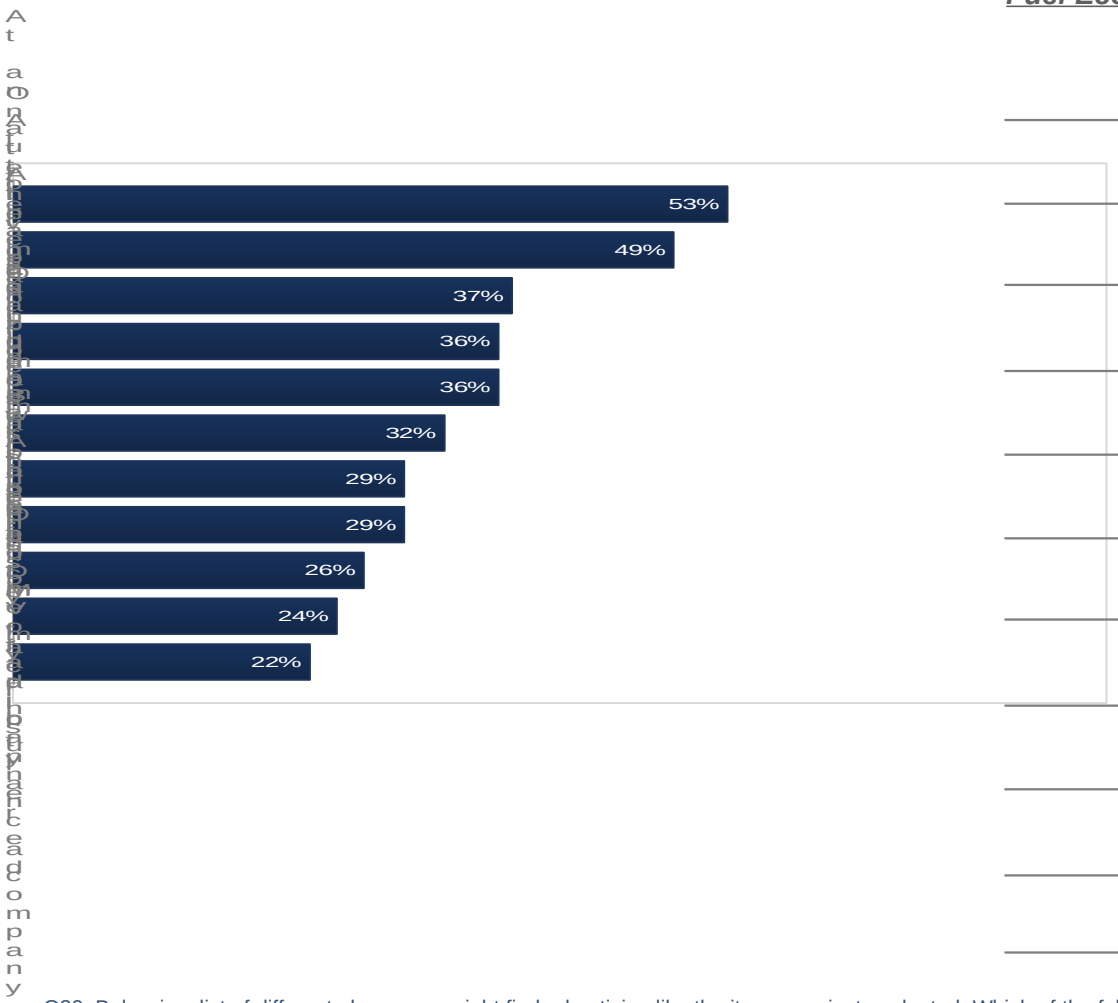
Alternative fuels are of particular interest to young drivers and those considering purchasing a vehicle in the next year. Thermal management technologies resonates best with highly educated respondents.



Q33: Which subject that is covered in these advertisements is most interesting to you personally?

As presented in the survey, respondents would be interested in seeing these advertisements on TV or at the gas pump.

Placing advertising in relevant locations can help NHTSA capture the attention of consumers while fuel economy is on their mind.



*Fuel Economy Movers**	*Alternative Fuel Movers**
62%	63%
60%	57%
44%	43%
46%	48%
47%	49%
38%	35%
34%	31%
40%	36%
28%	28%
27%	28%
28%	30%

Q39: Below is a list of different places you might find advertising like the items you just evaluated. Which of the following places are you interested in seeing or hearing advertising like this?

*"Movers" are defined as respondents who were more interested in looking up fuel economy information (Fuel Economy Movers) or alternative fuel information (Alternative Fuel Movers) after being exposed to the advertising.

INSIGHTS	ACTION
Consumers have general fuel economy knowledge, but are often misinformed about what they can be doing to improve their gas mileage.	• Ensure the website related to this initiative is populated with clear, easy to understand facts and tips. • Develop visual educational materials to clearly demonstrate what consumers can do to improve fuel economy.
When thinking about their vehicle's fuel economy or the alternative fuel options available, consumers are motivated by money savings.	• Communications for this campaign must focus on personal benefits, like dollars saved, in order to gain consumer attention. • Other benefits like environment and national dependence on oil can be used as supporting points in targeted communications.
Consumers are using third-party sources and web searches to obtain fuel economy information.	• To expand campaign reach and improve credibility, NHTSA should leverage existing relationships and build new partnerships with third party sources by sharing educational content. • NHTSA should also consider search engine optimization solutions to ensure the website where this content is held appears in consumer's web searches.
Fewer than half of consumers trust government agencies to provide fuel economy and alternative fuel information.	• Campaign content must use proven facts that consumers can trust. Citing research helps ensure transparency and can be useful for those consumers interested in learning more. • Partnering with other government agencies, like EPA, and third-party organizations in this education effort can help improve overall credibility.
Consumers are most interested in learning driver behaviors and vehicle maintenance tips.	• Leading the campaign with relevant quick tips that can be implemented immediately can help to capture consumer attention.

Moving Forward

1. Determine where relevant educational content will live.

- While SaferCar.gov is seen as a credible source of this information according to the quantitative study, focus group participants suggested that the URL is not intuitive for accessing fuel economy-related information. Instead, they suggested that FuelEconomy.gov would be a more likely source they would consult.

2. Develop compelling educational content.

- Develop visual, easily understood, educational web content that consumers can refer to when seeking information on these topics.
- Create supporting outreach materials, like engaging interactive online tools that can be shared with partners to reach consumers with relevant information.
- Present factual information to consumers that both highlights benefits and addresses perceived drawbacks of topics consumers are less familiar with, like alternative fuels.

3. Leverage and build partnerships to improve the reach of messaging.

- Leverage existing relationships NHTSA has built to distribute educational material.
- Explore potential inter-agency partnerships in educating consumers.
- Seek to build new relationships beyond government agencies to help improve credibility and trust.

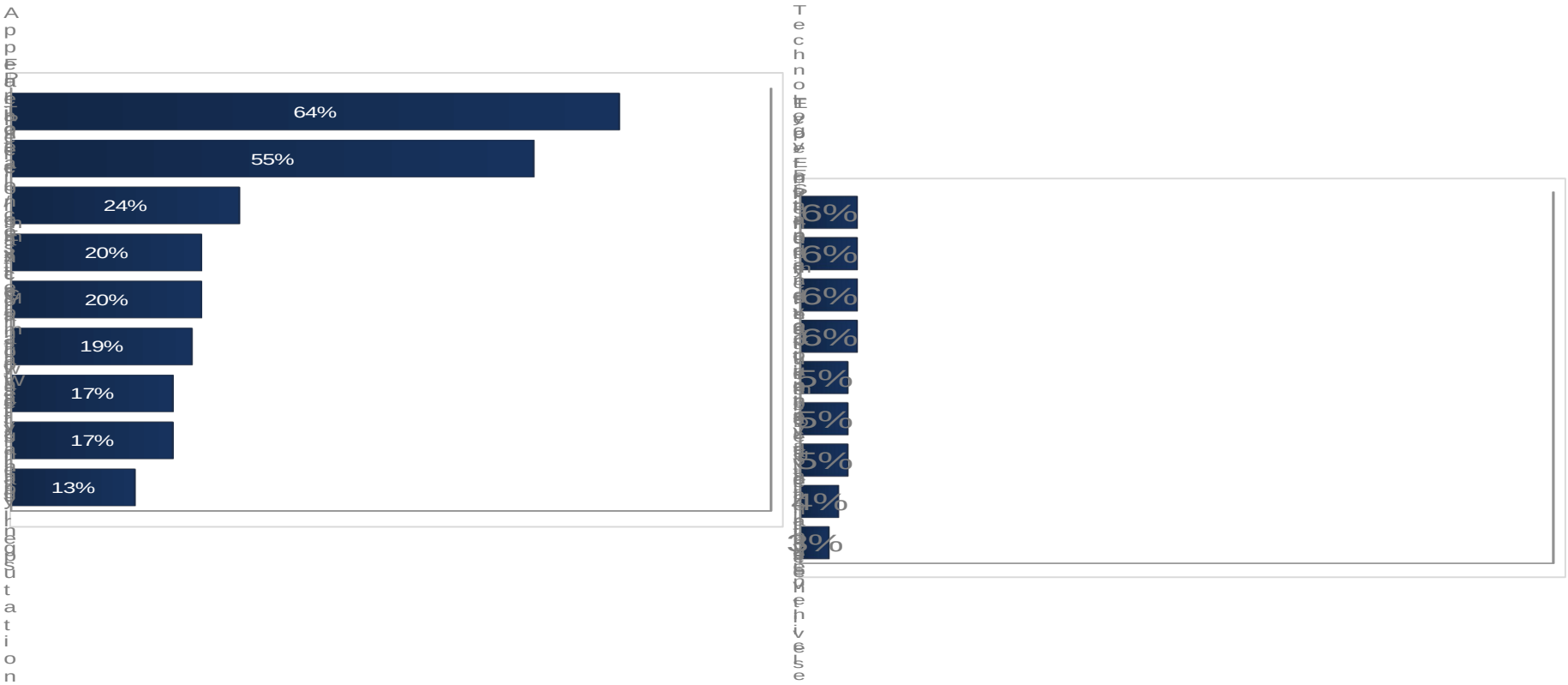
4. Create compelling advertising that can be placed in multiple channels.

- Tap into consumer motivations by using advertising to demonstrate ways consumers can save *money* by saving fuel.
- Focus the initial advertising campaign on those topics in which consumers are *most* interested, like driving behaviors and vehicle maintenance tips.
- Place advertising in relevant channels depending on the topic. This may include televisions spots, ads at the gas pump or banner ads on websites that consumers in the purchase mindset rely on.

Detailed Findings

While price is the most important factor when deciding which new vehicle to purchase, fuel economy is a close second.

Consumers are looking to save money and fuel economy is part of this value equation as gas prices soar.



INSIGHT TO ACTIO

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Fuel Economy

While most drivers generally understand that the way they drive has an impact on their vehicles' fuel economy, there are some misconceptions.

For many consumers, it is unclear whether parking in the shade on a hot day, opening the windows on the highway or idling helps or hinders their vehicle's fuel economy.

81% ***agree that the way they drive their vehicles can impact its fuel economy.***

Driver behaviors that improve fuel economy…

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Driver behaviors that hinder fuel economy…

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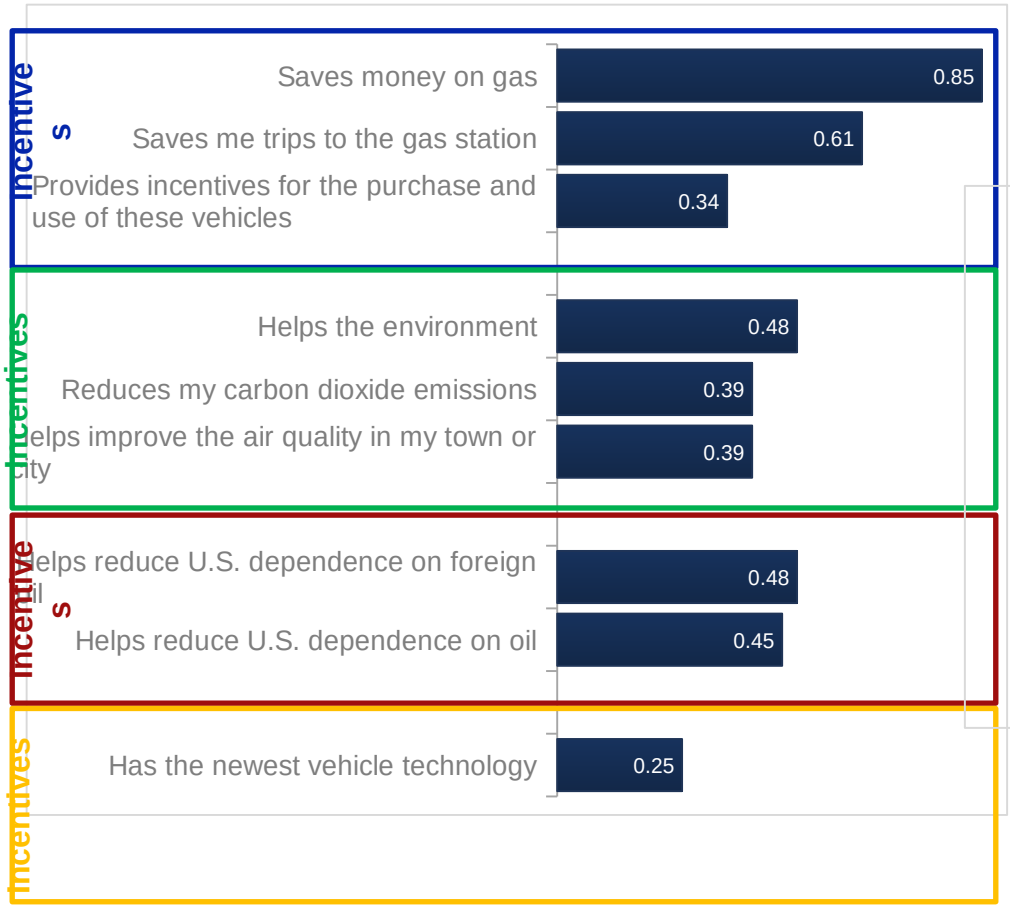
Q16: What impact does each behavior have on your vehicle's fuel economy? Does the behavior help you get more miles per gallon, cause you to get fewer miles per gallon, or does it have no impact on your vehicle's fuel economy?

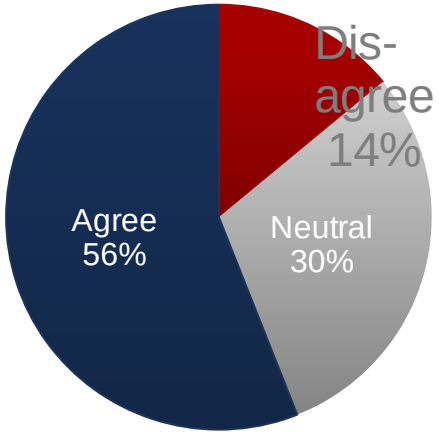
Personal incentives, like saving money on gas, are key reasons consumers may opt for a more fuel-efficient vehicle.

However, only slightly more than half believe that the upfront expense of a fuel-efficient vehicle can be recouped by saving money and the pump.

Reasons to purchase a more fuel efficient vehicle…



The upfront expense of a fuel-efficient vehicle can be recouped by saving money at the pump



Q15: Imagine you are purchasing a vehicle and have narrowed your choice to two vehicles. One vehicle has better fuel economy (i.e. more miles per gallon) than the other vehicle. Which of the following factors would motivate you to purchase the more fuel efficient vehicle?
Q21: If you were to consider purchasing a vehicle that can run on alternative fuels, which of the following factors would motivate you to purchase?

While saving money is the top factor to consider in their purchase decision, other factors are important to certain target groups.

Environmental benefits are more likely to resonate with younger consumers, while reducing national dependence on oil resonates with older consumers.

Reasons to purchase a more fuel efficient vehicle…

	18-24	25-34	35-44	45-54	55-64	65+
Saves money on gas	84%	79%	86%	85%	88%	86%
Helps to environment	56%	49%	46%	47%	46%	46%
Reduces my carbon dioxide emissions	45%	35%	38%	40%	37%	42%
Helps reduce U.S. dependence on foreign oil	40%	42%	45%	44%	56%	56%
Helps reduce U.S. dependence on oil	43%	41%	39%	44%	52%	50%

Q15: Imagine you are purchasing a vehicle and have narrowed your choice to two vehicles. One vehicle has better fuel economy (i.e. more miles per gallon) than the other vehicle. Which of the following factors would motivate you to purchase the more fuel efficient vehicle?

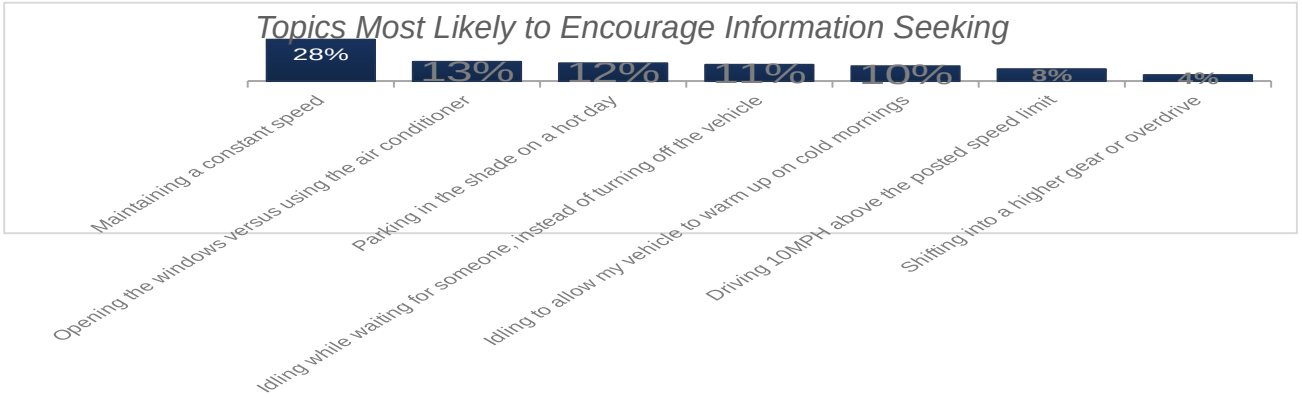
Compared to other topics presented in the ads tested within this study, US drivers are most interested in hearing about driving behaviors that can help improve their own fuel economy.

With 'vehicle maintenance tips' a close second, it is clear consumers are looking for quick, relevant tips that they can immediately implement.

Driver Behaviors

34%

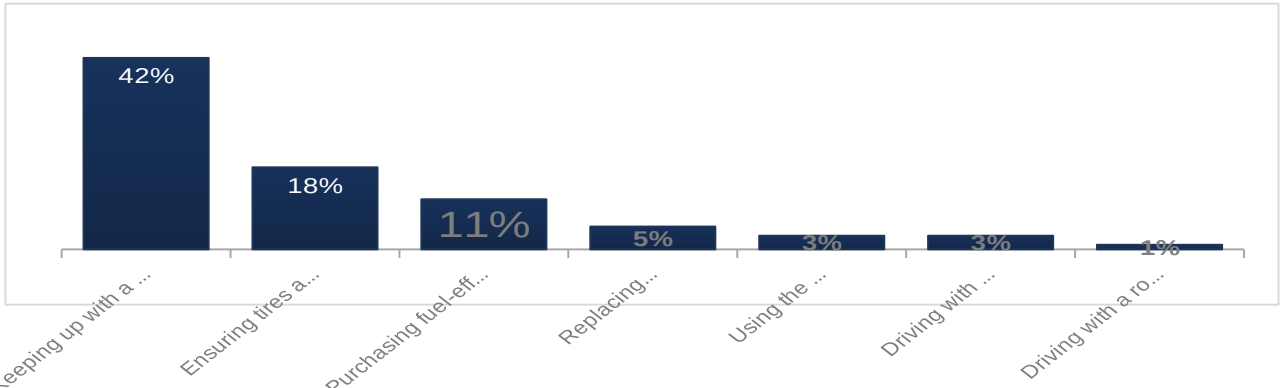
of drivers surveyed are most interested in hearing about **driving behaviors** that help improve fuel economy



Vehicle Maintenance

28%

of drivers surveyed are most interested in hearing **vehicle maintenance tips** that help improve fuel economy



Q33: Which subject that is covered in these advertisements is most interesting to you personally?

Q34: Which ONE of the following topics is most likely to encourage you to look for more information about driving behaviors that help improve fuel economy?

Q35: Which ONE of the following topics is most likely to encourage you to look for more information about maintenance tips that help improve fuel economy?

In addition to being the most interesting topic presented, the 'driver behaviors' ad increases interest in the topic among nearly two-thirds of respondents who saw the ad first, before any other ads.

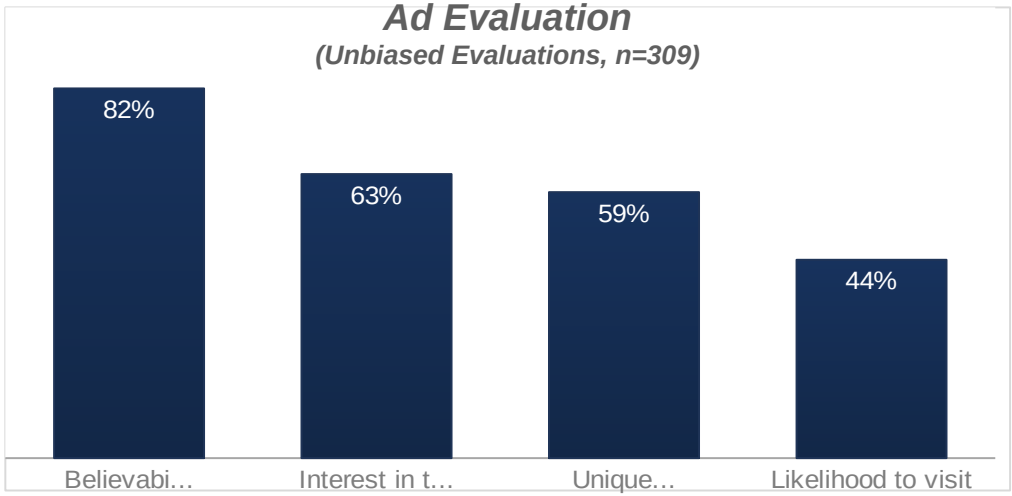
Driver Behavior Advertisement

What is this ad trying to communicate?

(Unbiased Evaluations, n=309)

Ad Evaluation

(Unbiased Evaluations, n=309)



Q26: What do you think this advertisement is trying to communicate to you? *(Shown: Word cloud demonstrating responses from those who saw this ad first)*
Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about driver behaviors that help improve fuel economy? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar,gov after seeing this ad? *(Shown: Top 2 Box %)*

While respondents believe the information presented in the 'vehicle maintenance' ad, only about half of respondents who saw this ad first feel it is unique and increases their interest in the topic.

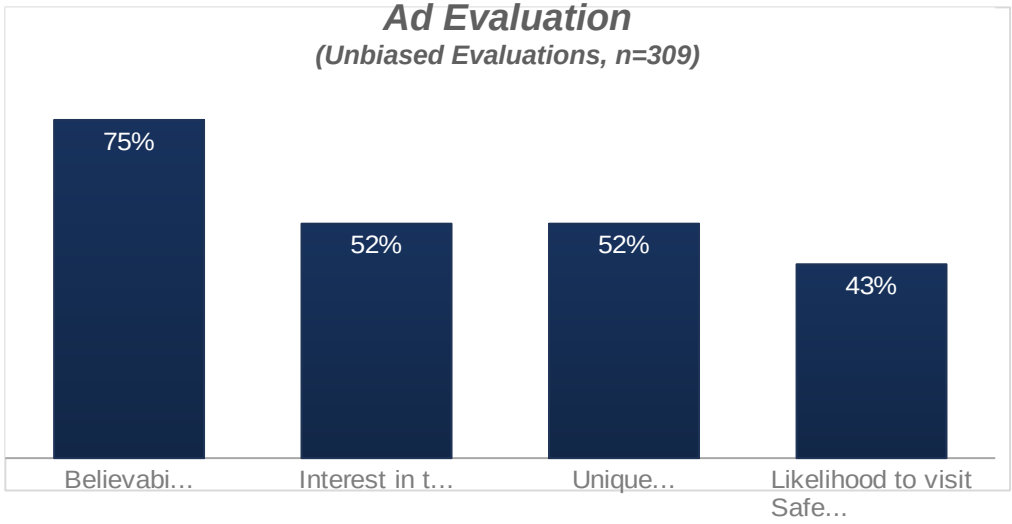
Vehicle Maintenance Advertisement

What is this ad trying to communicate?

(Unbiased Evaluations, n=309)

Ad Evaluation

(Unbiased Evaluations, n=309)

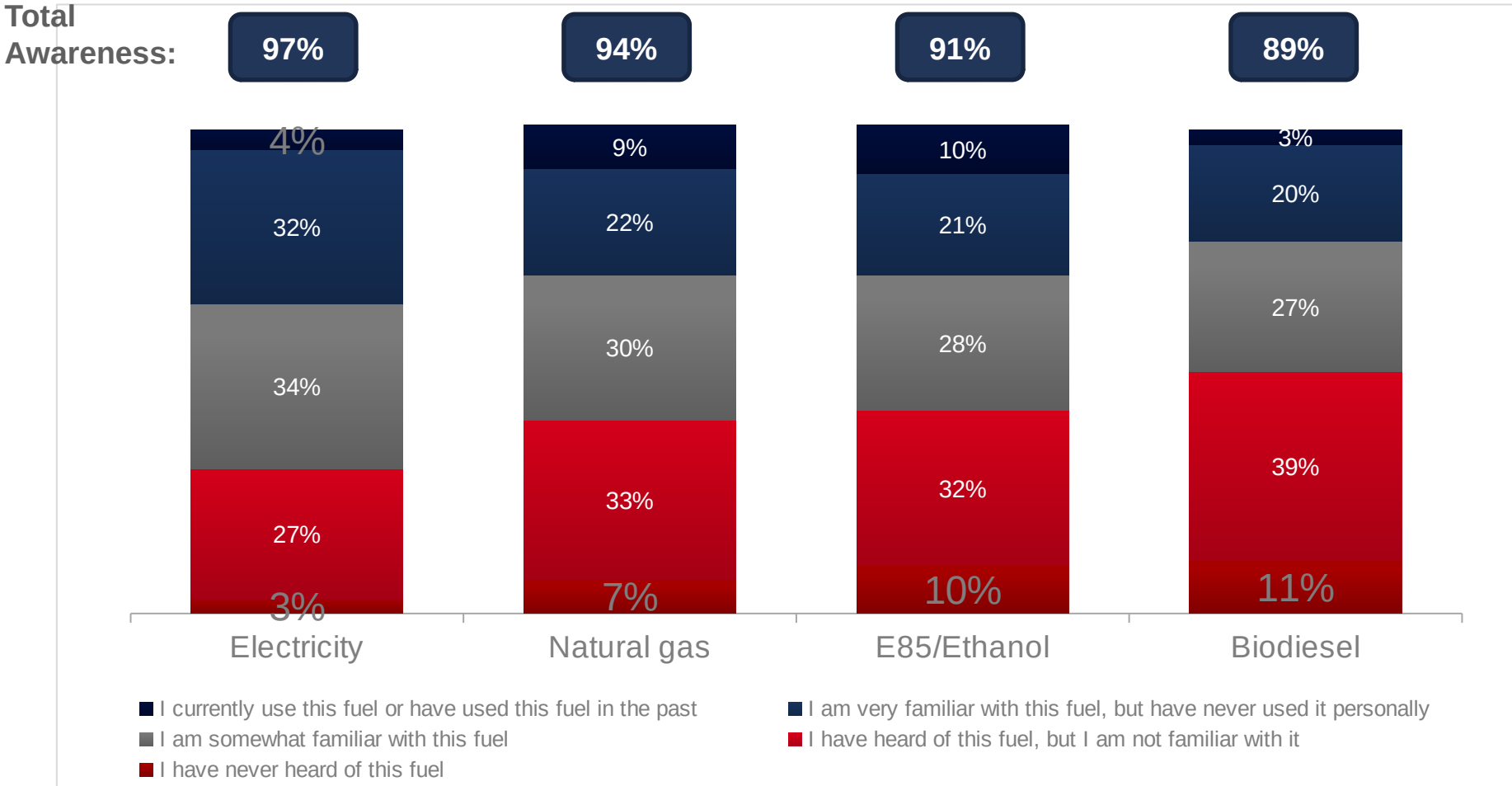


Q26: What do you think this advertisement is trying to communicate to you? *(Shown: Word cloud demonstrating responses from those who saw this ad first)*
Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about vehicle maintenance tips that help improve fuel economy? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar,gov after seeing this ad? *(Shown: Top 2 Box %)*

Alternative Fuels

While drivers are aware of the alternative fuels tested, there is a gap between awareness and familiarity levels.

Few consumers are currently using these alternative fuels in their vehicles.



Q17: How familiar are you with the following alternative fuels that can be used to power vehicles?

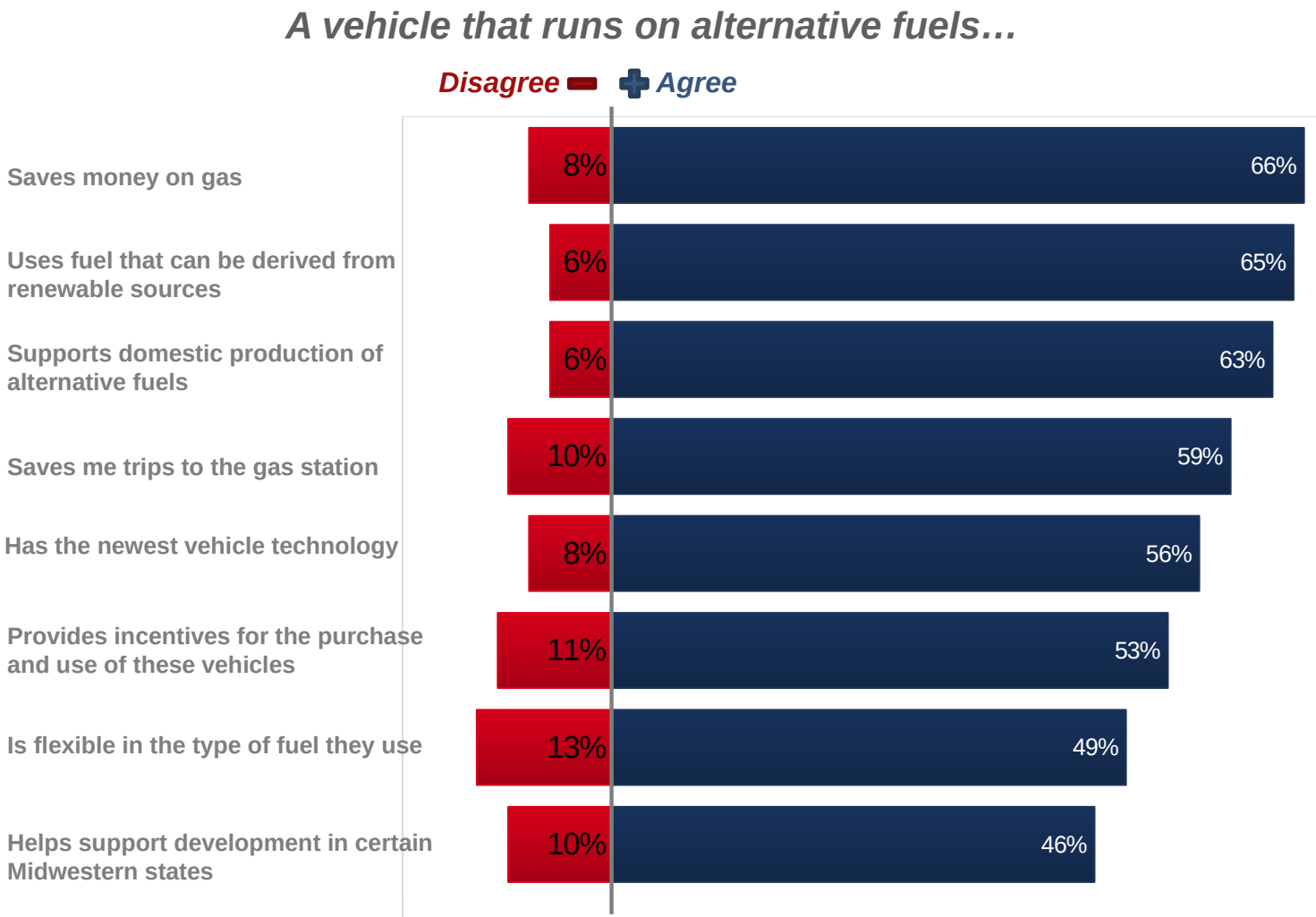
Consumers are receiving conflicting information about the benefits and drawbacks of alternative fuels.

Electricity, unlike the other fuels included in this study, is more likely to have drawbacks associated with its use.

	Benefits	Drawbacks
Electricity (n=306) **43%** named benefits **63%** named drawbacks		
Natural Gas (n=306) **37%** named benefits **30%** named drawbacks		
E85/Ethanol (n=306) **45%** named benefits **38%** named drawbacks		
Biodiesel (n=308) **39%** named benefits **24%** named drawbacks		

Q18: What have you heard about the benefits and/or drawbacks of using [ethanol/biodiesel/electricity/natural gas] to power a vehicle?

Despite the drawbacks they have heard, drivers generally agree that a vehicle running on alternative fuels has personal, environmental and national incentives.

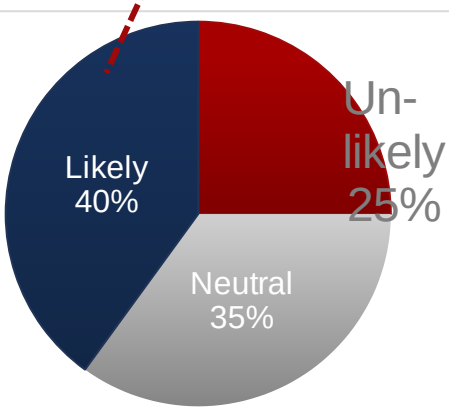


Q19: Thinking about alternative fuels, how much do you agree or disagree with the following statement about a vehicle that can run on an alternative fuel? *(Shown: Top 2%% Box, Bottom 2% Box)*

Personal incentives, like saving money and trips to the gas station are the key factors encouraging consumers to consider alternative fuel vehicles.

Likelihood to consider purchasing an alternative fuel vehicle

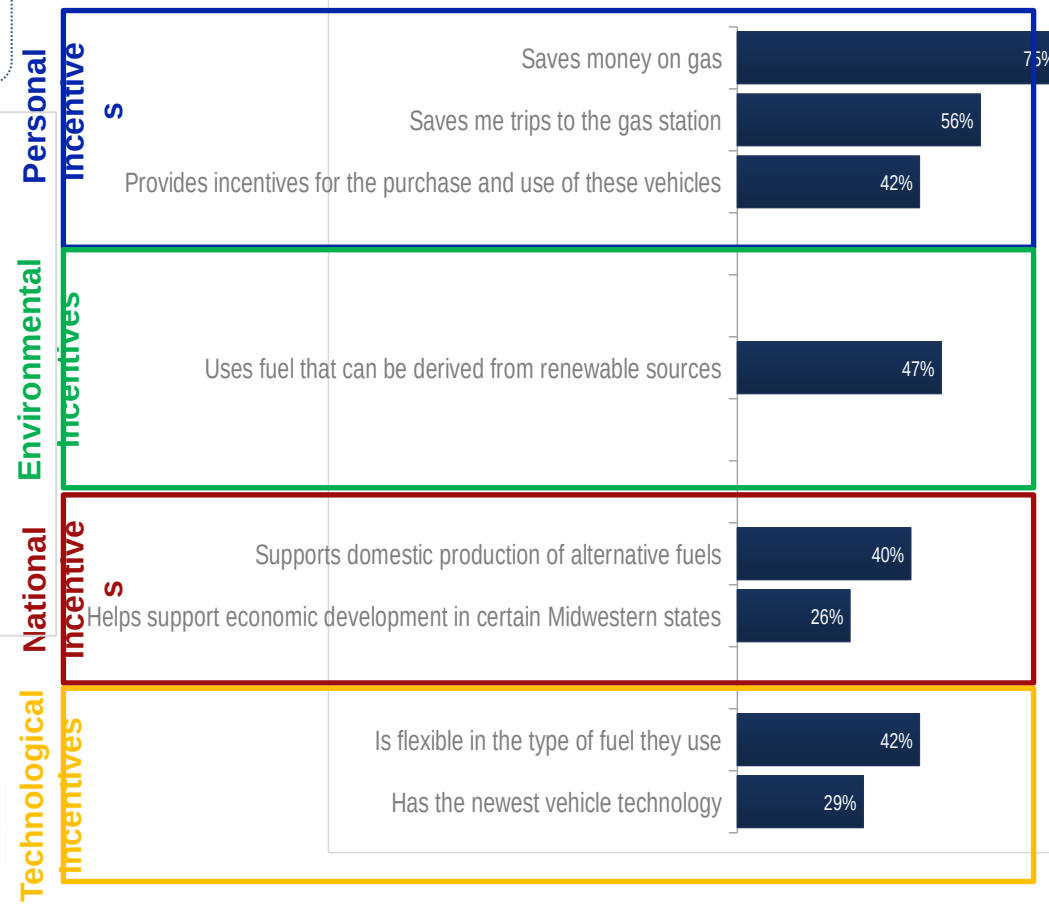
49% *of consumers who* ***plan to purchase a vehicle within the next year*** *are likely to consider an alternative fuel vehicle*



Likelihood to consider an alternative fuel vehicle, by age:

18-24……	55%
25-34……	53%
35-44……	43%
45-54……	34%
55+……	30%

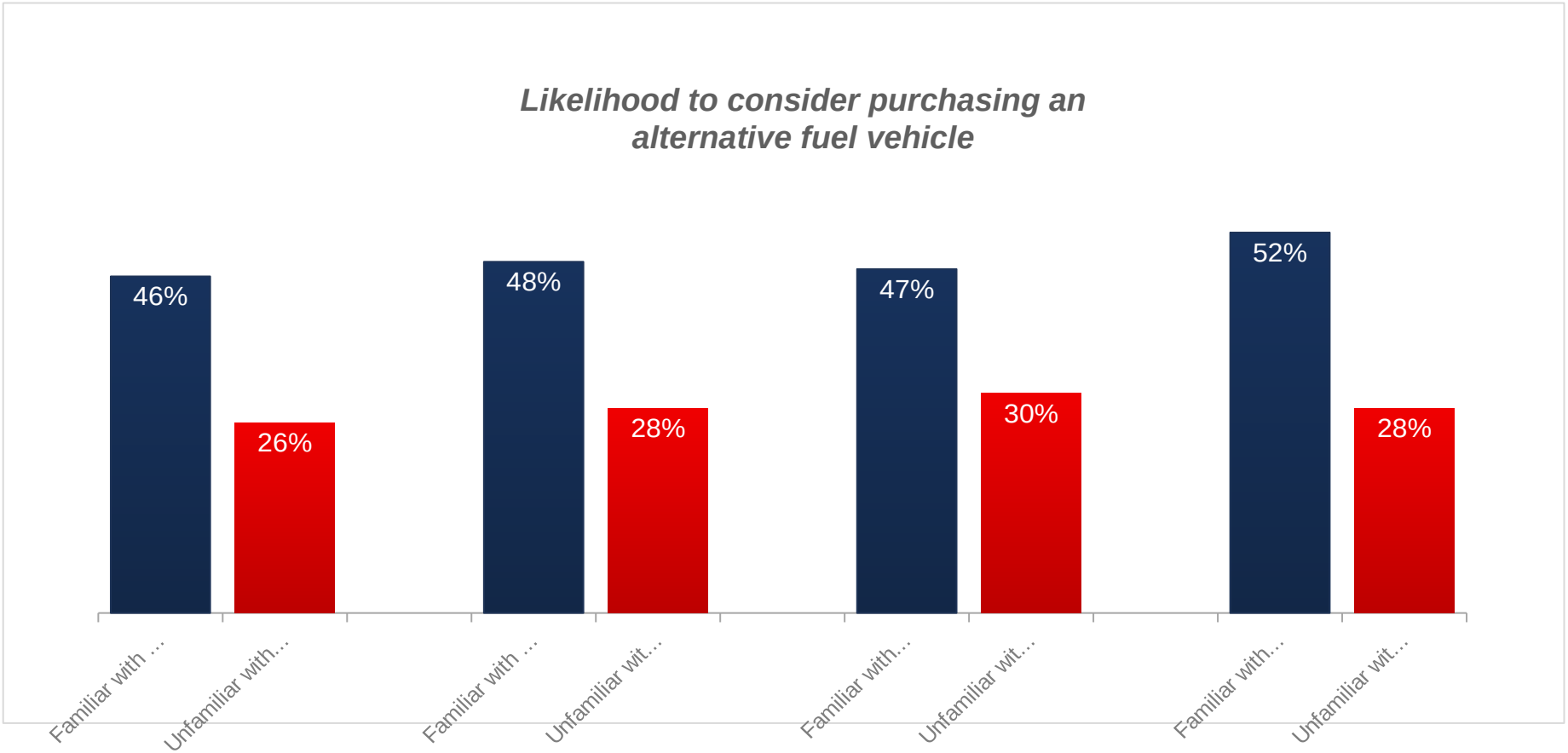
Reasons to purchase an alternative fuel vehicle…



Q20: For your next vehicle purchase, how likely are you to consider purchasing a vehicle that is able to run on an alternative fuel? *(Text Box Shows Top 2 Box % for those consumers who plan to purchase a vehicle in the next 12 months (n=484))*

Q21: If you were to consider purchasing a vehicle that can run on alternative fuels, which of the following factors would motivate you to purchase?

In addition to these benefits, simply increasing familiarity with these fuels may have an impact on consideration.



Q20: For your next vehicle purchase, how likely are you to consider purchasing a vehicle that is able to run on an alternative fuel? (Shown: Top 2 Box %)

Of the topics covered in the ads tested in this study, about one in five consumers are most interested in hearing about alternative fuels.

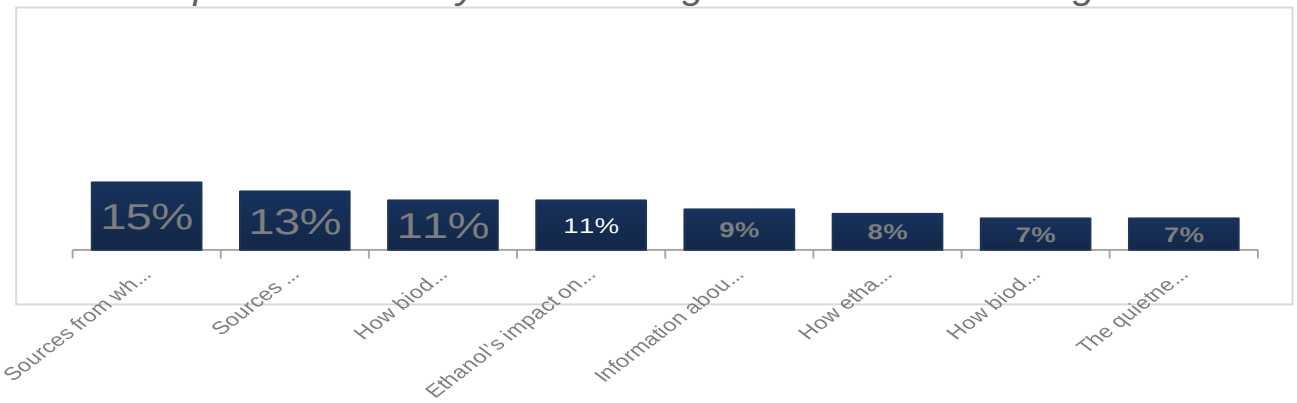
This topic is especially interesting to young consumers and high income consumers as well as consumers who are considering a new vehicle purchase in the next year.

Alternative Fuels

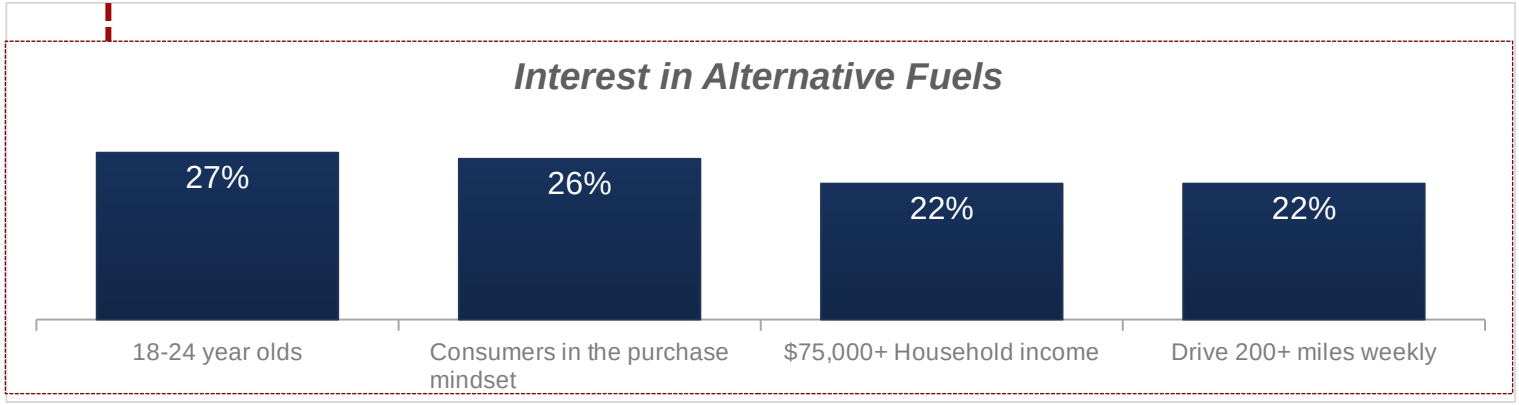
19%

of drivers surveyed are most interested in hearing about **alternative fuels** that help improve fuel economy

Topics Most Likely to Encourage Information Seeking



Interest in Alternative Fuels



Q33: Which subject that is covered in these advertisements is most interesting to you personally?
Q37: Which ONE of the following topics is most likely to encourage you to look for more information about alternative fuels?

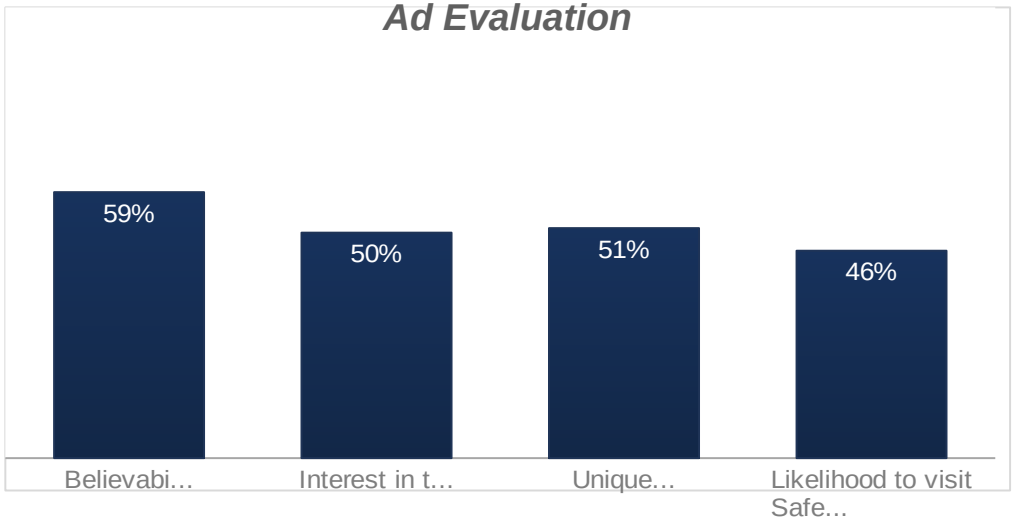
The ‘alternative fuels’ ad tested is slightly less believable than those ads about driving behaviors and vehicle maintenance.

Alternative Fuels Advertisement

What is this ad trying to communicate?

(Unbiased Evaluations, n=309)

Ad Evaluation

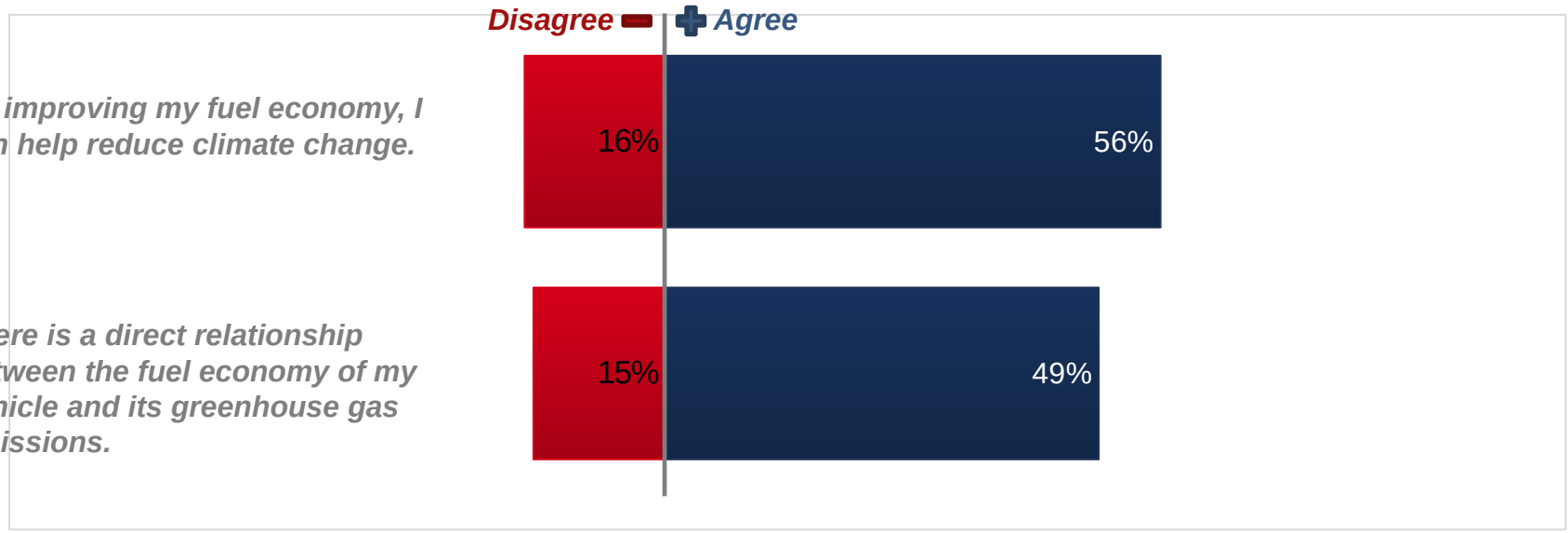


Q26: What do you think this advertisement is trying to communicate to you? *(Shown: Word cloud demonstrating responses from those who saw this ad first)*
Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about alternative fuels? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you’ve seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar,gov after seeing this ad? *(Shown: Top 2 Box %)*

Greenhouse Gases and Other Emissions

About half of drivers understand that there is a correlation between a vehicle's fuel economy and its greenhouse gas emissions.

They are more likely to understand that by improving fuel economy, they can do their part to help reduce climate change.



Q14: How much do you agree or disagree with the following statements? *(Shown: Top 2 Box %, Bottom 2 Box %)*

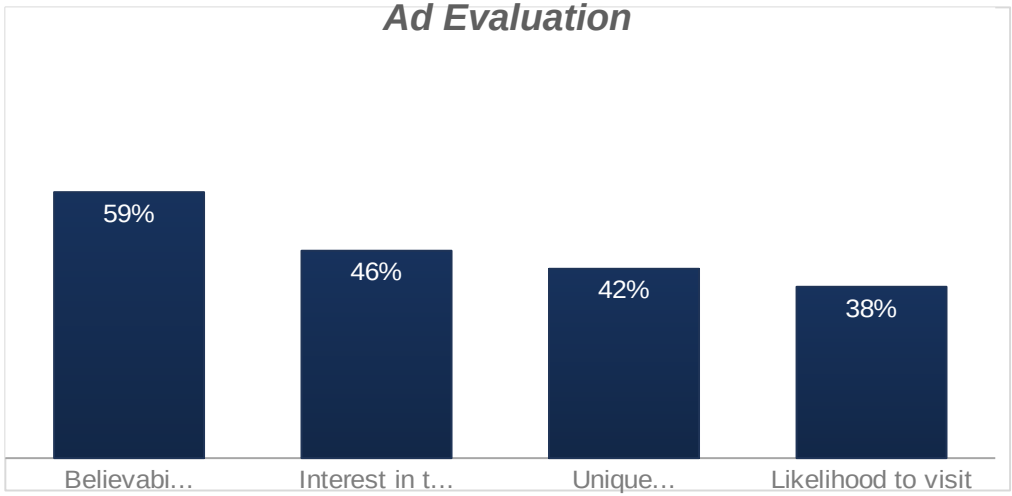
The greenhouse gas advertisement does not perform as well as other ads, particularly in terms of driving interest in the topic.

Greenhouse Gas Emissions Advertisement

What is this ad trying to communicate?

(Unbiased Evaluations, n=309)

Ad Evaluation



Q26: What do you think this advertisement is trying to communicate to you? *(Shown: Word cloud demonstrating responses from those who saw this ad first)*
Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about greenhouse gasses and other emissions? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar,gov after seeing this ad? *(Shown: Top 2 Box %)*

Thermal Management Technologies

Few respondents select thermal management technologies as the topic they are most interested in.

Consumers with high education levels are more likely to be interested in hearing about these technologies.

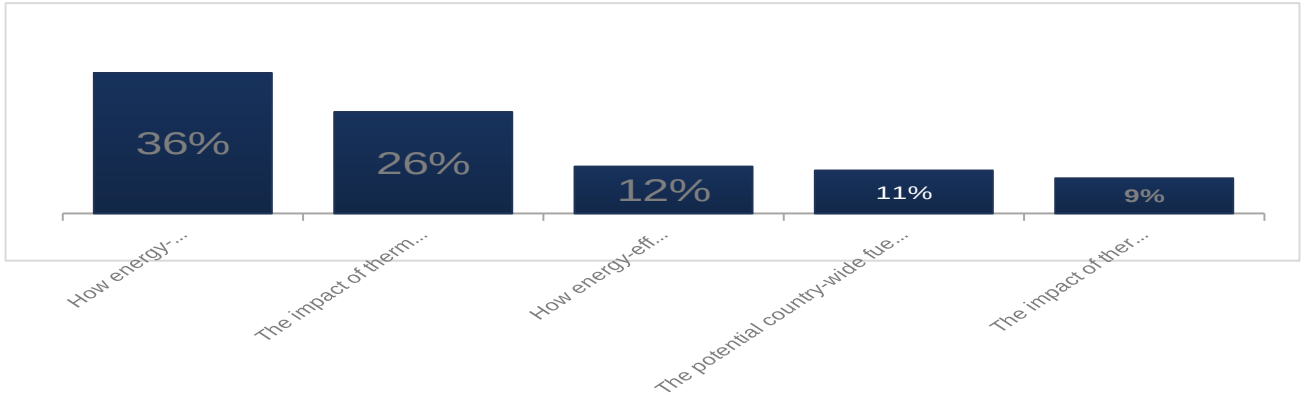
Thermal Management Technologies

15%

of drivers surveyed are most interested in hearing about **thermal management technologies** that help improve fuel economy

22% of grad/professional degree holders are most interested in the topic of thermal management technologies

Topics Most Likely to Encourage Information Seeking



Q33: Which subject that is covered in these advertisements is most interesting to you personally?
Q37: Which ONE of the following topics is most likely to encourage you to look for more information about thermal management technologies?

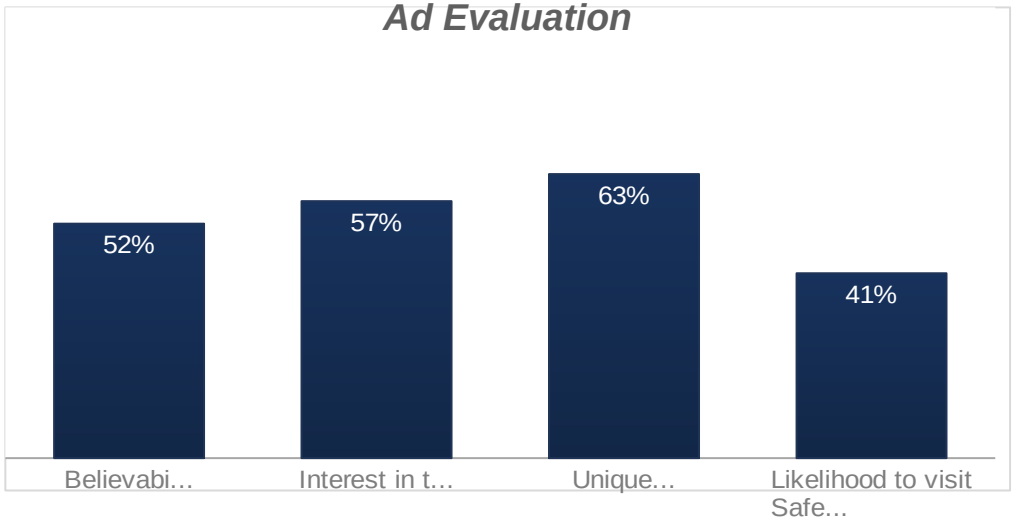
While thermal management technologies was not a topic of particular interest to most respondents, most respondents feel the energy-efficient glass advertisement is unique.

Thermal Management Technologies Advertisement

What is this ad trying to communicate?

(Unbiased Evaluations, n=309)

Ad Evaluation



Q26: What do you think this advertisement is trying to communicate to you? *(Shown: Word cloud demonstrating responses from those who saw this ad first)*
Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about thermal technologies, like energy-efficient glass? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar,gov after seeing this ad? *(Shown: Top 2 Box %)*

Communication Channels

When looking for information regarding new vehicles and fuel economy, most turn to the Internet – both general searches and manufacturer websites – as well as third party publications like Consumer Reports.

New Vehicle Information

***27%** don't look for new vehicle information*

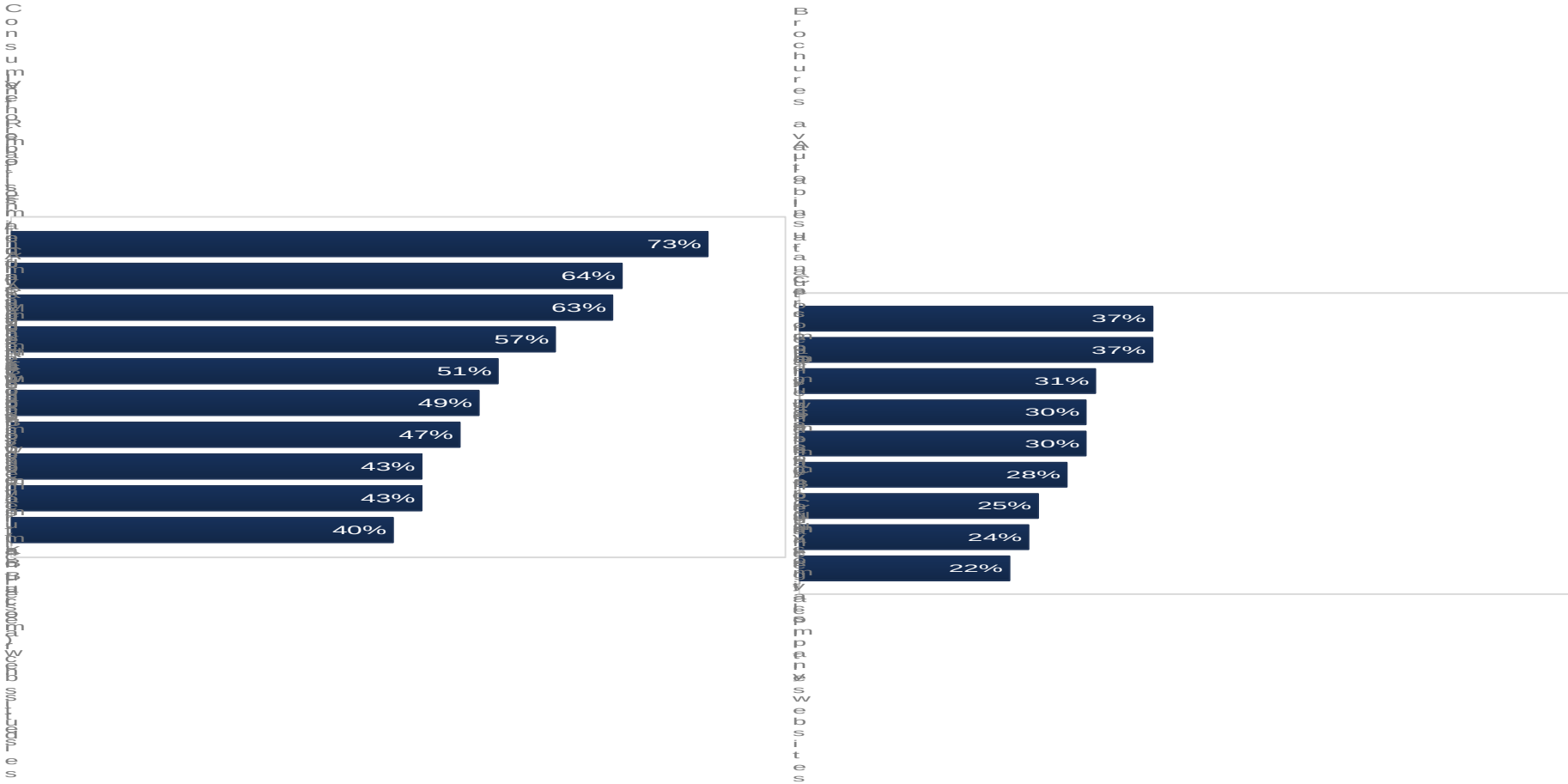
Fuel Economy Information

***39%** don't look for fuel economy information*

Q22: When looking for information about new vehicles, what specific sources do you look to?
Q23: When looking for information about fuel or fuel economy, what specific sources do you look to?

When provided with a list of sources, Consumer Reports is the top source US drivers would turn to in order to learn more about fuel economy and alternative fuels.

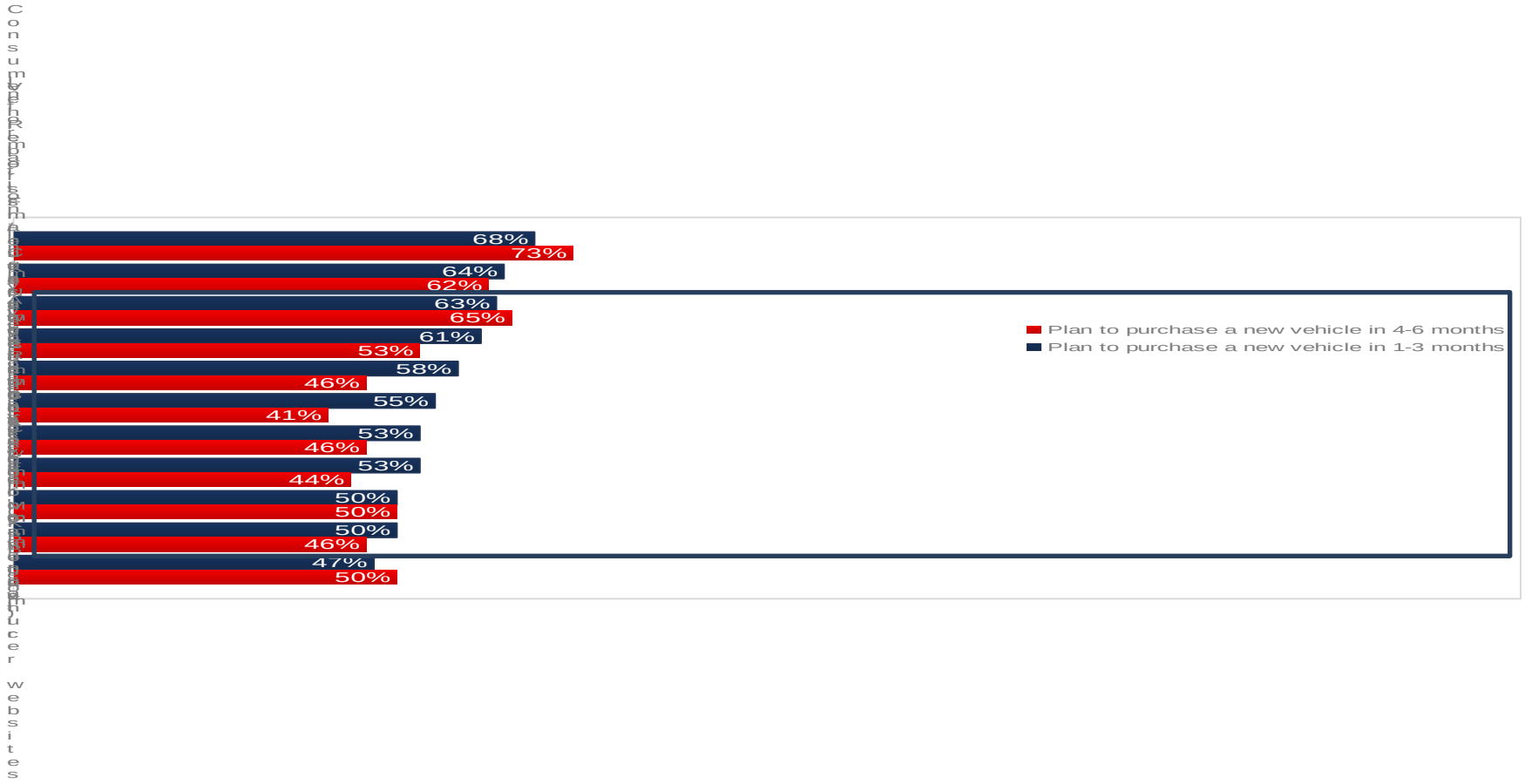
Manufacturer websites as well as family and friends are also among the top sources.



Q24: If you were looking for information on fuel economy or alternative fuels, would you be likely to use the following sources?

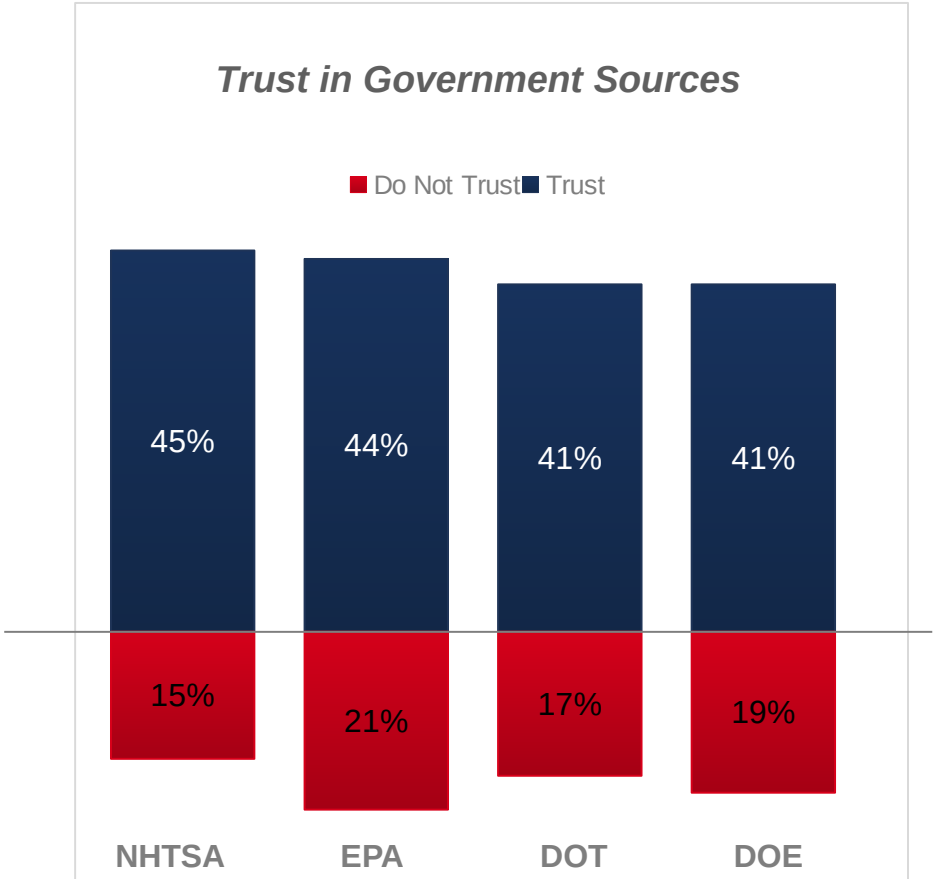
Consumers currently in the vehicle purchase mindset are more likely to look to new vehicle websites like Edmunds and Cars.com than drivers in general.

This group is also likely to be speaking with car dealers rather than mechanics.



Q24: If you were looking for information on fuel economy or alternative fuels, would you be likely to use the following sources? *(Shown: % Yes)*

Less than half of respondents trust government agencies to provide fuel economy and alternative fuels information. However, after seeing the advertising, two-thirds believe SaferCar.gov can be a credible source.



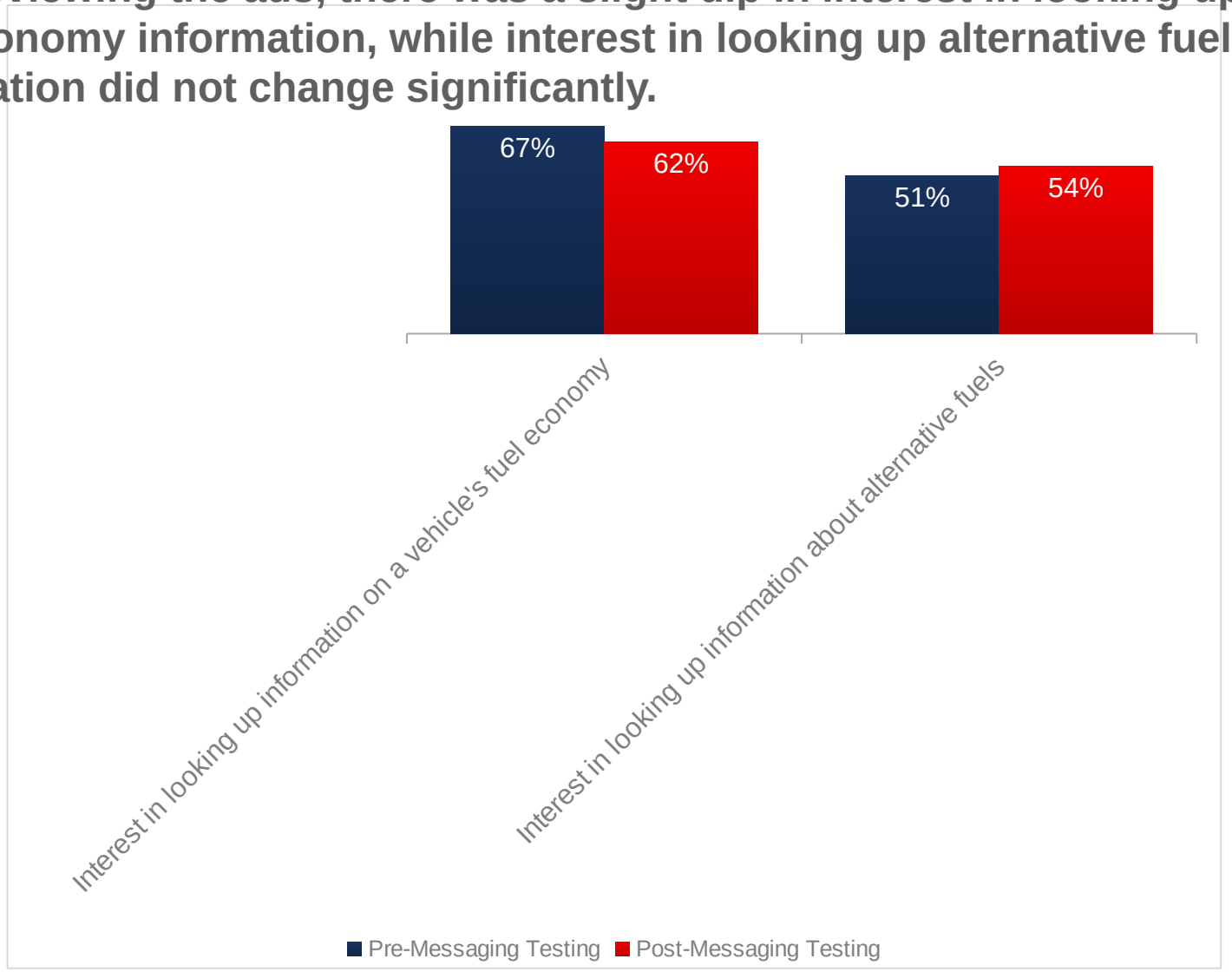
***67%** believe SaferCar.gov is a credible source for fuel economy and alternative fuel information.*

Q25: How much would you say you trust the following government sources to provide you with information about fuel economy and alternative fuels?
(*Shown: Top 2 Box %, Bottom 2 Box %)*
Q38: How credible do you believe SaferCar.gov is to provide you with this information?

Advertising Evaluations

INSIGHT TO ACTIO

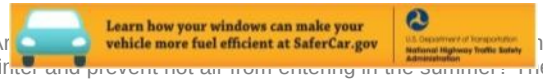
After reviewing the ads, there was a slight dip in interest in looking up fuel economy information, while interest in looking up alternative fuels information did not change significantly.



Q12: How interested are you in looking up information about ways to improve your current vehicle's fuel economy? *(Shown: Top 2 Box %)*
Q13: How interested are you in looking up information about alternative fuels that can be used to power passenger vehicles? *(Shown: Top 2 Box %)*
Q31: After seeing these ads, how interested are you in looking up information about ways to improve your vehicle's fuel economy? *(Shown: Top 2 Box %)*
Q32: After seeing these ads, how interested are you in looking up information about alternative fuels that can be used to power passenger vehicles? *(Shown: Top 2 Box %)*

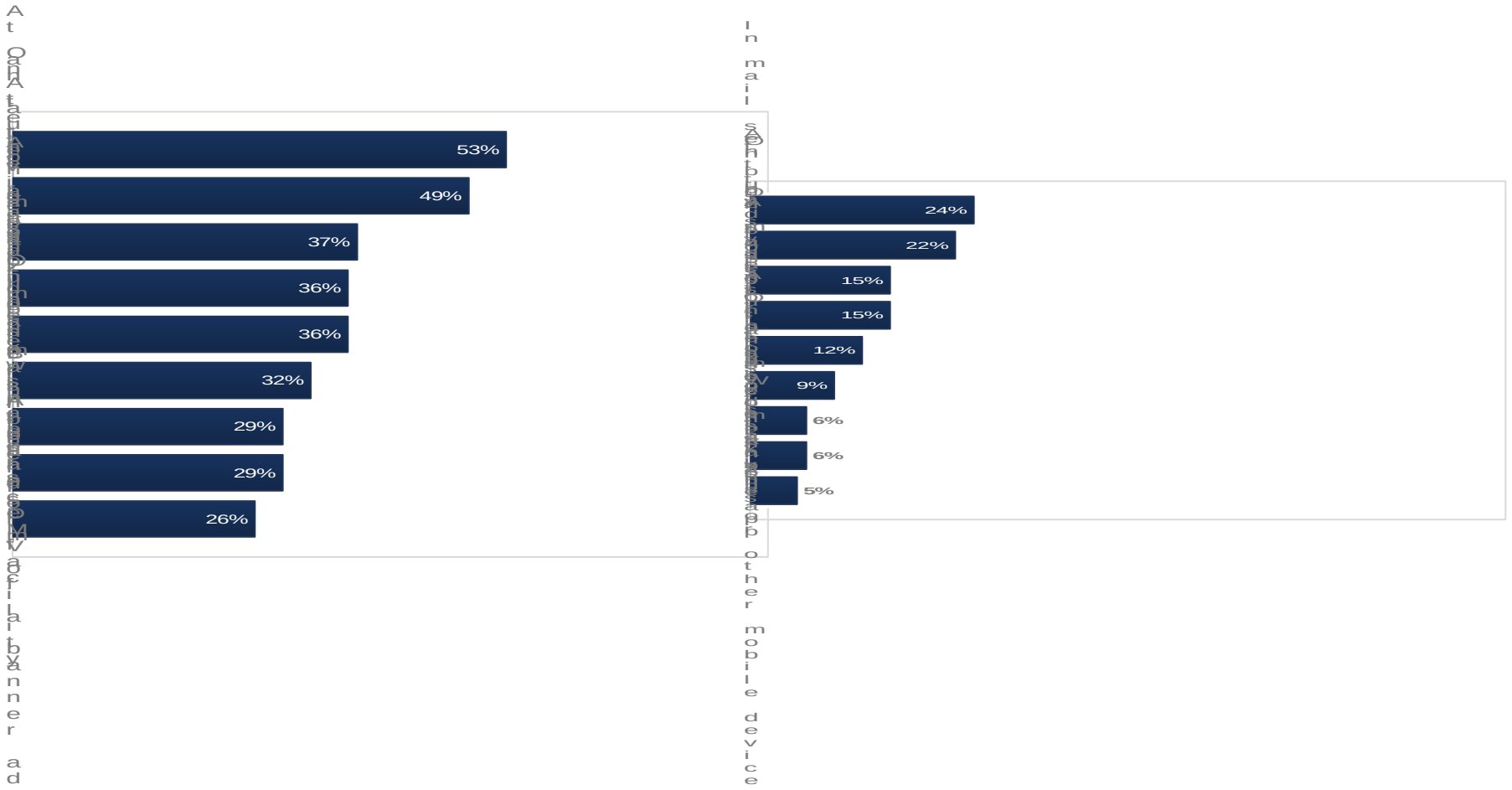
While most respondents found the ads to be believable, less than half are likely to visit SaferCar.gov after viewing the ads.

**Note: Data displayed represents all respondents*

	*Total Respondent Evaluations**			
	Believability *(Top 2 Box %)*	**Uniqueness** *(Top 2 Box %)*	**Interest in Topic**	**Likelihood to visit SaferCar.gov**
 "St abits that can improve your vehicle's fuel economy by up to 33% at SaferCar.gov"	78%	54%	59%	47%
 "Re CO_2 emissions. Learn vehicle maintenance tips that can improve your fuel economy at SaferCar.gov"	79%	52%	58%	46%
 "Ar n the win[illegible] they can be with energy efficient glass. Learn how your windows can make your vehicle more fuel efficient at SaferCar.gov"	58%	63%	55%	47%
 "Al l sou t alternative fuels at SaferCar.gov"	65%	52%	53%	45%
 "Ev ssions. Im environment. Learn how at SaferCar.gov"	65%	44%	47%	41%

Q27: How believable is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q28: After seeing this advertisement, how much more or less interested are you in learning more about [this topic]? *(Shown: Top 2 Box %)*
Q29: Thinking about other messaging you've seen about vehicles, how unique is the message presented in this advertisement? *(Shown: Top 2 Box %)*
Q30: How likely are you to visit SaferCar.gov after seeing this ad? *(Shown: Top 2 Box %)*

As presented in the survey, respondents would be interested in seeing these advertisements on TV or at the gas pump.



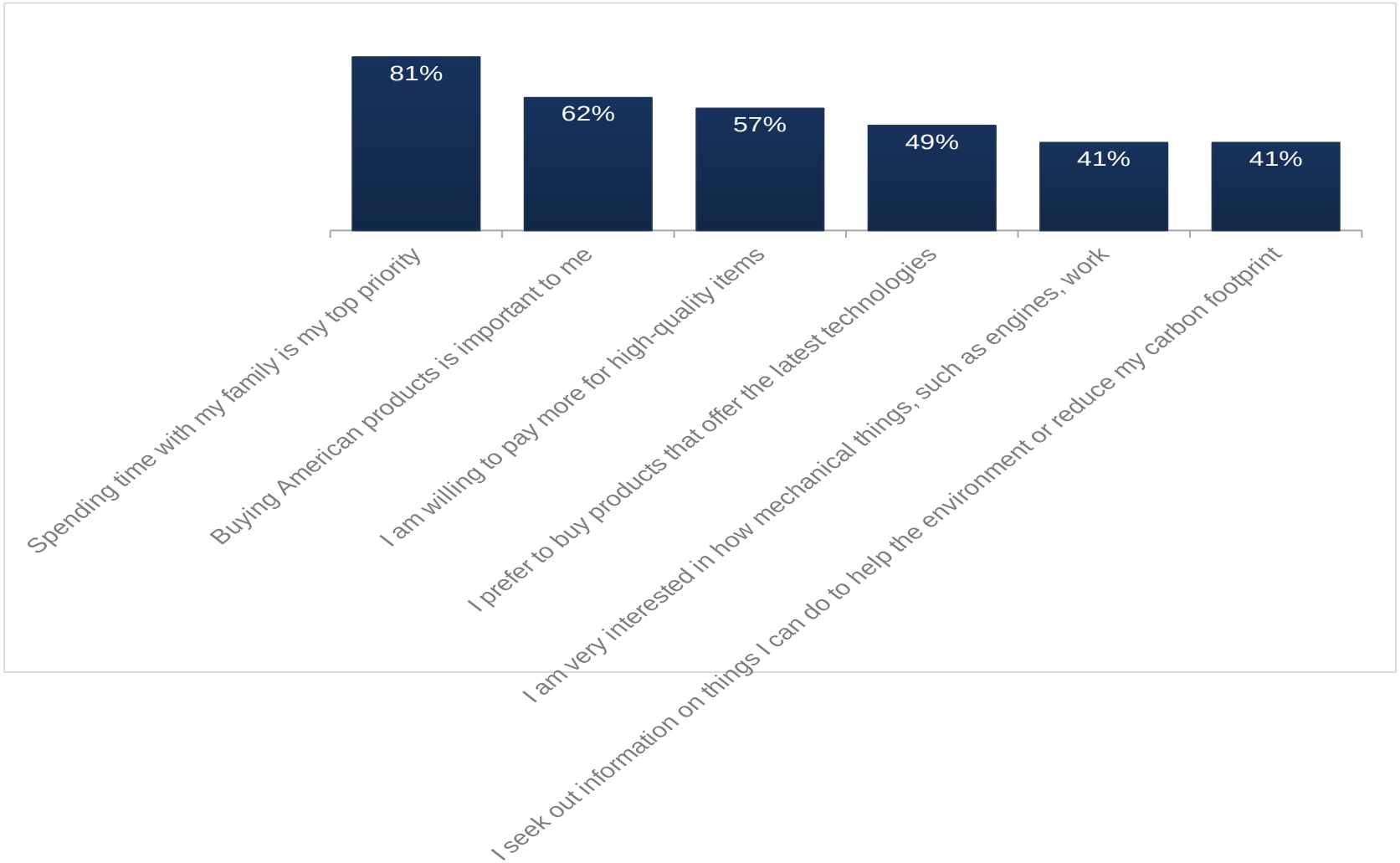
Q39: Below is a list of different places you might find advertising like the items you just evaluated. Which of the following places are you interested in seeing or hearing advertising like this?

Respondent Profile

Technology Adoption

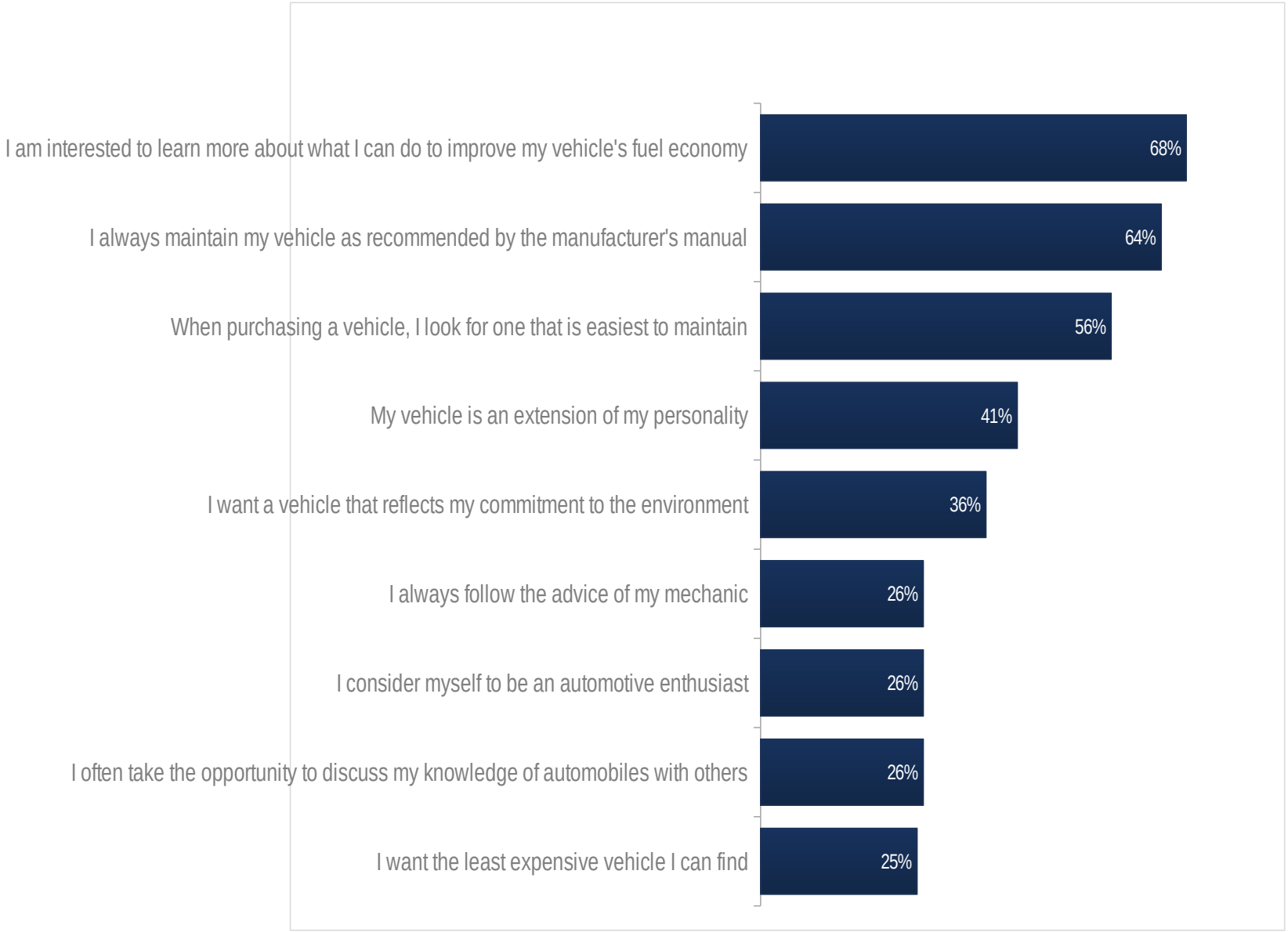
Q8: Which of the following statements best describes you?

General Psychographics



Q9: How well does each of the following statements describes you? *(Shown: Top 2 Box %)*

Vehicle-Related Psychographics



Q10: How well does each of the following statements describe you?*(Shown: Top 2 Box %)*

Demographics

		Total %
Gender	Male	49%
	Female	51%
Age	18 to 24	12%
	25 to 34	17%
	35 to 44	18%
	45 to 54	20%
	55 to 64	16%
	65 or older	17%
Plans to Purchase New Vehicle	1 to 3 months	7%
	4 to 6 months	10%
	7 to 12 months	15%
	12 months+	33%
	No plans to purchase	36%
Own/Lease	Own	97%
	Lease	4%
Decision Maker	Primary Decision Maker	63%
	Shared Responsibility	37%

		Total %
Education	HS Graduate	19%
	Some College	34%
	College Graduate	33%
	Post Graduate	14%
Mileage	0 to 49 miles	26%
	50 to 99 miles	28%
	100 to 199 miles	25%
	200 to 299 miles	13%
	300 to 499 miles	6%
	500 or more	2%
Type of Vehicle	Gasoline-engine vehicle	98%
	Gasoline-electric hybrid vehicle	5%
	Diesel engine vehicle	4%
	Flex-fuel or alternative fuel vehicle	4%
Number of Vehicles	1	40%
	2	42%
	3	10%
	4+	8%

		Total %
Income	Under $25,000	15%
	$25,000 to less than $50,00	30%
	$50,000 to less than $75,000	23%
	$75,000 to less than $100,000	15%
	$100,000 to less than $150,000	11%
	$150,000 to less than $200,000	3%
	$200,000 or more	1%
Ethnicity	American Indian or Alaskan Native	2%
	Asian	6%
	Black or African American	10%
	Native Hawaiian or Pacific Islander	1%
	White	84%
	Hispanic	7%
Region	Northeast	21%
	South	33%
	Midwest	23%
	West	23%

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