

**BEFORE THE  
DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION**

**And the**

**ENVIRONMENTAL PROTECTION AGENCY**

<b>The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks</b>	<b>49 CFR Parts 523, 531, 533, 536, and 537, 40 CFR Parts 85 and 86 [NHTSA–2018–0067; EPA–HQ–OAR–2018– 0283; FRL–9981–74–OAR] RIN 2127–AL76; RIN 2060–AU09</b>
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**COMMENTS OF CONSUMER GROUPS:**

**THE CONSUMER FEDERATION OF AMERICA, AKPIRG, ARIZONA CONSUMERS  
COUNCIL FOUNDATION, ARIZONA PIRG EDUCATION FUND, CALIFORNIA  
PUBLIC INTEREST RESEARCH GROUP EDUCATION FUND, CHICAGO  
CONSUMERS COUNCIL, CITIZENS ACTION COALITION OF INDIANA,  
COLORADO PUBLIC INTEREST RESEARCH FOUNDATION, CONNPIRG  
EDUCATION FUND, CONSUMER ACTION, CONSUMERS FOR AUTO  
RELIABILITY AND SAFETY, FLORIDA CONSUMER ACTION NETWORK,  
FLORIDA PUBLIC INTEREST RESEARCH GROUP EDUCATION FUND, ILLINOIS  
PIRG EDUCATION FUND, MARYLAND PUBLIC INTEREST RESEARCH  
FOUNDATION, MASSACHUSETTS PUBLIC INTEREST RESEARCH GROUP  
EDUCATION FUND, MONTANA ORGANIZING PROJECT, NEW MEXICO PIRG  
EDUCATION FUND, NORTH CAROLINA PUBLIC INTEREST RESEARCH GROUP  
EDUCATION FUND, OHIO PIRG EDUCATION FUND, OREGON CITIZENS UTILITY  
BOARD, OSPIRG FOUNDATION, PENNSYLVANIA PUBLIC INTEREST RESEARCH  
GROUP EDUCATION FUND, PIRGIM EDUCATION FUND, PUBLIC INTEREST  
RESEARCH FOUNDATION OF NEW JERSEY, TEXAS CONSUMER ASSOCIATION,  
TEXAS PUBLIC INTEREST RESEARCH GROUP EDUCATION FUND, U.S. PIRG  
EDUCATION FUND, VIRGINIA CITIZENS CONSUMERS COUNCIL, WASHINGTON  
PUBLIC INTEREST RESEARCH GROUP FOUNDATION, WISPIRG FOUNDATION**

**October 26, 2018**

## INTRODUCTION

### Fuel Economy is a Major Consumer Issue

The Consumer Federation of America<sup>1</sup> (CFA) and 30 of its member organizations (hereafter Consumer Groups) appreciate the opportunity to provide the Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) with comments regarding the Notice of Proposed Rulemaking on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. The agencies are proposing to freeze the current CAFE standards at their 2020 levels through 2026 and to revoke California's waiver to set its own emissions standards which can be and has been adopted by other states.

Throughout its 50 years of existence, CFA has been a vigorous and continuous participant in the process of setting regulations to improve the efficiency of energy-using consumer durables and lower the cost of energy borne by consumers.<sup>2</sup> Transportation fuels, the sources of energy most directly affected by DOT regulations are a major household expenditure, representing over 3 percent of total expenditures, one of the 6 largest subcategories listed in the consumer expenditure survey. The overwhelming majority of the benefits of fuel economy (80% or more) and pollution reduction standards are economic, directly yielding consumer pocketbook savings and indirectly stimulating macroeconomic growth.

In these comments we make a simple point, with a great deal of data and analysis. In 2008, NHTSA wrote a standard using many of its old, error ridden assumptions and practices that did not conform to the program as rebooted by the Energy Independence and Security Act of 2007 (EISA). Beginning in 2009 and particularly with the National Program, NHTSA/EPA corrected almost all of those errors. The Technical Analysis Report (TAR) affirmed those corrections. CFA's comments in these proceedings analyzed and affirmed those corrections, although there were still a couple more we would have liked to have seen. Unfortunately, with the 2018 Rollback and Freeze proposal, the agency has tried to go back to the bad old days, re-introducing two dozen errors into its approach. These comments explain why those assumptions and analyses are incorrect and illegal, violating the Administrative Procedure Act and the enabling statutes under which the agencies operate.

Below is a summary of our in-depth comments which provide our analysis of key aspects and reasons for unequivocal opposition to this rulemaking. Based on that analysis, we recommend the following:

- The EPA should affirm its earlier conclusion that the standards set for 2021-2025 are appropriate.

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<sup>1</sup> The Consumer Federation of America is an association of more than 250 nonprofit consumer groups that was established in 1968 to advance the consumer interest through research, advocacy, and education.

<sup>2</sup> The CFA website (<http://consumerfed.org/issues/energy/>) provides links to 140 pieces of testimony and reports published in the past ten years dealing with the efficiency of energy-using consumer durables divided roughly equally between appliances and vehicles.

- There is no need, under the enabling statutes of both NHTSA and EPA, to issue rules for the “out years” beyond 2026 and the agencies should make clear that their recommendation of the 2021-2025 standards, does not address future standards.
- To the extent that the agencies can identify flexibility within the current rules that enable automakers to accomplish essentially the same goals at a lower cost, they should put these proposals out for further comment.

## **Historical Analyses**

To explain why a rollback of the standards is not warranted, CFA analyzed the data and assumptions made by NHTSA since the passage of the Energy Independence and Security Act of 2007 (EISA). This analysis is summarized in Table 1.

The first column identifies the over 40 correctible errors made in the 2008 Rulemaking, as we described them in our comments. Even with these flaws there was clear evidence to support increasing fuel economy levels as dictated by EISA.

The next three columns show how the agencies corrected these errors, again as we say in our comments. Correcting the errors showed that much more improvement in fuel economy was possible under the enabling statutes of both agencies.

The fifth column identifies ways in which EPA/NHTSA have deviated from the improved practice and reintroduced two dozen errors into the proposed rule. The final column shows the magnitude of the impact that these errors have on its cost benefit calculations. The Rollback and Freeze proposal does not have a positive benefit cost ratio, compared to the continuation of the standards set by the National Program; once the errors are corrected, it has a negative benefit cost ratio of -6-to-1.

However, the flaws needed to be corrected in light of the enactment of the Energy Independence and Security Act (EISA). As we show in these comments, rulemakings in 2009-2010 began a transitional process of doing so. A transition was needed because the industry was under extreme pressure, with two of the “big three,” U.S. automakers in bankruptcy and a great deal of regulatory underbrush that had to be cleared away.

The next major step was taken by NHTSA, EPA and the California Air Resources Board (CARB) which collaborated on the National Program to set long-term standards for 2017-2025 Model Year Light-Duty Vehicles in 2012. As these comments show, the 2012 rule corrected the majority of the flaws in the 2008 approach to standards setting, using data supported by historical and current trends. The 2016 Technical Assessment Report (TAR), a collaborative work of NHTSA, EPA and CARB affirmed the approach to standard setting. In these comments, by reference, we incorporate all of the sources identified in Table 1 in the Technical Appendix into the current record. We believe this is appropriate, not only as a matter of general practice, but also because the mid-term review was intended to look at the record and performance of the National Program and the entire hearing record of that proceeding, including, in particular the TAR, which should be the foundation for the review.

**TABLE 1: TABLE 1: A DECADE OF EVOLUTION YIELDS A RATIONAL, LEGAL APPROACH TO STANDARD SETTING IN THE POST-EISA ERA**

ISSUES	2008	2010	2012	TAR	2018	Impact on
(correctable errors)	Post-EISA	Transition	Full	Approach	Old/New	B,C = Δ %
	Errors	Correction	Correction	Affirmed	Errors	TAR v. 2018
<b>Underestimating Benefits</b>						
Truncating Benefits					43314	B= + > 30
Rebound Effect Pocketbook	2,8,10,59-60;.8,28	10,27	12,53	5,6	43099-108	B= + 10 to 15
Gasoline Prices	2,8,44,49;2a		53		4299343070	B= + 3
Include All Benefits	2.8.57-58;a6	27,71, 2,16,27	14	2		B= + 50
Macroeconomic	22	8	14	4,6,69-72, App.G	43068	B= + 60
Public Health Co-Benefits	9	3,29,33	7,33	App.H,a4		B= + 33
Non-enviro externalities	2,8	3,6-7, 33-37	7,14,33			B= +
Discount rate (3% v. 7%)	2,40,52-55		55	APP.E	42306	B= + 34
<b>Overestimating Cost</b>						
Technology Cost	3,4,57	1,5,12	8,35,42-43	2,3,APP.D	42993	C= - 50
Tecnology Feasibility	3,10,11,17, 20-21		8,41,12	14,b8	42991	
Payback	53-54,56;a51		29,72	4,59	43255	
emerging technology	9,21	7		2		
Refresh and redesign cycle	11			?		
<b>Misrepresenting safety</b>					43231	
Rebound effect	10					C= - >75
Light-weighting trucks						C = - ?
Technology						C = - ?
<b>Broad Market Issues</b>						
Low income households			12,51	6-7	43227	B = + ?
Pocketbook			12,51	6-7	43105	B = + ?
Public Health				6-7		B = + ?
Clean Cars States					43306-16	
Federalism	Econ. Anal		Federalism	3,4,15,a4	43235-53	B = + ?
Hybrids aand Evs		35		3,15,APP.I,a8-9	43217-22	
<b>Conceptual &amp; Legal Frame</b>						
Economic Assumptions	36,39,65	2,4,21,40-45				
Efficiency Gap/Diffusion	22,33-37,41-42	2,3,22,23	12-13,15,54	8,APP.B,C,F, b6-7	43071	B = + ?
Behavioral Economics	36,39,38,41	22-23,31-32,45-46				B = + ?
Legal Balancing Post-EISA	2-3,8,11-13,17;a3-4	3,5,7-8, 19-21, 34,35, 64-66,109	8,15	2-4,12-13, APP. A,G;C6,ATT.SII	43206-16,43309	
<b>Modelling Flaws</b>		5, 19, 110		4,5		
Failure to vet, peer review						
Outdated data	10,11					
Internal inconsistencies	57, 10 VMT				xx scrappage	
<b>Real World Behavior</b>						
Consumers		6,68,70			43070-74	
Attitudes	18;a2,5	76,77				
Support for Stnadards						
Interest in Fuel Economyu		78-79			435216-17	
Payback Periods				5	43255	
Behavior	18,69;a7,30	68, 86-88,96-98	27-29			
marginal value of driving					42991-92	B = + ?
WTP Critique	42	24, 68			43071	B = + ?
Monthly Loan Payment			29	2,4		B = + ?
Automaker behavior	a2,7	71,73-75,91-95	46	2,16, APP.D,b10		
Misrepresenting Consumers	36, 39;a5	71, 58-64	5,20	9,,10,11,a10,12	42993	
preferences			4	3,10		B = + ?
payback	53,60,61	1		2		B = + ?
Advertising (manipulation)						B = + ?
Strategies & Pricing	61, a11	9, 70, 81			42993-4	
Plans & Refresh Cycle	10,11,17, 33,38,41;a3.	81	48			C = - ?
Fines, credits	33,35,41,59	20				C = - ?
Compliance	12,33;a11			3-4,12		C = - ?
<b>Market Performance</b>	4,9,11	15	10	2,17,a4,6	43809-94,43099	
Prices	11			51,7	42993	
Auto sales total	9,43	81-90,99-102		2,b11-13	42995	
Sales of efficient vehicles	11a,			2,b11-13		
<b>Overall Impact of Rollback &amp; Freeze</b>	2,8,14,25,36, 39,65	4,9,17,30,39-41, 70	5,6,8,11	2,5,17,b6	43419	TAR v. CFA = + 10% to 30%

The current SAFE proposal goes backwards by making and expanding upon the flaws found in the 2008 rule. By carefully re-analyzing of the impact of the standards, CFA shows the conclusions drawn from the 2012 rule and 2016 TAR were correct in their assessment of the benefit and costs of the standards. The SAFE analysis both underestimates the benefits of the standards by 10-30%, while also downplaying the harms of not enacting the standards as put forth in the TAR. The bottom line is clear, the Rollback and Freeze Proposal will cost consumers and then nation about six times as much as it saves in auto technology costs.

Thus, the benefit cost ratio is -6 to 1, which violates the enabling statues of both agencies and guidance from the Office of Management and Budget (OMB) on rulemakings. By turning their backs on the current rule without building a record to support it, the about face on standards also violates the Administrative Procedure Act (APA). In these comments we highlight the major conceptual, analytic and quantitative flaws in the Rollback and Freeze Proposal. The Technical Appendix and attachments discuss many more flaws in the proposal and provide empirical evidence that support our conclusions.

One of the main claims by NHTSA/EPA is that there have been fundamental changes in the auto market in the years after the 2012 rule and the TAR (which reaffirmed the findings of the 2012 rule). The fact of the matter is there is no evidence to support this claim, therefore the agencies simply re-interpreted old data in a fashion that recreated the effort of the original 2008 rule, misconstrued the data and made assumptions that that were proven to be incorrect by almost a decade of fact-based analysis and made assumptions that almost a decade of rigorous, fact-based analysis had shown to be incorrect.

### **Consumer Savings**

If the agencies go forward with the rollback of the fuel economy standards, consumers would lose out on over \$145 billion in pocketbook benefits and \$75 billion in overall economic growth. This \$220 billion in lost benefits compares to a paltry \$70 billion in savings if there is a rollback. Public health and environmental benefits would increase the total.

- We have included for the purposes of this analysis the traditional industry approach, which is the sum of pocketbook and environmental benefits. The Freeze and Rollback Proposal has a substantial negative benefit cost ratio (-3 to 1).
- Taking cost reductions and the pocketbook value of the rebound effect into account, the benefit cost ratio is -4.5 to one. As noted above, the cost declines on which this scenario is based are already in evidence and the pocketbook value of the rebound effect is also correct, so this assessment of the economics is likely the best.
- Adding the lost environmental benefits to the adjusted economic benefits would put the negative benefit ratio close to -6 to 1 for freeze and rollback. This is the best estimate of the impact of the attack on fuel economy standards.

### **FUNDAMENTAL FLAWS IN THE NHTSA/EPA ANALYSIS**

The agencies' notice tries to establish general themes that argue that the standards have diminished value and are not needed. Their arguments are, at best, unsupported and dubious, and at worst, they are flat out wrong. Here we provide one example. The Notice tries to argue that

fuel economy makes new vehicles unaffordable, hurting the industry and keeping consumers in older, dirtier cars.

### **Missing Benefits**

The Notice claims that the need to conserve energy, embraced by Congress as the overarching goal, has been eliminated by the improvement in our oil situation, but ignores the fact that one-fifth of the recent improvement has been due to improved efficiency and the Rollback and Freeze Proposal will increase consumption by billions of gallons over the next decade. The SAFE analysis also irrationally and unreasonably excluded important benefits, including macroeconomic and public health benefits, benefits that are inextricably tied to the reduction of consumption of fossil fuels. The agencies have also dramatically lowered the public health benefits that are associated with reducing the amount of gasoline used. As there is a clear and obvious link between reducing the use of fossil fuels and lower amounts of pollutants, the benefits of increasing fuel economy have a co-benefit of making the air cleaner and thereby helping decrease any diseases tied with air pollutants. Lower fuel consumption is one of the least cost ways to lower pollution, which not only saves consumers money, but also reduces public health costs.

The Notice claims that as fuel economy rises the diminishing benefit of continuing improvements are no longer justified, but fails to note that in its own example the benefits exceed the costs. Indeed, early in the Notice, we are shown a graph to support the claim of “unaffordability” that is fundamentally flawed by comparing current prices to constant income. Correcting that error, as shown in Figure 1, shows that there has been no significant change in affordability. After the Great Recession, spending on vehicles returned to their pre-standards range. Fuel economy is certainly not to blame for a non-existent problem. The failure of NHTSA/EPA to recognize this reflects a fundamental failure to understand how the new approach to standards setting adopted by EISA works. We call it “command-but-not-control” performance standards setting, which preserves consumer choice and gives automakers flexibility in meeting standards.

### **Rebound Rate**

The misleading re-interpretation of old data can be found throughout the SAFE analysis. The biggest misleading re-interpretation can be found in doubling the rebound rate, which claims that consumers will drive greater distances thanks to increased fuel economy, thereby negating some of the benefits. In 2012 and 2016, the agencies determined the rebound rate to be 10%, which any reasonable analysis done today would find to be too high. As shown in Figure 2, the agencies in the SAFE analysis have decided to use an incredibly high rebound rate of 20%, which is one-third higher than the already flawed 2008 analysis. By doubling the previous rebound rate, the agencies have dramatically reduced the estimate of the pocketbook benefits to consumers, thereby underestimated the welfare gains consumers enjoy.

### **COSTS**

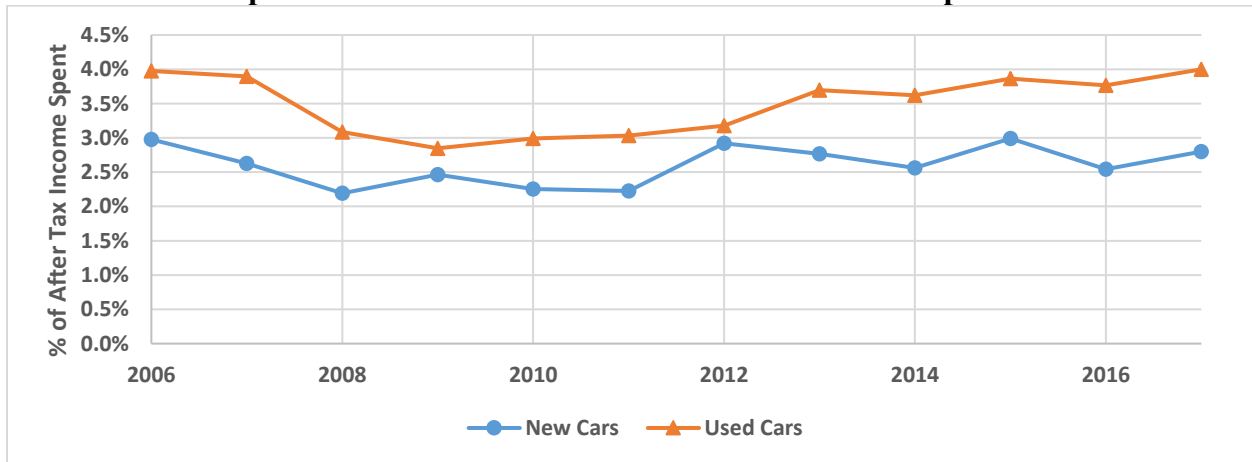
The agencies also increased the costs to comply with the standards by 50-100%, thereby in some cases doubling the compliance costs. By decreasing the options associated with making

**FIGURE 1: AFFORDABILITY OF VEHICLES HAS NOT BEEN UNDERMINED BY FUEL ECONOMY**  
**The Erroneous NHTSA/EPA Comparison, Nominal Prices versus Real Income**



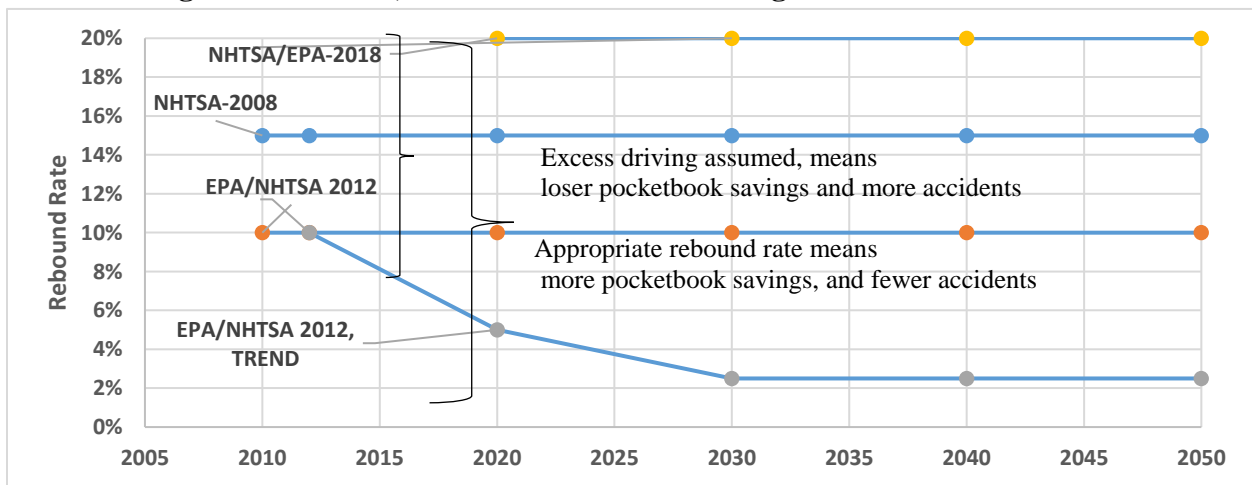
Source: NPRM, p. 22995

**The Correct Comparison: Percent of After-Tax Household Income Spent on Vehicles**



Source: Bureau of Labor Statistics, Consumer Expenditure Survey

**FIGURE 2: EXTREMELY HIGH, EXCESSIVE ASSUMED REBOUND RATE**  
**More Driving and Accidents, Smaller Pocketbook Savings Macroeconomic Benefits**



internal combustion engines to be compliant with the standards, the SAFE analysis forces a significant increase in the penetration of electric vehicles to meet the standards. This re-interpretation of compliance costs goes against the increasing availability of fuel saving technology as well as the historical pattern which shows automakers and the private sector have been decreasing the cost of compliance. In fact, in every analysis (2008, 2012, 2016), the agencies have overestimated the cost of compliance, as automakers are able to produce fuel economy technology at lower cost prices than regulators estimated. A reasonable analysis would have reduced the estimated compliance costs, not increased them, and concluded that the standards set in 2012 and re-affirmed in 2016 are technically feasible and economically viable, as EPA and CARB found in their mid-term reviews.

### **Technology Cost Whiplash**

The whiplash of the current proposal is depicted in Figure III-3. The reasons for the whiplash are the severe constraint on technology choices imposed by the model and the very high markup assumed. By imposing constraint on the use of technologies, ignoring emerging technologies and assuming many more electric vehicles would be necessary, NHTSA has adopted a price that is far above EPA's estimates and those of independent third parties, as shown in the upper graph of Figure 3.

Another way to appreciate this whiplash is to calculate the cost of increasing fuel economy per MPG. As shown in the lower graph of Figure III-3, David Greene, one of the leading experts on fuel economy, recently conducted a review of the literature in which he concluded that an estimate of 27% of the increase in vehicle cost, or about \$150 for every mile per gallon improvement, was too high. He gave two reasons for this.

First, backward looking analysis of cost increases that included used vehicles (as his analysis did), were double counting the cost of increasing fuel economy because the sellers of vehicles were capturing a significant part of the capitalized value of better fuel economy equal to about 20% of the estimated cost of efficiency, in their sales price. This factor alone would lower the estimate to 21.6% of the increase in price or to about \$120 for each 1-mile improvement in the MPG. Second, real world experience showed that there was a learning process in which costs fell as automakers gained more experience with increasing fuel economy. Greene suggested that 2% per year was a reasonable estimate. Over the redesign cycle of vehicles (e.g. five years) this learning rate would lower the cost by about 10%. Thus, one might argue that the appropriate numbers would be about 20% per year and \$108 dollars per MPG.

In a subsequent analysis, Greene estimated the cost of improving fuel economy directly with an econometric model that corroborated the above concerns, as shown in the lower graph in Figure 3. The simple adjustment to a constant 20% of total cost moves the estimate much closer to the empirical evidence offered by Greene suggesting costs that are about two thirds of the literature review—about 18% or \$99/MPG.

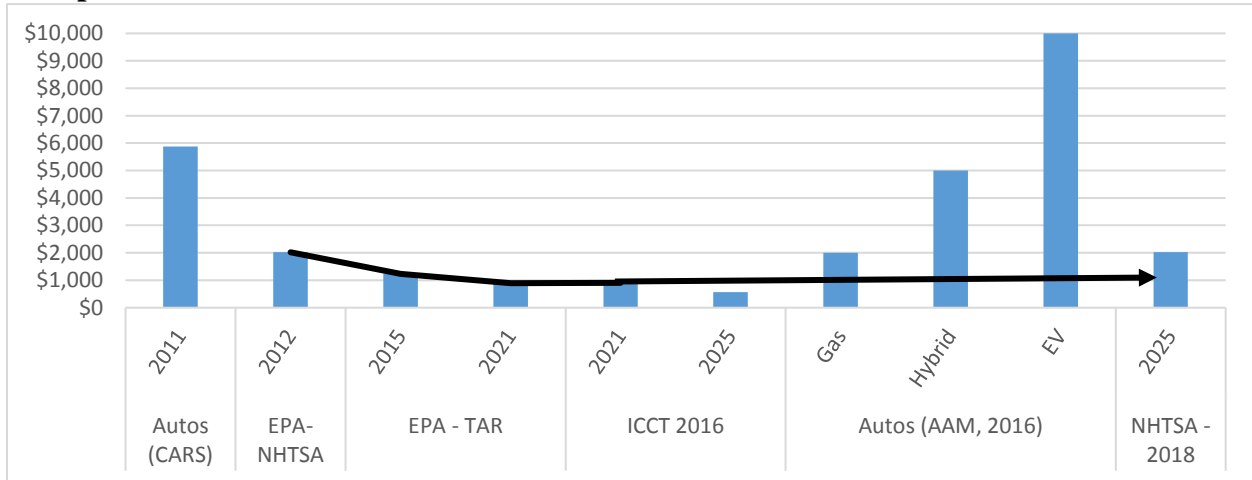
EPA's analysis of the cost of the National Program in the TAR yields an estimated cost for fuel savings that is similar, \$97/MPG. This estimate reflects considerable technological progress over the early years of the National Program, which is consistent with the historical pattern. A recent study by the ICCT offers an estimate of going forward costs of improvement



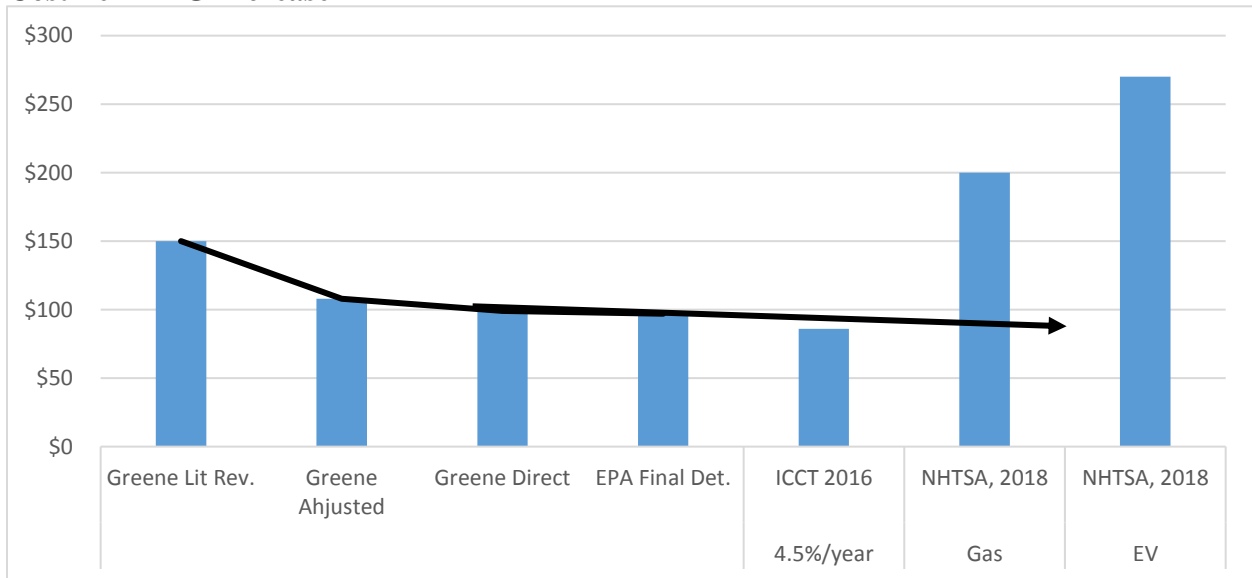
close to the rate of the National Program (national program = 3.3%, ICCT = 4% per year). The ICCT study also includes continuing technological progress.

**FIGURE 3: THE COST WHIPLASH: PER VEHICLE COST OF MEETING THE 2025 STANDARD**

**Cost per Vehicle**



**Cost Per MPG Increase**



Source: CFA, CARS Memo, NHTSA, 2018, p. 43222

Automakers also regularly state that compliance costs are higher than what regulators estimate, when in fact they comply with efficiency standards at a lower cost than the regulators' estimates. New car prices for the most part have, since the Great Recession, failed to match the rate of inflation, all the while increasing in fuel economy. While new vehicle prices are indeed rising, this is due to the switch from cars to trucks and SUV's, which have a higher MSRP.

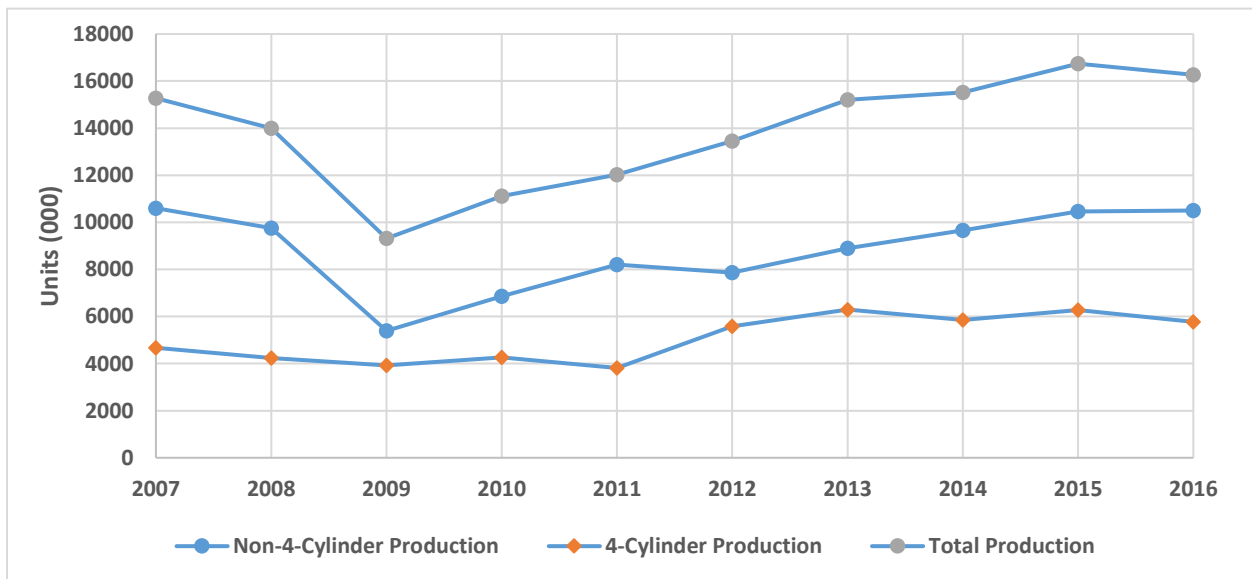
CFA analysis has further shown that after factoring in inflation, a full 27 percent of the "all-new" 2017 vehicles went down in price and increased their fuel economy by 1 to 10 MPG

compared to their 2011 counterpart<sup>3</sup>. This is without considering that fuel economy technology is only one of the many different improvements that increase a vehicle’s MSRP, such as safety technology, convenience items and design changes which are all equal or higher drivers to increased vehicle costs. When using historically supported evidence, the best estimate of fuel economy technology costs is about \$100 per MPG of improvement. Using this estimate, 94 percent of the “all-new” 2017 vehicles saw a net positive benefit for the drivers, as the fuel savings exceeded the cost of fuel efficiency technology over the first five years of ownership.

### Technology Deployment

The overarching discussion of technology developments that introduces the NHTSA analysis is fundamentally flawed and infects the entire proposal. NHTSA claims that some options considered in the original order for the National Program have not worked out as EPA/NHTSA anticipated. This is given as a major justification for rolling back and freezing the standards. EPA/NHTSA fail to note that some options have performed better than anticipated and that as the Notice pointed out that there were many alternative routes available to complying with the standards. More importantly, this is what should be expected from the “command-but-not-control” approach embodied in EISA and implemented faithfully in the National Program. The idea is to give the automakers flexibility to meet consumer needs while complying with the standards. EPA/NHTSA fail to accept the fact that the automakers and the auto market have used this flexibility to achieve both goals. Take the example of four-cylinder engines (shown in Figure 4).

**FIGURE 4: 4-CYLINDER ENGINES OUTPERFORM THE REST OF THE MARKET: 4-cylinder sales withstood the great recession accounting for the increase in sales since 2007**



Source: EPA, Trends, 2017

<sup>3</sup> Jack Gillis and Richard Eckman, entitled, *An Analysis of Consumer Savings and Automaker Progress on the Road to 2025 CAFE Standards Increasing Fuel Economy Saves Consumers Money, Sells Vehicles, Keeps American Companies Competitive and, Most Importantly, is Achievable*, July 24, 2017

The market share of 4-cylinder engines has grown dramatically, thereby improving the average mileage of cars substantially. In part, their popularity reflects the fact that they have more horsepower than earlier 4-cylinder engines. This means that some of the fuel savings that could have been achieved by shifting to smaller engines is “taken back.” That is exactly the objective of a command-but-not-control approach. Automakers make the choices that keep them in compliance while also meeting consumer needs. This balance has worked extremely well. The performance of the auto market does not support the claim that the standards have damaged its functioning. Record numbers of vehicles have been sold and record number of 4-cylinder vehicles have been purchased.

## **Vehicle Safety**

Besides costs, the main argument regarding the current standards that the SAFE analysis puts forward as rationale to roll back the standards, is vehicle safety which the agencies state will be decreased if the current standards were to be implemented. The argument that the standards will result in a dramatic increase in traffic fatalities is wrong for two reasons, theory and reality.

NHTSA’s analysis assumes, contrary to the empirical evidence and literature that an increase in new vehicle prices will increase the number of vehicles on the road and miles driven (VMT). By far the largest change from previous analyses in connection with safety is the change in the rebound rate. By irrationally doubling the rebound rate, the agencies projected increased fatalities due to increased fuel economy by 75%. By incorrectly assuming a massive increase in the number of cars/miles driven, NHTSA concludes there will be a massive increase in fatalities. Since the former will not happen, the latter will not happen.

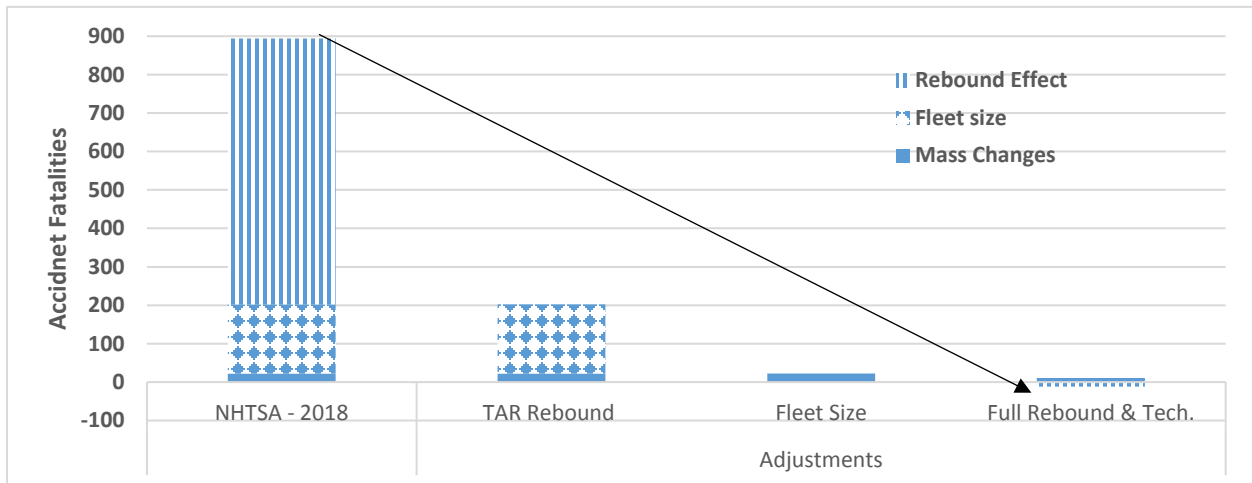
This assumption of increased fatalities is also inconsistent with real world experience. The agencies underestimate the increasing crashworthiness of vehicles. While the agencies correctly point out that vehicles are becoming lighter to meet the standards, vehicles are also more crashworthy compared to just 7 years ago when the standards went into effect. An analysis<sup>[1]</sup> of all 2018 crash tests show that 71 percent of vehicles weigh less and had better fuel economy than its previously crash tested version. Of these vehicles, 47 percent had a better crash test rating, while the other 53 percent had the same rating. Not a single vehicle in the analysis had a worse crash test rating than its previous version. Outside of the passive nature of crashworthiness, the amount of added safety features that actively help to prevent a crash<sup>[2]</sup> have increased by 60 percent since 2011. These facts can be proven by real-world driving experiences as well. The percentage of crashes that result in a fatality has steadily been decreasing since the standards were enacted, with a full tenth of a percentage decline from 0.61% to 0.51% from 2011 when the standards were enacted, to 2016 (the latest year figures are available).<sup>[3]</sup>

Another argument the agencies put forward to roll back the standards is that due to the increased cost of vehicles, the turnover rate would decrease, meaning there would be more, older less safe vehicle on the road. The agencies ignore the fact that each year for the past five years, an average of 16.9 million new, safer and more fuel-efficient vehicles (17 million over the last two years) have been added to the fleet, while an average of 13 million older, less safe and less fuel-efficient vehicles have been retired<sup>[4]</sup>. Even this year, auto sales are up 1.1 percent compared to the same time last year, clearly showing the argument of low turnover rate to be fictional.

Correcting the major flaws in the NHTSA/EPA framework, including the rebound effect, the absence of an increase in the number of vehicles on the road and the failure to recognize technological flexibility for automakers, eliminates any increase in fatalities as a result of the maintaining the standards set by the National Program, as shown in Figure 5. We believe other technological improvements, introduced along with higher fuel economy, further reduce the impact of increased accidents. Given the fact that the rebound rate is well below the level assumed by the TAR and safety technology continues to be added to vehicles, the TAR is likely to have significantly overestimated the increase in fatalities, not underestimated it as NHTSA now claims.

And our national survey conducted in August, 2018 revealed that over three quarters (76%) of Americans rightly reject the assertion that increasing fuel economy standards would lead to more accidents.<sup>[5]</sup> This rejection is widely bipartisan, with 60 percent of Republicans, 80 percent of independents, and a plurality of 90 percent among Democrats rejecting the argument.

**FIGURE 5: CORRECTING NHTSA ERRORS ELIMINATES ANY INCREMENTAL INCREASES IN FUEL ECONOMY RELATED ACCIDENT FATALITIES**



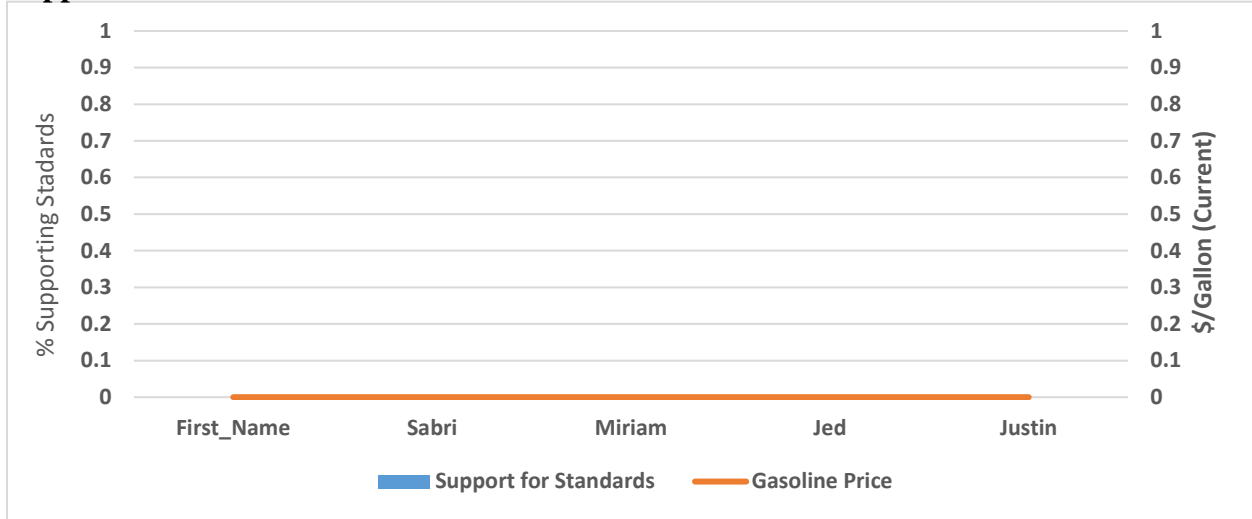
Source: NHTSA, 2018, PRIA, p. 1080; adjusted by CFA to eliminate excessive rebound effect and overreliance on mass reduction

## CONSUMER ATTITUDES

### Public Support for Standards

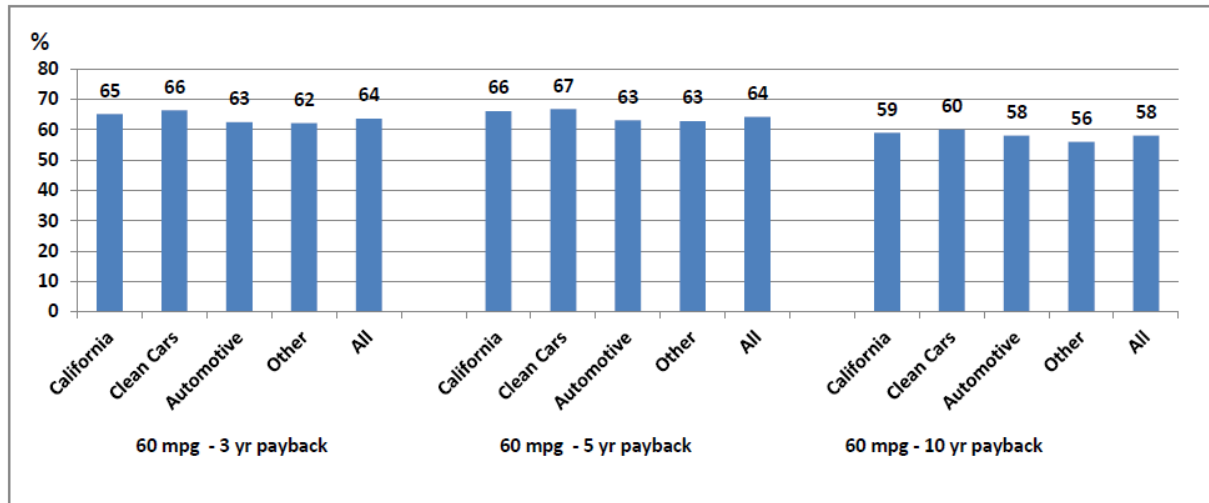
Over the course of more than a decade, CFA has sampled public opinion about fuel economy standards. We have found consistent large majorities support standards. Support cuts across, geographic areas (Clean Cars states, auto states, other states) and political orientation of respondents. Figure 6 shows the support for standards starting in 2010, when the questions identified substantial increases in fuel economy that were in the range being contemplated by the National Program. It also shows gasoline prices in current dollars in the year of the survey. Gasoline prices do not exhibit a strong relationship to prices in this period, which we surmise reflects the fact that consumers expect them to rise and also react adversely to price volatility. This, of course, is one of the primary reasons we have been vigorous advocates of increasing standards.

**FIGURE 6: PUBIC SUPPORT FOR STANDARDS**  
**Support Across Time and Gasoline Prices**



Sources: CFA surveys, EIA database, Gasoline Prices

**Support for Standards by Region and Payback Period**



Source: National Survey Shows that Most Consumers Support 60 MPG Fuel Economy Standards by 2025, 09/28/10.

Consumers understand that the technology to increase fuel economy costs money, and therefore may increase the overall vehicle cost. CFA found that three out of five consumers support the standard if they would see a return on their investment in just 3 years. In fact, our previous surveys, that tested various levels of payback periods, found the level of support is roughly the same at 3 and 5 years and, even at a 10-year payback period there was majority support.

**Payback Periods and Technology**

Of most direct relevance to the standards setting process, we have asked consumers how they view the potential economic impact of standards. As a general proposition, payback periods

are an inferior measure of economic performance that should not be used to drive the economic analysis. In this case, the payback periods are seen as a constraint on market behavior by assuming that people will not buy technologies with a longer payback. The 2.5-year payback period dramatically and inappropriately restricts the technologies that the model can include in its estimation of costs

In the last 2011 survey, in addition to the general question about support for fuel economy standards, we also asked respondents whether they support a standard of 60 miles per gallon.<sup>4</sup> For the latter question, we asked about support depending on how long the fuel saving technology would take to pay for itself. We asked about a 3-year, 5-year and 10-year payback period. The specific target of 60 mpg is supported by over 60% of respondents with payback periods of three and five years. This support remains in the high 50% range with a ten-year payback period. We noted at the time that using a payback period to assess fuel economy is actually a fairly “demanding” approach, since most consumers purchase autos with loans that last a relatively long period (with the majority being 5-year loans). In the auto loan framework, the relevant comparison is the cash flow. When a consumer buys a vehicle with more fuel saving technology, the cost of the vehicle increases and the monthly loan payment goes up. However, monthly expenditures on gasoline go down, since the consumer can drive as far on less gasoline. If the savings on gasoline exceed the increase in the loan payment, the consumer is better off from the beginning. The analysis arbitrarily restricts technology choices, particularly compared to the TAR.

### **Automaker Misrepresentation of Consumer Attitudes**

Automakers have consistently misunderstood or misrepresented consumer purchasing behavior and attitudes. Of course, automakers spend an immense amount of money to influence public attitudes towards the vehicle on which they make the most profit, but even their own data shows that consumers want more fuel economy that the automakers will not deliver absent standards, as Figure 7 shows.

After the big four attributes, respondents care as much about fuel efficiency as the ability to take long trips and the automakers are working on that too. Beyond these big six attributes, the valuation of others falls off, but efficiency comes next. Even here the message for EVs is positive. Environmental impacts rank a lot higher (8<sup>th</sup> and 9<sup>th</sup>) than powerful engines (13<sup>th</sup>) or engine type (gasoline power =14<sup>th</sup>, electricity = 16<sup>th</sup>). Fitting more than 5 people (15<sup>th</sup>) or hauling boats and campers (ranks dead last) don't matter much.

### **ADDITIONAL IMPORTANT PUBLIC POLICY ISSUES**

#### **Low Income Households**

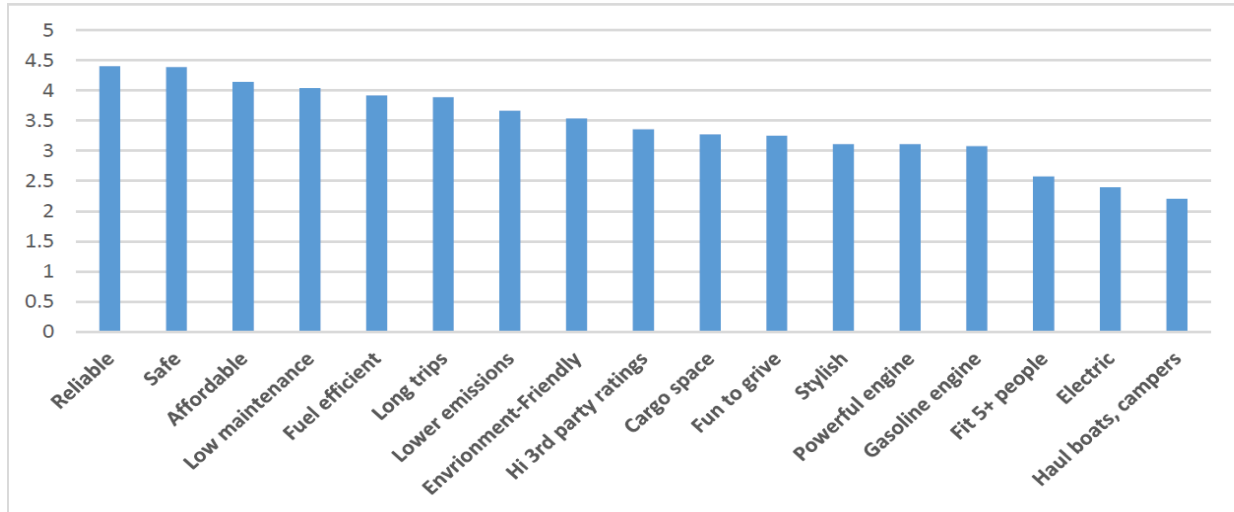
An issue that has been examined in every CAFE analysis is the impact fuel economy standards would have on low-income consumers. The agencies posit that due to increased manufacturers' suggested retail prices (MSRP) from meeting the current standards, lower income households would be driven out of the market. This argument is misleading for the basic fact that low income households are generally not in the new car market. In fact, due to operating costs

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<sup>4</sup> CFA Consumer Groups Comment, 2012, pp. 24-25.

being a much larger share of the cost of driving for low-income drivers, having higher standards would help them rather than hurt them. Also, the fact that that the economic value of future fuel savings is only partially reflected in the resale price of used vehicles. Low income consumers get a disproportionate share of the operating cost reduction thanks to increased fuel economy.

**FIGURE 7: RANK ORDER OF IMPORTANCE OF VEHICLE CHARACTERISTICS**



**Source and Notes:** Mitch Bainwol, President and CEO, Alliance of Automobile Manufacturers, *Consumers & Fuel Economy*, CAR Management Briefing Seminars, Traverse City, Michigan, August 2016, p. 10. The winter related question, specific to the North East, has been discarded. It would rank 12<sup>th</sup> of 18, low in California, high in New England)

### Clean Cars States Waiver

The agencies also propose repealing California’s ability to set a different, higher fuel economy standard compared to the federal standard. This policy was founded on the fundamental principle of the American political system, wherein federalism allows the national and state levels of governments to pursue different pathways to solve a similar problem, as the problems and solutions to those problems can vary quite frequently depending on location.

Currently 13 states and Washington DC, which collectively represent 113 million Americans and over a third of the automotive market have signed onto the California Clean Car Program. The Program has helped to set the U.S. on a path that will improve the performance of light duty vehicles by a greater amount in a shorter time period than ever accomplished in U.S. history. This two-standard arrangement is supported by over two-thirds of Americans, as consumers can see the clear benefit of increased fuel economy.

### Legality

If the agencies decide to move forward with the rollback in fuel economy standards, with no new, compelling evidence and by irrationally, and misrepresenting old data, the agencies will directly violate the Administrative Procedure Act (APA). The APA does not allow for a radical change in agency direction without strong and thorough evidence to support it, and by the significant lost benefits to savings (-6 to 1), it is clear this is not the case. The rollback also

violates legal obligations of NHTSA, as it is mandated to set standards with the highest technologically feasible and economically practicable energy savings possible.

### **Changing Market**

CFA analyzed the changing automotive market and the switch from cars to SUVs and whether consumer preference is connected to fuel efficiency. The agencies' position that consumers don't value fuel economy is completely false as SUVs, pickups and crossovers, whose fuel economy increased by over 15% between 2011 to 2017, had a 70% increase in sales. On the other hand, these types of vehicles with less than a 15% increase in fuel economy from 2011 to 2017 only experienced a 50% increase in sales, 20% less. Consumers are therefore switching from cars to SUV's because they can now obtain the same fuel economy as in a sedan, while SUVs also provide numerous additional benefits, from storage and leg room to increased field of vision

### **CONCLUSION**

History and the hearing record support the continuation of the standards. In summary, it is clear that EPA and NHTSA's Rollback and Freeze Proposal is not supported by the in-depth analysis done since the CAFE program was restarted in 2012 through 2016. The agencies' proposal harms consumers and our economy and should be withdrawn.

- The EPA should affirm its earlier conclusion that the standards set for 2021-2025 are appropriate.
- There is no need, under the enabling statutes of both NHTSA and EPA, to issue rules for the "out years" beyond 2026 and the agencies should make clear that their recommendation of the 2021-2025 standards, does not address future standards.
- To the extent that the agencies can identify flexibility within the current rules that enable automakers to accomplish essentially the same goals at a lower cost, they should put these proposals out for further comment.