Consumer Federation of America

Testimony of
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on

Midterm Review and an Update on the Corporate Average Fuel Economy Program and Greenhouse Gas Emissions Standards for Motor Vehicles

Before the

Committee on Energy and Commerce
Subcommittee on Commerce, Manufacturing, and Trade
Subcommittee on Energy and Power
U.S. House of Representatives
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MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE

The Consumer Federation of America[1] has participated in dozens, if not hundreds, of efficiency rulemakings, regulatory negotiations, and legislative hearings involving large and small energy using consumer durables, ranging from automobiles to heavy duty trucks, air conditioners, furnaces, water heaters, computers, and lightbulbs.[2] We have participated in every round of rulemaking for fuel economy standards since the passage of the Energy Independence and Security Act, which rebooted and reformed the CAFÉ program.

We appreciate the opportunity to share our views of the current state and future prospects for the National Program. We will submit our full agency comments for the hearing record and look forward to working with the committees to develop the most effective, consumer-friendly fuel economy and transportation sector greenhouse gas reduction program possible.

Our technical expertise is not in the design and construction of these consumer durables, it is in the design and implementation of minimum energy standards.[3] We believe that knowing how to build an effective standard is at least as important to arriving at a successful outcome as knowing how to build a consumer durable. Although we do not claim expertise in the technical design of consumer durables, we do review the technical economic studies, prepared by others, and evidence on the market performance of to determine whether there are significant potential consumer savings that would result from a higher standard.

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[1] 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.

[2] The CFA website (http://www.consumerfed.org/issues/energy) lists over 100 pieces of legislative testimony and regulatory comments in home energy and motor vehicles, most of which involve energy use and efficiency standards. The NCLC website (http://www.nclc.org/issues/appliance-efficiency-standards.html) lists a dozen comments, letters and lawsuits involving appliance efficiency standards.

[3] Mark Cooper, "Energy Efficiency Performance Standards: Driving Consumer and Energy Savings in California," presentation to the *California Energy Academy*, February 20, 2014); *Energy Efficiency Performance Standards: The Cornerstone of Consumer-Friendly Energy Policy*, October 2013.

SUMMARY OF TESTIMONY

In my testimony today I will briefly discuss seven points that will be examined in detail in our comments to be filed in response to the release of the Technical Assessment Review.

1) Consumers are the big winners, with total benefits well over five times the costs. Three-fifths of those benefits are enjoyed as direct pocketbook cost savings resulting from a reduction in the total cost of driving.

2) Low income consumers benefit more than the average consumer because operating expenses are much more important in their total cost of driving.

3) The benefits of the National Program are stills so strong, in spite of declining gasoline prices, because the minimum performance standards were extremely well designed. They are what I call a "command but not control" approach to regulation. They address numerous market imperfections and do so in a manner that harnesses the power of capitalism and markets to meet the standard in the least cost manner possible. This is not your grandfather's CAFÉ program; it ensures consumers have choices in what to buy and automakers have freedom to select the technologies they know best to meet the standards.

4) Automakers have done an excellent job with the freedom they have. They are over-complying and costs are coming down. Innovation is roaring.

5) Our analysis shows that the industry complaints about the standards are the typical handwringing, which has proven to be wrong time and again in the past. The current round of complaints overestimates the costs by a factor of five, misrepresents what consumers want and ignores how much the billions of dollars they spend on advertising influences consumer behavior. The direct attack of the Alliance's on the National Program is based on a mixture of

self-serving, unsubstantiated assumptions, false choices and misrepresentation of what consumers want.

6) The indirect attack on the National Program, through a think tank funded by the automakers is equally unconvincing. Six months ago their report identified a dozen things the Technical Assessment Review should do. Having read through all 1200 pages, it is clear that the agencies have done all these things and still find a strongly positive outcome.

7) The automakers are also overstating the differences between the agencies and demanding a unified National Program in the hope that this would lower the standards. At this stage, the problem is overstated and the two agencies that support the current standard (or stronger) have a much stronger case

EXPLANATION OF WHY THE NATIONAL PLAN HAS BEEN SO SUCCESSFUL

1. CONSUMER BENEFITS OF THE STANDARD

The topline results of the launch and early implementation of the National Program are quite simply, a very positive bottom line.

Consumer Pocketbook Benefits

- In spite of a significant decline in the current and projected price of gasoline, the benefits of the program far exceed the costs.
- The consumer pocket benefits continue to exceed the consumer pocketbook costs by a substantial amount, with a benefit cost ratio of approximately over 3 to one.
- The payback period is about five years, or less than half the life of the vehicle.
- Consumer pocketbook benefits still constitute the bulk of the total national benefits (about two-thirds).
- One way to summarize this outcome, recognized by NHTSA is to calculate the cost per gallon saved. EPA estimates that over 50 billion gallons of oil will be saved at a cost of $36 billion. That works out to just over $0.70 per gallon, a bargain no consumer in his or her right mind would pass up.

Additional National Benefits

- Environmental and public health benefits are slightly larger than the cost of the technology.

- The macroeconomic benefits of increasing consumer purchasing power should also be included, although EPA and NHTSA have chosen not to. In 2012, EPA ran an econometric model which showed that the macroeconomic multiplier effect almost doubled the economic benefit. Our comments in the heavy duty truck rule show that this order of magnitude is correct. Thus, the macroeconomic benefits are twice the cost.

Total National Benefits

- Combining all benefits, the total benefit is close to six times the cost.

- To put this in other word, The National Program could more than pays for itself in consumer pocketbook saving alone, or environmental public health savings, or macroeconomic stimulus. Taken together the National Program delivers a huge benefit in terms of consumer and total social surplus.

2. LOW INCOME HOUSEHOLDS

Four years ago we explained why low income households are big winners from fuel economy standards and the EPA has looked at our arguments in the Technically Assessment Review. They found them to be spot on.[4]

First, low income households make up a much smaller part of the new vehicle market than their share in the overall population, about one-tenth. Therefore, the operating cost of vehicles makes up a much larger part of their total cost of driving than the average household and fuel economy standards reduce operating costs.

Second, because low income households buy used cares, they tend to benefit from the fact that the economic value of future fuel savings is only partially reflected in the resale price of used vehicles. Low income households get a disproportionate share of the operating cost reduction.

[4] TAR, pp. 6-16 to 6-22.

Third, low income households are likely to be disproportionate beneficiaries of the indirect benefits. Low income households are to suffer most from environmental and public health externalities associated with the operation of vehicles. They are likely to suffer most in a weak economy and benefits from policies that strengthen it. Therefore, they are likely to benefit most from reductions in those impacts.

Fourth, while one can debate whether the standards will increase vehicle sales and accelerate scrappage, by 2022, which is the focal point of the mid-term evaluation, the vast majority of cars available on the used car market will have been built under the fuel economy standards rebooted by the Energy Independence and Security Act of 2007. Low income households will be buying more fuel efficient vehicles as a result of the standards program.

3. WELL-CRAFTED STANDARDS

We approach the setting of standards from a uniquely consumer point of view, always starting from three basic questions:[5]

- Will a standard save consumers money?
- Why is there an efficiency gap that appears to impose unnecessary costs on consumers?
- Why is a standard an appropriate policy?

When we conclude that a standard is appropriate, we turn our attention to the design

- How can the standard be best designed to achieve the goal of lowering consumer cost?

In a number of regulatory proceedings and academic articles we have argued and demonstrated that performance standards are among the most effective and powerful tools of energy policy. We have applied this framework to evaluate a range of energy consuming

[5] Adapted from Mark Cooper, "Energy Efficiency Performance Standards: Driving Consumer and Energy Savings in California, February 20, 2014); *Energy Efficiency Performance Standards: The Cornerstone of Consumer-Friendly Energy Policy*, October 2013).

durables, including, in addition to light duty vehicles, gas furnaces, computers and heavy duty trucks. The extensive and intensive analysis of the current standards demonstrates that in the National Program EPA/NHTSA/CARB have designed an extremely effective performance standard, as the following table shows.

IMPERFECTIONS POTENTIALLY ADDRESSED BY STANDARDS[6]

Societal Failures[7]	Structural Problems[8]	Endemic Flaws	Transaction Costs	Behavioral[9]
Externalities[10]	Scale[11]	Agency[12]	Sunk Costs, Risk[13]	Motivation[14]
Information[15]	Bundling[16]	Asymmetric Information	Risk & Uncertainty[17]	Perception[18]
	Cost Structure[19]	Moral Hazard	Imperfect Information[20]	Calculation[21]
	Product Cycle Availability[23]			Execution[22]
	Produce differentiation[24]			
	Incrementalism [25]			

Source: Framework developed in Comments of the Consumer Federation of America, Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Environmental Protection Agency 40 CFR Parts 86 and 600, Department of Transportation 49 CFR Parts 531,633, 537, et al., November 28, 2009. Italicized references are additional factors added by the Technical Assessment Review. Page references are to the TAR

[6] The efficiency gap persists, P. 6-5, despite these developments and uptake of energy efficiency technologies, lags behind adoption that might be expected under these circumstances." Quoting the National Academy of Sciences, P. 6-7, [T]here is a good deal of evidence that the market appears to undervalue fuel economy relative to its expected present value."

[7] P. 6-7, the nature of technological invention and innovation.

[8] P. 6-7, Consumers cannot buy technologies that are not produced; some of the gap in energy efficiency may be explained from the producers' side.

[9] P. 6-5, behaviors on the part of consumers and/or firms that appear not be in their own best interest (behavioral anomalies).

[10] P. 6-8, dynamic increasing returns. network effects; p.4-35, the potential existence of ancillary benefits of GHG-reducing technologies… These can arise due to major innovation enabling new features and systems that can provide greater comfort, utility, or safety.

[11] P. 6-8, the structure of the automobile industry may inefficiently allocate car attributes.

[12] P. 6-7, product differentiation carves out corners of the market for different automobile brands.

[13] P. 6-6, Consumers may be accounting for uncertainty in future fuel savings

[14] P. 6-6, Consumers may... not optimize (instead satisficing).

[15] P. 6-5 lack of perfect information.

[16] P. 6-6 Fuel-saving technologies may impose hidden costs.

[17] P. 6-6, Consumers might be especially averse to short-term loses….relative to long term gains.

[18] P. 6-5, Consumers might be "myopic" and hence undervalue future fuel savings; p. 6.6 Consumers may focus on visible attributes... and pay less attention to attributes such as fuel economy that typically do not visibly convey status.

[19] P. 6-8, First mover disadvantages, p. 4-33, Thus, instead of the first-mover disadvantage, there is a regulation-driven disincentive to "wait and see."

[20] P. 6-6, consumers might lack the information necessary,

[21] P. 6-6, consumers might... not have a full understanding of this information.

[22] P. 6-6, selecting a vehicle is a complex undertaking... consumers may use simplified decision rules.

[23] P. 6-7, the role of business strategies.

[24] P. 6-7, separating product into different market segment… may reduce competition.

[25] P. 6-8, Automakers are likely to invest in small improvements upon existing technologies.

First, and foremost, as the following table shows, they have identified a number of potential market imperfections that the standards address. These follow the imperfections that we identified as important in our earlier analysis. One can argue about which imperfections are most important or most prominent, but there is no doubt that there are many that affect the energy efficiency market

Second, and of equal importance, "command but not control" performance standards work best when they embody six principles,[26] which are clearly at the core of the National Program.

- **Long-Term:** Setting an increasingly rigorous standard over a number of years that covers several redesign periods fosters and supports a long-term perspective. The long term view lowers the risk and allows producers to retool their plants and provides time to re-educate the consumer.
- **Product Neutral:** Attribute based standards accommodate consumer preferences and allow producers flexibility in meeting the overall standard.
- **Technology-neutral:** Taking a technology neutral approach to the long term standard unleashes competition around the standard that ensures that consumers get a wide range of choices at that lowest cost possible, given the level of the standard.
- **Responsive to industry needs:** The standards must recognize the need to keep the target levels in touch with reality. The goals should be progressive and moderately aggressive, set at a level that is clearly beneficial and achievable.
- **Responsive to consumer needs:** The approach to standards should be consumer-friendly and facilitate compliance. The attribute-based approach ensures that the standards do not require radical changes in the available products or the product features that will be available to consumers.
- **Procompetitive:** All of the above characteristics make the standards pro-competitive. Producers have strong incentives to compete around the standard to achieve them in the least cost manner, while targeting the market segments they prefer to serve.

[26] Mark Cooper, "Energy Efficiency Performance Standards: Driving Consumer and Energy Savings in California, February 20, 2014), slide 22.

4. The Industry Response to Well-Crafted Performance Standards

These continuing positive results and the fact that automakers are not only complying with the early standards, but over complying, is driven by the careful design of the standards and the rational response of the automakers.

- As we noted and advocated, the original standards were responsible, and did not seek to push fuel economy/pollution reduction to the limit of technology. The original goals were "inframarginal" with respect to the capabilities of the industry.

- The standards remain inframarginal, with many combinations of technologies available to comply.

- While the biggest potential game changer in terms of compliance – electric vehicles – are not necessary to meet the standards, the evidence continues to grow that they could play a much larger part in the vehicle fleet.

As our historical analysis showed, the industry has responded as market theory and past experience predicts, a process that is observable at both the macro and micro levels.

- The industry has found lower cost ways of complying with the standards than originally thought.

- The mix of technologies likely to be chosen has shifted due to different speed of development in knowledge and cost.

- One of the most popular approaches to meeting the standards, the Atkinson-2 engine was not even considered in the initial analysis and would never have been applied widely, but for the standards.

- There is no evidence that the costs of compliance are disrupting the auto market in any way and consumers are having no difficulty in finding the vehicles that they prefer at prices that are affordable.

5) Misleading Analysis for the Automakers

The AAM analysis makes a remarkable serious of erroneous assumptions and misleading comparisons and claims.

The analysis looks at only the costs of the standards and not the benefits

The first slide (p. 2) claims that "only OEMs have real skin in the game." In fact, since the consumer pocketbook benefits exceed the technology costs by more than three-to-one, consumers have twice as much "skin in the game." As noted above, environmental, public health and macroeconomic benefits should also be included. In other words, consumers and society have as much as six times as much "skin in the game" as the automakers. The claims ignore the fact that the agency analyses show that the total cost of driving declines (p. 35)

The Alliance makes a series of erroneous and misleading comparisons:

The Automakers present numerous nonsensical comparisons. For example, on the list of public concerns (p. 7), they note that terrorism, race relations and a weak economy are a greater concern to the public. Improving fuel economy does not detract from policies to address these bigger problems. Indeed, it can be argued that reducing oil consumption and imports helps to undermine the leverage of terrorists, while the resulting macroeconomic growth improves the economy.

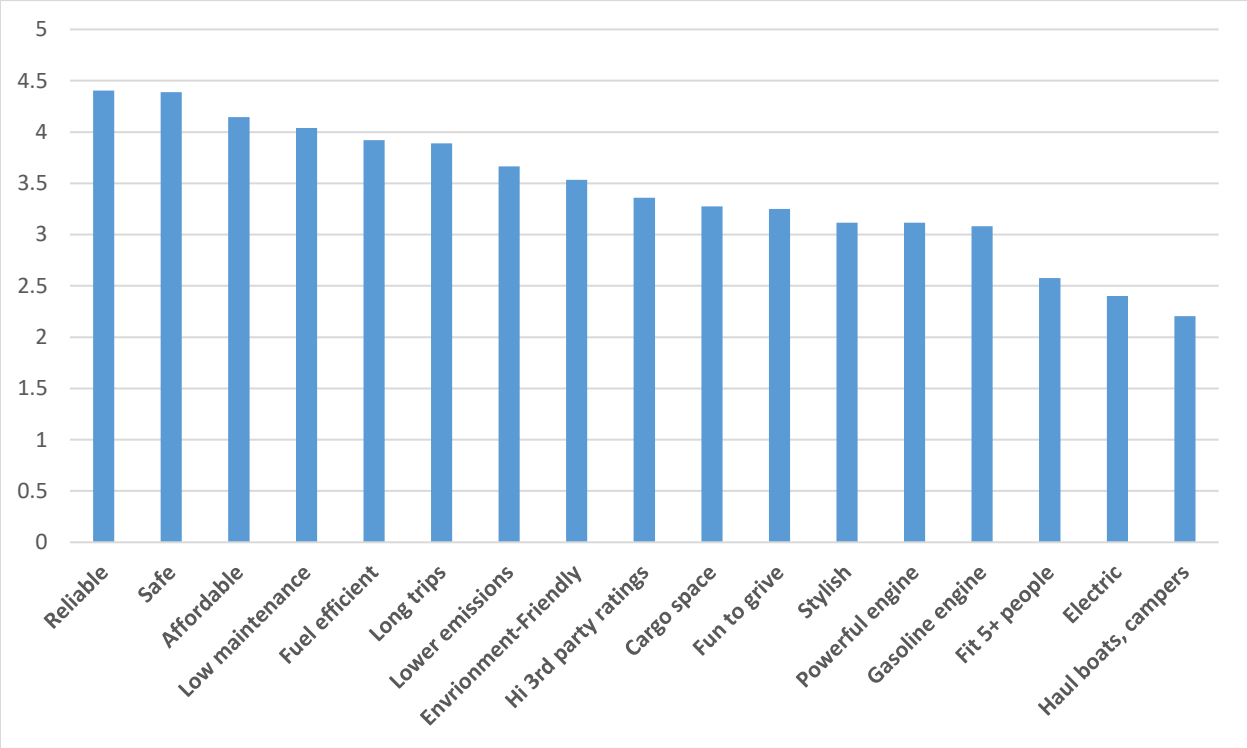
Even when they present a bogus choice (p. 7) that assumes the global threat of climate change "requires government regulations… that raised the price on new cars… pricing new cars out of the reach of many American families," more respondents opt for more regulation (42% to 41%). Similarly (p. 8), they point out that 69% of respondents want to encourage mobility, vs. 16% that want to discourage mobility. Since the standards lower the cost of driving (and have a rebound effect to increase driving), they obviously encourage mobility.

The public is not as enamored of gasoline powered muscle cars and truck as the automakers claim

If an EV and gasoline vehicle were matched on cost and travel length (p. 9), more (48% to 43%) would prefer the electric vehicles and a clear majority (57%) are willing to pay more for an electric vehicle.

As the following table shows, the analysis of desirable vehicle attributes shows that Consumers want reliable, safe, affordable and low maintenance vehicles (p. 10). There is no reason to believe that fuel efficient gasoline engines or electric vehicles (EVs) cannot fill the bill and the automakers are working feverishly to ensure that they do so.

ALLIANCE OF AUTOMOBILE MANUFACTURERS, VEHICLE ATTRIBUTE SURVEY, AUGUST 2016



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

Moreover, 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 even here the message for EVs is positive. Environmental impacts rank a lot higher (8th and 9th) than powerful engines (13th) or engine type (gasoline power =14th, electricity = 16th). Fitting more than 5 people (15th) or hauling boats and campers (ranks dead last) don't matter much. If you watch the TV ads and go into the show

rooms, you would have to conclude that the automakers are pushing the wrong vehicles. More importantly, there is nothing in this data that suggests EVs cannot be a big success. Our survey results, this data and automaker investments can be interpreted to means that EVs are on the early part of the adoption curve and there is a very strong basis to expect success.

6. INDIRECT ATTACKS BY THE AUTOMAKERS ALSO MISS THE MARK BY A WIDE MARGIN

While a report from the School of Public and Environmental Affairs of Indiana University, which is supported by the automakers, raises many issues and questions about the Fuel Economy standards. As the following Table shows, the report should carry no weight with policymakers on procedural and substantive grounds.

RECOMMENDATION FROM *RETHINKING AUTO FUEL ECONOMY*
COMPARED TO THE EPA/NHTSA DRAFT *TECHNICAL ASSESSMENT REPORT*

Issue/Recommended for Analysis of the National Program	**EPA/NHTSA Action**	**Impact on Evaluation**
Technical		
1. Gas price changes	Use EIA estimates	+
2. Expert Technology Analysis	Integrate NRC/Teardown analysis	+
3. Rebound	Extensive literature Review	+
Consumers		
4. Perceptions	Extensive literature Review	+
5. Capabilities	"Efficiency Gap" analysis	+
6. Sensitivities	Extensive literature Review	+
Economic Impacts		
7. New Vehicle Effects	Extending 2012, little Impact	+
8. Non-vehicle macroeconomic Effects likely to be positive	Mentioned, but not analyzed,	(+)
ZEV		
9. Consider Impact on Market	Small fleet acknowledged	+
10. Modify Standards if Needed	Out of Bounds, EPA/NHTSA lack authority	=
11. Consider Complementary Policies	Discussed	+
12. Risk Assessment	Sensitivity analysis, wide range of plausible scenarios considered	+

Source: Issues/Recommendations from Sanya Carley, et al., *Rethinking Auto Fuel Economy Policy: Technical and Policy Suggestions for the 2016-17 Midterm Reviews,* February, 2016.

There are a dozen specific recommendations embodied in the report. We believe one is out of bounds, in the sense that EPA/NHTSA lack the authority to implement changes in the California ZEV program, although they certainly could discuss changes with the California Air Resources Board. However, we do not think the ZEV program is malfunctioning or in need of repair. Of the remaining eleven recommendations, EPA/NHTSA have addressed 10 and their extensive analysis shows that the National Program is functioning quite well. Prior analysis in the 2012 Technical Support Document suggests that the one recommendation that has not yet been addressed will also support the National Program.

We doubt that the answers given by the agencies will end the debate, so it is important to note that the thrust of much of the analysis and recommendations in the framing of the questions is fundamentally flawed. There is no evidence that the impacts on consumers that they fret about have occurred under the National Program or are on the horizon. The absence of these effects flow from two fundamentally incorrect approaches that the authors take and real world facts they ignore.

Above all, the beneficial effect of a reduction in the total cost of driving is hidden behind cost estimates that are 2 to 10 times higher than the agency estimates and benefits that are under estimated by 50 percent.

7. ONE NATIONAL PROGRAM

The Automakers claim "there is no One National Plan" (ONP, p. 31-33). Although all the three agencies involved in the National Program generally agree that the standards are positive and point generally in the same direction. In fact, two of the three agencies (EPA and CARB) agree quite closely. NHTSA has headed in a tangential direction based on unfounded

and incorrect assumptions. It analyses are properly treated by EPA as a "sensitivity" case. NHTSA has some heavy lifting to do if its approach is to be accepted as the primary approach.

In our view NHTSA has gone off on a tangent from the other two agencies because of erroneous assumptions in its analysis. It increased the estimate of costs by unjustifiably raising the mark-up on fuel efficiency technologies and including fines paid in the cost. If lower cost technologies are available from compliant manufacturers, they will set the market clearing price and neither excessive profits nor fines will be recoverable in the market.

It decreased the estimate of benefits by assuming a dramatic reduction of vehicle miles traveled, which it admits could well be a result of the great recession.

It continues to impose the assumption that technologies included in vehicles must have a three year payback. That assumption was never justified, since consumers are willing to accept a five year payback and, when all manufacturers face a similar constraint, there should be no disadvantage in meeting a higher constraint. Not only was the assumption never justified, but the changes in the market since 2012 have moved the market farther from the artificial constraint. Consumers are holding their vehicle longer and the majority of new car buyers are taking loans of five years or more. A five year payback would be more appropriate, if such a constraint is needed, although NHTSA would be better off allowing technologies to enter the model in the order of least cost.

In conclusion, our review of the Technical Assessment Report for the mid-term review for the Corporate Average Fuel Economy Program and Greenhouse Gas Emissions Standards for Motor Vehicles finds that consumers are the big winners, with total benefits well over five times the costs. Low income consumers benefit more than the average consumer because operating expenses are much more important in their total cost of driving. The benefits of the National

Program remain very strong, in spite of declining gasoline prices as the minimum performance standards were extremely well designed. It is a "command but NOT control" approach to regulation. Automakers have done an excellent job with the freedom they have. They are over-complying and costs are coming down. Industry is doing an excellent job of complying with the standards and in fact, exceeding them. Many of their concerns are based on of erroneous assumptions and misleading comparisons and claims. NHTSA, EPA and CARB have done a good job of coordinating and collaborating in this effort—there is no need for a unified National Program which potentially could unnecessarily weaken the standards. This program is clearly on the right road for consumers, the environment and our economy.

I thank the Subcommittees for the opportunity to present the Consumer Federation's views on this vital issue.