



**Testimony of David J. Friedman
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**Before the U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Consumer Protection and Commerce and the
Subcommittee on Environment and Climate Change**

Hearing on:

**"Driving in Reverse: The Administration's Rollback of Fuel Economy and
Clean Car Standards"**

**June 20, 2019
10:00 am
2123 Rayburn House Office Building**

Introduction

Chairwoman Schakowsky, Ranking Member Rodgers, Chairman Tonko, Ranking Member Shimkus and Committee members, thank you for inviting Consumer Reports to provide testimony at this hearing. I am David Friedman and I am the Vice President of Advocacy for Consumer Reports. I formerly served as both Acting (2014) and Deputy (2013-2015) Administrator of the National Highway Traffic Safety Administration (NHTSA), where I led the agency's mission to save lives, prevent injuries, and reduce the economic costs of road traffic crashes.

Consumer Reports is an independent, nonprofit member organization that works side by side with consumers for truth, transparency, and fairness in the marketplace. We use our rigorous research, consumer insights, journalism, and policy expertise to inform purchase decisions, improve the products and services that businesses deliver, and drive regulatory and fair competitive practices.

Consumer Reports has a 327-acre auto test center in Colchester, Connecticut, which is the world's largest and most sophisticated independent automobile testing center devoted to consumer interests. We buy our test vehicles anonymously at retail to maintain our independence and to test cars with the trim and options people actually buy. Using state-of-the-art measurement tools, CR engineers and automotive experts put vehicles through more than 50 rigorous tests, including safety systems, braking, fuel economy, handling, comfort, and performance. Our annual auto reliability and owner satisfaction surveys yield information on hundreds of models based on responses from hundreds of thousands of car owners.

SUMMARY: Proposed Fuel Economy and Emissions Standards Rollback Will Take Money Out of Consumers' Pockets, Harm Automakers and Our Nation, and Fails on Safety.

The proposed rollback is contrary to consumer interest and preferences. Survey after survey by CR indicate that Americans want more fuel economy, not less, and they place a significantly higher value on fuel efficiency than attributes like horsepower and vehicle size. Further, the rollback fails the statutory requirements of EPCA and the Clean Air Act and is based on analysis that is riddled with errors and modeling inconsistencies.

Key points:

- The existing standards deliver a three-to-one return on investment (i.e. fuel savings are three times the technology investment costs).
- NHTSA and EPA's preferred rollback would cost MY 2026 vehicle owners an average of \$3,300 over the life of the vehicle.

- SUV and pickup owners and used vehicle buyers would see the largest share of the benefits.
- The rollback would increase oil consumption by 320 billion gallons, the equivalent to 20% of the country's proven oil reserves.
- The rollback would harm the auto industry, decreasing sales between MY 2021 and 2035.
- The rollback would fail to improve auto safety, and may have a small harmful effect.

The fact is that Automakers have the technology to make better, safer, more efficient vehicles, and federal agencies should strengthen the current standards to save American's money, strengthen the auto industry, and protect our nation against the threat of economy-crippling oil price spikes.

Instead of rolling back fuel economy standards that help Americans, NHTSA, an agency with a core mission of safety, should be focused on strengthening standards to address the public health epidemic of nearly 40,000 fatalities and more than three million injuries on our roads every year. NHTSA can and should move forward on sensible safety rules that would help protect the public, but has not finalized any life-saving standards since the first half of January 2017, and has not even issued any proposals documenting potential lives saved for two and a half years.

1. History of Fuel Economy and Greenhouse Gas Standards for Light-Duty Vehicles

Fuel Economy Standards. In response to the 1973 oil crisis, Congress passed the Energy Policy and Conservation Act (EPCA) of 1975, directing the Department of Transportation (DOT) to set fuel economy standards for passenger vehicles and light trucks.¹ Fleetwide average fuel economy improved for about a decade following implementation of the standards. However, the standards were mostly stagnant starting in 1990, until the nation faced another oil price shock, spurring passage of the Energy Independence and Security Act (EISA) of 2007. That law required automakers to reach a fleetwide average of at least 35 miles per gallon by 2020. Based on that law and developments regarding greenhouse gas pollution regulation (see below), final fuel economy standards were put in place in 2011 through MY 2021 and augural standards were established through MY 2025.

Greenhouse Gas Pollution and "One National Program." In 2007 the Supreme Court held in *Massachusetts v. EPA* that the U.S. Environmental Protection Agency (EPA) has authority under the 1970 Clean Air Act to regulate greenhouse gases as "air pollutants."² In 2009, EPA issued a science-based finding that greenhouse gases endanger public health and welfare and therefore would be regulated as pollutants.³ Subsequently, DOT (acting through NHTSA), EPA and the

¹ "Light trucks" includes pickup trucks, SUVs, minivans, and some crossover utility vehicles.

² *Massachusetts v. EPA*, 549 U.S. 497 (2007).

³ 74 FR 66495 (December 15, 2009).

California Air Resources Board (CARB)⁴ jointly issued new rules to strengthen fuel economy and establish new greenhouse gas emission standards for Model Year (MY) 2012-2016 (Phase I) and MY 2017-2025 (Phase II). These new standards were harmonized to allow manufacturers to comply with all three sets of regulations simultaneously and became known as “One National Program.” Automakers and other stakeholders (including the advocacy division of Consumer Reports, then known as Consumers Union) supported these standards.⁵

Mid-Term Review. Included as part of the Phase II rulemaking was a “mid-term review,” in which EPA was to determine whether the standards were still “appropriate” or new standards were needed. Building off of an extensive record, including detailed teardowns of critical technologies to evaluate costs, EPA issued in January 2017 a final determination that the MY 2022-2025 standards remained appropriate under section 202 (a) (1) of the Clean Air Act. However, right after the current administration took office, automakers asked for a rollback of the standards,⁶ and the oil industry ran advertising and political campaigns to achieve the rollback.⁷ In April 2018, without a rigorous and comprehensive process or a standard comment period, EPA’s new leadership reversed the first final determination, indicating it would establish new, weaker standards.⁸

2. Consumer Benefits of Existing Standards

As efficiency gains and emission reductions have been made in the vehicle fleet under the existing standards, vehicle sales have increased, new vehicles have gotten safer, and the affordability of vehicles has been preserved.⁹ The fuel economy and greenhouse gas program has a proven record of success, and there is still room to continue improvements and increase consumer benefits. Overall, the existing fuel economy standards, which affect vehicles from MY

⁴ California has authority under Section 209 of the Clean Air Act to set more stringent emissions standards than the federal government and acquired a waiver from EPA to do so. The waiver is still in effect for the state’s low emission vehicle (LEV) and zero emission vehicle (ZEV) programs out to MY 2025.

⁵ 2011 Commitment Letters for 2017-2025 Light-Duty National Program, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/2011-commitment-letters-2017-2025-light-duty-national>.

⁶ Alliance of Auto Manufacturers Letter to former Administrator Pruitt (Feb. 21, 2017) <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas>.

⁷ *The New York Times*, “The Oil Industry’s Covert Campaign to Rewrite American Car Emissions Rules,” December 13, 2018, at <https://www.nytimes.com/2018/12/13/climate/cape-emissions-rollback-oil-industry.html>.

⁸ Mid-term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-duty Vehicles, (April 13, 2018)

<https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas>.

⁹ Tyler Comings & Avi Allison, *More Mileage for Your Money: Fuel Economy Increases While Vehicle Prices Remain Stable*, SYNAPSE (March 15, 2017),

<https://consumersunion.org/wp-content/uploads/2017/03/Synapse-CU-Affordability-Report-3-15-corrected-1.pdf>.

2017-2025, would net Americans \$660B in savings relative to the standards in place for MY 2016.¹⁰

A. Low-income households benefit the most from strong standards.

Fuel economy and emissions standards are especially important for low-income consumers because they are more sensitive to gasoline prices and the vast majority of low-income car owners buy used vehicles.¹¹ Used vehicle buyers get more fuel economy for their money because fuel economy remains stable even as a vehicle depreciates.¹² While vehicle prices have been stable relative to inflation, gasoline prices have outpaced inflation and have been historically volatile.¹³ Low-income households, which spend more money fueling cars than buying them (and five times more on fuel compared to high income consumers, as a percentage of income) are particularly sensitive to gas prices.¹⁴ Research has shown that “as a percent of income, savings on fuel from better fuel economy are greatest for lower income households.”¹⁵ Thanks to improving fuel economy, gasoline spending has decreased for low-income households, even as gasoline prices have risen.

B. American consumers support strong fuel economy standards.

By saving consumers money, strong standards strengthen the economy and help low-income households in particular become more economically resilient, so it is unsurprising that Americans support strong standards. In a nationally representative survey, Consumer Reports found that fuel economy is the number one attribute vehicle owners would like to see improved.¹⁶ Fuel economy topped the list of attributes that American drivers think have the most room for improvement, beating out: purchase price, maintenance costs, connectivity, vehicle comfort, passenger room, safety, cargo space, reliability, horsepower, vehicle size, off-road

¹⁰ Calculation based on net benefits (fuel savings in excess of cost of compliance) during the lifetime of MY 2021-2035 vehicles.

¹¹ See Table 1101. Quintiles of income before taxes: Annual expenditure means, shares, standard errors, and coefficients of variation, Consumer Expenditure Survey, 3rd quarter 2017 through 2nd quarter 2018

¹² Greene, D. and J. Welch. (2016). *The Impact of Increased Fuel Economy for Light-Duty Vehicles on the Distribution of Income in the United States*, report prepared for Oak Ridge National Laboratory and the Energy Foundation. Specifically, the authors found that savings on fuel costs due to improved miles-per-gallon standards ranged from 4.3 percent of annual income for the lowest income quintile, to 0.9 percent for the highest income quintile.

http://bakercenter.utk.edu/wp-content/uploads/2016/09/Equity-Impacts-of-Fuel-Economy-Report_final.pdf.

¹³ Comings, Figure 6.

¹⁴ Comings, pp 11-12.

¹⁵ Greene, D. and J. Welch. (2016). *The Impact of Increased Fuel Economy for Light-Duty Vehicles on the Distribution of Income in the United States*, report prepared for Oak Ridge National Laboratory and the Energy Foundation. Specifically, the authors found that savings on fuel costs due to improved miles-per-gallon standards ranged from 4.3 percent of annual income for the lowest income quintile, to 0.9 percent for the highest income quintile.

http://bakercenter.utk.edu/wp-content/uploads/2016/09/Equity-Impacts-of-Fuel-Economy-Report_final.pdf.

¹⁶ *2018 Automotive Fuel Economy Survey Report*, Consumers Union, (July 30, 2018), <https://consumersunion.org/research/2018-automotive-fuel-economy-survey-report/>.

capability, style, and handling. Fuel economy was flagged as needing improvement almost twice as often as purchase price, maintenance costs, or connectivity, and more than four times as much as horsepower, vehicle size, or off-road capability. Fuel economy ranks first among attributes requiring improvement across each of the three income groups, each of the four regions, and among both Republicans and Democrats.

Thinking about your current vehicle, which three attributes have the most room for improvement?	Total %	Household Income			Region				Political Party	
		Under \$50,000 %	\$50,000-\$99,999 %	\$100,000 or more %	Northeast %	Midwest %	South %	West %	Republican %	Democrat %
<i>Respondents selected UP to three responses</i>										
Fuel economy	38%	35%	38%	41%	35%	40%	38%	39%	39%	36%
Purchase price	22%	21%	23%	23%	28%	23%	20%	20%	24%	22%
Maintenance costs	22%	26%	21%	19%	26%	22%	22%	21%	19%	23%
Infotainment or connectivity	21%	18%	20%	27%	22%	18%	21%	24%	21%	24%
Passenger room	14%	14%	16%	13%	13%	15%	13%	12%	16%	12%
Vehicle comfort	12%	11%	12%	12%	9%	14%	12%	12%	13%	11%
Cargo space	11%	11%	10%	11%	10%	10%	12%	9%	12%	9%
Safety	10%	12%	9%	7%	10%	8%	9%	12%	9%	11%
Horsepower	9%	7%	10%	9%	6%	8%	10%	10%	8%	10%
Reliability	8%	14%	7%	4%	6%	10%	9%	7%	9%	8%
Vehicle size	8%	9%	7%	8%	9%	8%	8%	8%	7%	9%
Off-road capability	8%	8%	7%	10%	10%	6%	9%	8%	11%	7%
Style	6%	5%	8%	5%	6%	8%	5%	6%	6%	6%
Handling	5%	3%	3%	8%	4%	4%	5%	6%	5%	5%
Base: Americans who own and drive a vehicle	1,067	339	342	413	197	239	412	248	493	513

The same nationally representative survey also found strong majority support for robust fuel economy standards.¹⁷ Highlights from the survey include:

- 85% of Americans agreed automakers should continue to improve fuel economy for all vehicle types.
- 74% of Americans agreed that increasing average on-road fuel economy from 25 miles per gallon today to 40 miles per gallon by 2025 is a worthwhile goal.
- 78% of Americans agreed that making larger vehicles, such as SUVs or trucks, more fuel-efficient is important.
- Only 26% of Americans agree that automakers care about lowering fuel costs for their customers.

Weakening fuel economy and greenhouse gas standards erodes fuel savings and ignores strong consumer support for the standards, and yet that is exactly what EPA and NHTSA are currently doing, as detailed below.

¹⁷ 2018 Automotive Fuel Economy Survey Report, Consumers Union (July 30, 2018), <https://consumersunion.org/research/2018-automotive-fuel-economy-survey-report/>.

3. EPA and NHTSA’s Proposed Rollback Will Harm Consumers and the Economy

In 2011, automakers agreed to the current standards out to 2025, and in 2017, EPA made a final determination, based on a comprehensive technical assessment report, that these standards remained appropriate for MY 2022-2025. Automakers are currently complying with Phase II fuel economy and greenhouse gas standards.¹⁸ However, in August 2018, the current EPA and NHTSA leadership officially proposed to roll back the standards, following up on the request of automakers and pressure from some oil companies. The preferred alternative laid out in the proposed rule would freeze the standards at MY 2020 levels through 2026 instead of continuing reasonable year over year improvements through MY 2025, as required under the original Phase II standards. The proposal would replace the current EPA standards for greenhouse gases and projected (or “augural”) NHTSA standards for fuel economy. NHTSA’s proposed action of no increase to the Corporate Average Fuel Economy (CAFE) standards fails to meet the mandatory statutory factors in setting the “maximum feasible standard” under EPCA, as amended by EISA -- especially “the need of the United States to conserve energy.”¹⁹

Even according to the agencies’ own estimates, the proposed rollback would increase oil consumption by ½ million barrels/day,²⁰ while costing Americans \$153 billion more on fuel,²¹ costing the auto industry tens of thousands of jobs²² and providing zero benefit to the auto industry.²³ In addition, EPA has proposed a first-ever revocation of the waiver granted to California for its own emission standards. There is no provision in the Clean Air Act to revoke a waiver already granted and there is not a science-based rationale to do so, but if the waiver revocation were upheld in court, this would block 41% of the U.S. population--residents of the Clean Car States--from having access to cars meeting the existing set of standards.²⁴

¹⁸ *The EPA 2018 Automotive Trends Report*, (March 2019), <https://www.epa.gov/automotive-trends>.

¹⁹ 49 U.S.C. § 32902(f) (2018).

²⁰ The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42,995 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85), available at <https://www.regulations.gov/docket?D=NHTSA-2018-0067>.

²¹ SAFE Vehicles Rule at 43,062.

²² Tables VIII-39 and VIII-40 of the SAFE Vehicles Rule include the agencies analysis of the change in auto manufacturing jobs for the CAFE program and CO₂ program respectively. Tallying the difference in auto industry jobs for these two policies between the baseline and the proposed alternative results in a loss of 602,000 job years (CAFE) and 466,000 job years (CO₂) respectively between 2019 and 2030. This adds up to an average of 50,000 (CAFE) and 39,000 (CAFE) jobs lost on a continuous basis throughout the analysis period for the two policies. SAFE Vehicles Rule at 43,437.

²³ SAFE Vehicles Rule at 43,062.

²⁴ Under the Clean Air Act, California has the right to set more stringent emission standards than the federal standards through a waiver process and other states may elect to follow California’s standards. So far, 14 other states and the District of Columbia—often referred to as “Clean Car states” or “177 states” in reference to the section of the Clean Air Act that allows states the option of following California’s standards—have chosen to follow California’s standards.

A. The rollback harms consumers

The robust technical analysis conducted by EPA and NHTSA in 2016, as well as more recent reports from ICCT show that many cost-effective technologies to reduce fuel economy are currently underutilized.²⁵ If standards are weakened, those improvements will remain underutilized in the vehicle fleet, and consumers will have to give up significant savings. If NHTSA and EPA's preferred rollback is put in place for MY 2021-2026, consumers will lose \$460B of the \$660B net consumer savings from the existing program, which is equivalent to the owners of a MY 2026 vehicle paying an average of \$3,300 more over the life of that vehicle. And because the currently expected fuel savings each month is greater than the additional monthly payment for the planned fuel economy improvements, the rollback would cost buyers who finance their vehicles more starting from the first month they own their vehicles. An analysis of the proposed rule from MJ Bradley & Associates also indicates net consumer losses, estimating the rollback will cost an average household \$200-500 per year after 2025, or \$1,200-\$3,000 over 6 years.²⁶

Buyers of larger vehicles and used vehicles will feel the losses especially keenly. Larger vehicles have the most room to improve, and the targets for increasing their efficiency were backloaded in the later years of the program, so losses will be especially acute for SUV and pickup truck owners under the rollback. Since most Americans buy used vehicles, and used car buyers will be especially impacted because as the fleet turns over, it will be less efficient and people will end up spending more on gas and with fewer options to do anything about it.

B. The rollback lowers auto sales and hurts the economy

Because more efficient cars and trucks result in lower fuel costs, they often have a lower total cost of ownership, which makes them more affordable. When consumers have more desirable vehicle choices with lower operating costs, they spend more money on other things, including vehicles, which increases vehicle sales.²⁷ Taking away that affordability through lower fuel economy standards will shrink American's budgets, cutting back their spending on many things, including new cars, which will lower auto sales.²⁸ In addition, the agencies use erroneous technology cost and rebound effect assumptions, which further bias the sales analysis in an

²⁵ Nic Lutsey et al., *Efficiency Technology and Cost Assessment for U.S. 2025-2030 Light-Duty Vehicles*, ICCT (March 2017),

https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf.

²⁶ MJ Bradley & Associates, *Clean Car Roll-back: Estimated costs for American families if U.S. climate pollution and fuel economy standards are relaxed*, (July 20, 2018)

https://www.edf.org/sites/default/files/MJ_Bradley_Clean_Cars_rollback_report.pdf.

²⁷ Jamie Hall et al., *Effects of the Draft CAFE Standard Rule on Vehicle Safety*, SYNAPSE (Oct. 25, 2018),

http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf.

²⁸ Ibid.

inaccurate direction. When these factors are accounted for, projected sales increase with fuel efficiency standards in place.²⁹

The decrease in fuel economy (and therefore increase in fuel spending) that would result from weakening the existing standards outweigh the decreases in compliance costs. This increase in the total cost of ownership results in a projected decrease in vehicle sales of between 800,000 and 2.3 million compared to the existing standards. Because the agencies erred in both the magnitude and the direction of the impact of changes to vehicle sales that might result from changing the standards, their estimates³⁰ of fatalities avoided and vehicle sales are similarly incorrect in both magnitude and direction.

C. The rollback is based on numerous errors and unrealistic assumptions, which stands in stark contrast to how the current standards were set.

1. Summary of agencies' key errors

Modeling errors and miscalculations from the analysis for the proposed rule include:

- mischaracterizations of vehicle price trends
- unjustified inflation of compliance and vehicle ownership costs
- a flawed sales model (including incorrect assumptions about how consumers buy and retain vehicles)
- a flawed fleet share model (including inflated VMT),
- contradictory and poorly supported beliefs about consumers' valuation of fuel economy improvements, and
- outdated assumptions about the relationship between vehicle mass and safety.³¹

When these and other errors are corrected, the direction of the effect of the roll back is clear, showing the rollback slows fleet turnover, increases or has no impact on fatalities, and inflicts a significant net cost on consumers.

2. NHTSA relied on inflated costs of compliance in its proposed rule, doubling prior estimated costs of compliance relying only on unsubstantiated automaker claims and ignoring the NAS recommended approach.

The agencies consistently use very high costs of compliance without adequate justification, abandoning techniques the National Academy of Sciences (NAS) recommended they expand the

²⁹ Ibid.

³⁰ Ibid.

³¹ ACEEE, Consumers Union and Consumer Federation of America joint comments into Docket [NHTSA-2018-0067] at <https://www.regulations.gov/document?D=NHTSA-2018-0067-11731>.

use of.³² The difference in the compliance cost of achieving the augural 2025 standards and the existing 2025 GHG standards, as assessed in the 2018 proposed rule increased by over 100% from EPA’s original 2016 Proposed Determination and 2017 Final Determination.³³ Only NHTSA cost estimates are used in the proposed rule, despite their being double the cost estimated by EPA’s modeling, conducted in parallel with NHTSA. This increase is unjustified and unsupported and is largely achieved by inappropriate and unrealistic pairings of technology that do not reflect how automakers apply technology to vehicles (e.g. applying turbocharging technologies to vehicles that are already hybridized and results in a negative incremental benefit).³⁴ In fact, the estimated compliance costs in the draft TAR should be revised *further downward*, as even that estimate was too high, in part because of technologies on the market today that were not included in the agencies’ analysis.³⁵

The error of unjustified inflated costs carries over to nearly every part of the agencies’ analyses, including sales and safety impacts, in addition to overall net cost-benefit calculations. Errors from agencies’ flawed cost estimates and sales model permeate the overall cost-benefit analysis, including its turnover, fatality, and net benefits calculations.

3. *Agencies’ assumption of voluntary overcompliance is unsupported by decades of history, is misused to calculate benefits of rollback while externalizing the costs, and makes clear that the proposal does not meet the statutory “maximum feasible requirement.”*

The agencies’ modeling in the proposed rule projects automaker overcompliance after 2020 even as standards in the proposed rule flatlines. This has the effect of further underestimating costs of the rollback (since automaker investments in greater efficiency are not counted toward the rule) while still counting fuel savings from overcompliance as a benefit of their new proposed rule.³⁶ The historical record shows that fuel economy improvements have lagged when standards

³² Nat’l Research Council, *Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles*, NAT’L ACADEMIES PRESS (2015), <https://www.nap.edu/download/21744#>.

³³ See ICCT comments submitted to Docket [NHTSA–2018–0067].

³⁴ Ibid.

³⁵ Technical analysis indicates that the technology costs estimated in the draft TAR were themselves 34–40% overstated. Nic Lutsey et al., *Efficiency Technology and Cost Assessment for U.S. 2025–2030 Light-Duty Vehicles*, ICCT (March 2017), https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf. A 2018 Synapse report that uses a range of cost estimates, including cost estimates higher than ICCT, but lower than the agencies’ estimates also indicates a net cost of the proposed rule. Jamie Hall et al., *Effects of the Draft CAFE Standard Rule on Vehicle Safety*, SYNAPSE (Oct. 25, 2018), http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf.

³⁶ Tyler Comings & Avi Allison, *More Mileage for Your Money: Fuel Economy Increases While Vehicle Prices Remain Stable*, SYNAPSE (March 15, 2017), <https://consumersunion.org/wp-content/uploads/2017/03/Synapse-CU-Affordability-Report-3-15-corrected-1.pdf>.

stagnate. The agencies' assumption that fuel economy will continue to improve due to "market forces" post-2021 without increasing standards is counter to the factual record³⁷ and contradicted by their own assertions in the proposed rule that automakers struggle to sell vehicles with better fuel economy.³⁸

By assuming that all technologies with a 30-month payback will be incorporated by manufacturers even without the standards in place, yet proposing to set standards below that level, the proposed rule clearly does not meet the maximum feasible standard under EPCA. If automakers would invest in these technologies even without the standards, then that sets the floor from which maximum feasible, cost-effective standards should be established. Yet the agencies have proposed a level of fuel economy below what they claim automakers would do on their own without standards.

4. The Key to Highway Safety is Progress on Safety, not Rolling Back Standards.

The evidence shows that vehicles are getting more fuel-efficient and safer.³⁹ The past decades have shown steadily increasing fuel economy, as well as lower fatality rates. But the auto industry does not automatically improve safety. Most major safety improvements arise not from the good will of automakers or consumer demand, but through mandatory safety standards.⁴⁰ Current NHTSA leadership is not moving forward to improve safety and is instead misleading the public about the safety impacts of its "SAFE" proposed rule. This Orwellian-sounding rule does nothing to improve safety. On the other hand, there are many things that NHTSA could and should be doing to help safety and is not doing, as described below.

A. Steps NHTSA should be taking to improve safety.

As a safety agency, NHTSA is missing opportunities to reduce deaths and injuries on our roads through safety-related rulemakings. NHTSA can and should move forward on sensible safety rules -- many of them congressionally mandated -- that would help protect the public. For example, numerous initiatives -- such as on rear seat belt reminders,⁴¹ stronger testing to protect

³⁷ When standards stalled, so did fuel economy, as demonstrated by EPA's Trends report. *Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2017* (January 2018) <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGDW.pdf> at 7.

³⁸ SAFE Vehicles Rule at 43,993 and 43,260.

³⁹ Jamie Hall et al., *Effects of the Draft CAFE Standard Rule on Vehicle Safety*, SYNAPSE (Oct. 25, 2018), http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf. See also, Statement by Alliance of Automobile Manufacturers CEO Mitch Bainwol Before the Senate Energy and Natural Resources Committee (Jan. 21, 2016), <https://autoalliance.org/2016/01/21/statement-of-auto-alliance-ceo-mitch-bainwol-before-the-senate-energy-and-natural-resources-committee/>.

⁴⁰ Kahane, C. J. (2015, January). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs*. (Report No. DOT HS 812 069). Washington, DC: National Highway Traffic Safety Administration.

⁴¹ See Janette Fennell et al., *The Center and KidsAndCars.org Sue DOT/NHTSA to Force Action on Rear Seat Belt Reminder Rule*, CENTER FOR AUTO SAFETY (Aug. 16, 2017),

children,⁴² advanced driver assistance safety features (such as automatic emergency braking (AEB) that detects pedestrians and that operates at highway speeds, blind spot warning systems, and systems to verify driver engagement and alert drivers if inattentive),⁴³ vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2X) communications systems,⁴⁴ distracted driving guidelines,⁴⁵ and on-board systems to detect drunk drivers -- have the potential to save thousands of lives annually.⁴⁶ On top of all these are standards that could help reduce the growing toll of lives lost due to heavy vehicles, such as trailer underride guards, AEB for trucks, and tools to stop 18-wheelers from speeding.

NHTSA's lightweighting claims in the proposed rule are highly uncertain, at best, as described below. Market forces and past automaker trends strongly suggest that automakers will primarily remove weight from heavier vehicles, thus improving societal safety outcomes, but if NHTSA has reason to believe that automakers will use lightweighting in ways that will put Americans at risk, it should use its full investigation, recall, enforcement, and rulemaking authorities to prevent such dangerous practices.

B. How the rollback fails on safety

Most of NHTSA's claimed reductions in fatalities from the "SAFE" rule arise from modeling inconsistencies and clear errors related to inconsistent VMT assumptions and assigning fatalities to increased driving that may arise from consumers saving money. The small remainder of fatalities attributed to lightweighting as a compliance strategy is also based on flawed assumptions, described below.

<https://www.autosafety.org/cas-kidsandcars-org-sue-dotnhtsa-force-action-rear-seat-belt-reminder-rule/>; *see also* 49 U.S.C. § 30127 (2018).

⁴² *See, e.g.*, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201904&RIN=2127-AL34>, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201904&RIN=2127-AK95>, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201904&RIN=2127-AL04>

⁴³ *Real-World Benefits of Crash Avoidance Technologies*, IIHS (May 2018), www.iihs.org/media/3b08af57-8257-4630-ba14-3d92d554c2de/mYL9rg/QAs/Automation%20and%20crash%20avoidance/IIHS-real-world-CA-benefits-0518.pdf; *Driver Assistance Technologies*, NHTSA, <https://www.nhtsa.gov/equipment/driver-assistance-technologies>

⁴⁴ Federal Motor Vehicle Safety Standards and V2V Communications, 82 Fed. Reg. 3,854 (Jan. 12, 2017).

⁴⁵ Visual-Manual NHTSA Driver Distraction Guidelines for Portable and Aftermarket Devices, 81 Fed. Reg. 87,656 (Dec. 5, 2016).

⁴⁶ NHTSA, *Research on Seatbelt Interlock and Alcohol Detection Technologies*, 17 (Feb. 1, 2018), <https://www.gsa.gov/cdnstatic/NHTSA's%20Research%20on%20Seatbelt%20Interlock%20and%20Alcohol%20Detection%20Technologies.pdf>

1. *NHTSA’s own most recent statistical analysis shows that the relationship between mass reduction and fatalities is not statistically significant at standard confidence intervals (95% or even 90%).*

The agencies’ estimated fatalities attributed to lightweighting are based on counterfactual assumptions about fleetwide vehicle weight distribution. According to NHTSA’s own analysis, the fatality calculation for weight reduction includes zero in each vehicle category at the 95% CI,⁴⁷ yet the agencies extrapolate these values as the lynchpin for ascribing fatalities attributable to mass reduction to the augural standards, and fatality reductions to the “preferred alternative.” In fact, this relationship has been weakening over time (now only 85% CI for two vehicle categories and even lower for remaining three categories) indicating that modern car designs are ensuring that weight is no longer a statistically significant factor in determining vehicle safety.

2. *The agencies’ analysis does not capture the most recent trends of a weakening relationship between mass and fatality risk.*

The vehicles NHTSA uses in its analysis for mass/fatality correlation are between 8 and 17 years old,⁴⁸ and thus are unlikely to capture the current and future mass/fatality relationship of modern vehicles or the benefits of mandated safety equipment such as electronic stability control standard for the 2012 model year.⁴⁹ In addition, new advanced high-strength materials are now being used to make vehicles more fuel-efficient. The crash properties of these materials, as well as newer designs, are not reflected in the historical analysis—but vehicles designed with these materials are earning crash test ratings equal to or better than the heavier models they are replacing.

A review of modeling studies and real-world vehicle performance shows that lightweighting, when applied by skilled engineers, in a manner that does not reduce vehicle footprint, can achieve significant weight reductions while maintaining or even improving safety.⁵⁰ The Lotus Phase 2 CUV (Crossover Utility Vehicle) study incorporated a wide variety of structural body materials (aluminum, steel, magnesium and composites), used bonded construction, achieved a

⁴⁷ NHTSA & EPA Preliminary Regulatory Impact Assessment The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021 – 2026 Passenger Cars and Light Trucks, 1372 (Aug. 23, 2018), <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ld-cafe-co2-nhtsa-2127-al76-epa-pria180823.pdf>.

⁴⁸ NHTSA & EPA Preliminary Regulatory Impact Assessment The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021–2026 Passenger Cars and Light Trucks, 1374 (Aug. 23, 2018), <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ld-cafe-co2-nhtsa-2127-al76-epa-pria180823.pdf>.

⁴⁹ Federal Motor Vehicle Safety Standards; Electronic Stability Control Systems; Controls and Displays Final Rule, 72 Fed. Reg. 17235 (April 6, 2007) at <https://www.federalregister.gov/documents/2007/04/06/07-1649/federal-motor-vehicle-safety-standards-electronic-stability-control-systems-controls-and-displays>.

⁵⁰ Gregory Peterson, *Modern Vehicle Lightweighting: A Review on Safety of Reduced Weight Vehicles*, CONSUMERS UNION (Oct. 24, 2018), <https://consumersunion.org/research/modern-vehicle-lightweighting-a-review-on-safety-of-reduced-weight-vehicles/>

37% BIW weight reduction and a 31% total vehicle weight savings, and met key FMVSS crash requirements at near cost parity.⁵¹ The EDAG/GWU mid-sized passenger car (Honda Accord) study showed a 20.9% weight reduction while meeting all key performance metrics including safety, drivability, comfort, and noise.⁵² The 2011 Lightweight Silverado Study predicted a 20.8% mass reduction with comparable modeled crash test performance to the all-steel version.⁵³

Real-world examples include the 2015-2018 Ford F-150, which reduced weight by up to 700 pounds by incorporating advanced lightweight materials, while being the only pickup truck to earn a Top Safety Pick rating from IIHS in 2015.⁵⁴ It also received a 5 star rating from NHTSA, which was an improvement over the 4 star rating the previous, all-steel 2014 version of the F-150 received.⁵⁵ The 2019 Silverado base model shaved over 200 lbs. relative to the 2018 model, while also reducing MSRP. The larger premium model shaved almost 500 lbs.⁵⁶

Many attributes associated with reducing vehicle weight also contribute to better handling and shorter braking distances, and may allow an average driver to control the vehicle more effectively in an impending accident. Many real-world examples are highlighted by the Michigan Manufacturing Technology Center analysis that illustrate improved handling performance of reduced weight vehicles, which can contribute to improved safety.⁵⁷ Additionally, the deployment and increased penetration of crash avoidance technologies, such as forward collision warning (FCW), automatic emergency braking (AEB) and electronic stability control (ESC), are likely to further erode the relationship between mass and fatality risk.

As mentioned in the previous section, the agencies' sales projections are in the wrong direction because of errors in the overall cost-benefit analysis. Vehicle sales will likely decrease from rollback, which means new vehicle sales and the safety technologies that come with them will slow down under rollback.

⁵¹ Report, *Evaluating the Structure and Crashworthiness of a 2020 Model-Year, Mass-Reduced Crossover Vehicle Using FEA Modeling*, LOTUS ENG'G (Aug. 31, 2012),

https://www.arb.ca.gov/msprog/levprog/leviii/final_arb_phase2_report-compressed.pdf.

⁵² H. Singh, *Feasible Amount of Mass Reduction for Light Duty Vehicles for Model Years 2017-2025*, NHTSA (May 2013), https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/3-singh-edag-nhtsa_2013.pdf.

⁵³ Report, *Mass Reduction and Cost Analysis— Light-Duty Pickup Truck Model Years 2020-2025*, FEV (June 2015), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100MS0E.PDF?Dockkey=P100MS0E.PDF>.

⁵⁴ Forbes, *In Crash Tests, Ford's Aluminum F-150 Is The Safest Pickup* (April 12, 2016)

<https://www.forbes.com/sites/joannmuller/2016/04/12/in-crash-tests-fords-aluminum-f-150-is-the-safest-pickup/#d55d01422367>

⁵⁵ National Highway Traffic Safety Administration, <https://www.nhtsa.gov/ratings>

⁵⁶ Gregory Peterson, *Modern Vehicle Lightweighting: A Review on Safety of Reduced Weight Vehicles*, CONSUMERS UNION (Oct. 24, 2018)

<https://consumersunion.org/research/modern-vehicle-lightweighting-a-review-on-safety-of-reduced-weight-vehicles/>

⁵⁷ Gregory Peterson, *Modern Vehicle Lightweighting: A Review on Safety of Reduced Weight Vehicles*, CONSUMERS UNION (Oct. 24, 2018),

<https://consumersunion.org/research/modern-vehicle-lightweighting-a-review-on-safety-of-reduced-weight-vehicles/>

5. Conclusion

Gradual improvements to fuel economy and emission standards, like those in place today, are part of a practical and tested program to reduce fuel consumption, protect public health, maintain a competitive auto industry, and save consumers billions of dollars. Automakers have developed the technology to make better, safer, and more efficient vehicles, and federal agencies should maintain or strengthen standards to continue this progress in consumer savings and protection, not roll them back. EPA and NHTSA's actions to roll back these standards are based on flawed analysis and will cost consumers money and slow down auto sales while, at best, doing nothing to improve safety.

I would like to thank the committee for holding this hearing and appreciate the opportunity to testify today.