

**Consumers Union Comment  
Attachment A:  
Comment Body**



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Washington, DC 20590

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Consumers Union's Comments on NHTSA and EPA's Notice of Proposed Rulemaking  
"Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026  
Passenger Cars and Light Trucks"  
(Docket No. EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067)

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## **Introduction**

Consumers Union (CU), the advocacy division of Consumer Reports, urges the National Highway Traffic Safety Administration (NHTSA) and Environmental Protection Agency (EPA) (hereinafter referred to collectively as “the agencies”) to adopt the no-action alternative in its proposed rulemaking and for NHTSA to finalize the augural standards from 2012. All of the other proposed options in the Notice of Proposed Rulemaking (NPRM) erode fuel savings and do not adequately consider the mandatory statutory factors in setting the “maximum feasible standard” under the Energy Policy and Conservation Act of 1975 (EPCA), as amended by the Energy Independence and Security Act of 2007 (EISA) -- especially “the need of the United States to conserve energy.”<sup>1</sup> As Consumers Union outlined in its comments on NHTSA’s Draft Environmental Impact Statement (DEIS), setting the standard at a level lower than the augural Corporate Average Fuel Economy (CAFE) standards does not meet the statutory requirements of EPCA.<sup>2</sup> Even according to the agencies’ own estimates, the proposed rollback would increase oil consumption by ½ million barrels/day,<sup>3</sup> while costing Americans \$153 billion more on fuel,<sup>4</sup> costing the auto industry tens of thousands of jobs<sup>5</sup> and providing zero benefit to the auto industry.<sup>6</sup>

Contrary to the agencies’ assertions, the proposed rule would cost, not save, consumers money and would cost, not save, lives, as detailed below. Consumers Union supports the standards set in 2012 (“augural/existing CAFE/GHG standards” because: 1) consumers want better fuel economy than the current fleet offers, 2) these standards are economically practical and technologically feasible, and 3) these standards would save consumers money. Consumers Union opposes the “preferred

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<sup>1</sup> 49 U.S.C. § 32902(f) (2018).

<sup>2</sup> Consumers Union, Comment Letter on NHTSA’s Notice of Intent To Prepare an Environmental Impact Statement for Model Year 2022–2025 Corporate Average Fuel Economy Standards (Aug. 25, 2017), <https://www.regulations.gov/document?D=NHTSA-2017-0069-0104>.

<sup>3</sup> 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).

<sup>4</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,062 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>5</sup> Tables VIII-39 and VIII-40 include the agencies analysis of the change in auto manufacturing jobs for the CAFE program and CO<sub>2</sub> 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 (CO<sub>2</sub>) respectively between 2019 and 2030. This adds up to an average of 50,000 (CAFE) and 39,000 (CO<sub>2</sub>) jobs lost on a continuous basis throughout the analysis period for the two policies.

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,437 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>6</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,062 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

alternative,” because when the agencies’ errors in the NPRM and PRIA are corrected and reasonable assumptions are used, it is revealed that the proposed rule puts lives at risk even as it increases costs for consumers and oil consumption. Similarly, Consumers Union opposes all other alternatives weaker than the augural/existing CAFE/GHG standards because they would undermine consumer benefits.

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 in fuel costs. Automakers have developed the technology to make better, safer, and more efficient vehicles, and federal agencies should maintain or strengthen augural/existing standards to continue this progress in consumer savings and protection. Both Consumer Reports’ subscriber and nationally representative surveys demonstrate overwhelming public support for continuing to strengthen fuel economy standards. Further, Consumers Union has collected 51,764 signatures from consumers in support of strong CAFE standards.

New analyses described in detail below indicate that fuel economy and safety have improved together;<sup>7</sup> that rolling back the standards will cost consumers money and is unlikely to affect vehicle sales or safety outcomes in a positive way;<sup>8</sup> and that the kind of lightweighting incentivized under the augural/existing standards is likely to improve both safety and fuel economy.<sup>9</sup> Additional recent research shows that fuel economy is the number one attribute vehicle owners would like to see improved;<sup>10</sup> that consumers are willing to pay more for improvements to fuel economy than for improvements to acceleration or premium trim;<sup>11</sup> and yet automakers emphasize performance in their vehicle advertisements three times more often than fuel economy, undermining their

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<sup>7</sup> 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](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>8</sup> 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](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>9</sup> 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/>. (Attachment 2).

<sup>10</sup> *2018 Automotive Fuel Economy Survey Report*, CONSUMERS UNION (July 30, 2018), <https://consumersunion.org/research/2018-automotive-fuel-economy-survey-report/> (Attachment 3).

<sup>11</sup> Christine Kormos & Reuven Sussman, *Auto Buyers’ Valuation of Fuel Economy: A Randomized Stated Choice Experiment* (June 12, 2018) <https://consumersunion.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018-%E2%80%9393-Auto-buyers-valuation-of-fuel-economy.pdf>. (Attachment 4).

arguments about consumer interest in fuel economy.<sup>12</sup> Prior Consumers Union analyses have indicated that strong CAFE/GHG standards will improve consumer welfare and help meet consumer expectations,<sup>13</sup> and are unlikely to affect the entry-level price of new vehicles or the affordability of used vehicles (which constitute about 70 percent of light-duty vehicle purchases).<sup>14</sup> In addition to the environmental and health benefits, consumers are likely to see significant net savings from strong standards, especially light truck buyers.<sup>15</sup>

## Who We Are

Consumers Union is the advocacy division of Consumer Reports, an independent, nonprofit membership organization that works side by side with consumers to create a fairer, safer, and healthier world. Consumer Reports conducts extensive consumer surveys and research and buys nearly 70 new vehicles each year to test at our Auto Test Track in Connecticut, to generate independent expert reviews and ratings related to fuel economy, reliability, safety, and other attributes important to consumers.

CU represents the interests of consumers and has provided comments on fuel economy-related public dockets for over a decade, including the setting of the 2017-2025 standards in 2012,<sup>16</sup> the Draft Technical Assessment Report in 2016,<sup>17</sup> the final

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<sup>12</sup> Gwen Arnold, Andrew Leach & Leila Tabrizi, *Content Analysis of Unique Auto Ads in the United States: 2005, 2012, 2015, and 2017*, CONSUMERS UNION (Oct. 19, 2018), <https://consumersunion.org/wp-content/uploads/2018/10/Final-Report-Auto-Ad-Content-Analysis-080318-1-1-1.pdf>. (Attachment 5).

<sup>13</sup> Malcolm Hazel et al., *Investigation of Relationship between Fuel Economy and Owner Satisfaction*, CONSUMERS UNION (June 2016), <https://consumersunion.org/wp-content/uploads/2016/06/CU-MPG-Satisfaction-report-final.pdf>. (Attachment 6).

<sup>14</sup> 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>. (Attachment 7).

<sup>15</sup> 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>. (Attachment 7).

<sup>16</sup> Consumers Union, Comments for Proposed Rule 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards (Feb. 10, 2012), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2010-0799-9454>.

<sup>17</sup> Consumers Union, Comments on Midterm Evaluation Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards (Sept. 21, 2016), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-3511>.

determination in 2017,<sup>18</sup> the Draft Environmental Impact Statement in 2017,<sup>19</sup> and the second final determination in 2018.<sup>20</sup>

## **1. Overview of Agencies' Errors**

### **a. The agencies' conclusion that the proposed rule would save money and lives rests on inaccurate data and assumptions and unsound methodology.**

While the agencies claim, "The proposed SAFE Vehicles Rule seeks to ensure that government action on these standards is appropriate, reasonable, consistent with law, consistent with current and foreseeable future economic realities, and supported by a transparent assessment of current facts and data,"<sup>21</sup> the proposed rule fails these objectives on all counts. While the agencies' draft TAR in 2016 was indeed a "transparent assessment of current facts and data," it is not the basis upon which the agencies now rely for their proposal. The new proposal is based instead upon unreasonable assumptions, mistaken logic, insufficient modeling rigor, and unsupported legal arguments, as detailed below. EPA indicated during its first stage of this process that an industry request<sup>22</sup>--not data--was the driver for rolling back the standards and finding that standards set in 2012 were deemed no longer appropriate, ignoring the draft TAR in exchange for that industry request and their unsupported claims.<sup>23</sup> If the EPA's second final determination had relied on either the same draft TAR used in the first final determination, or a data-driven update to that TAR, then the reasonable conclusion

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<sup>18</sup> U.S. Environmental Protection Agency, Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation (Jan. 13, 2017), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-6270>; Consumers Union, 2016 Vehicle Fuel Economy Poll Nationally Representative Telephone Survey (June 20, 2016), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-3511>.

<sup>19</sup> Consumers Union, Comments on EPA's Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation (Dec. 23, 2016), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-6028>.

<sup>20</sup> Consumers Union, Comments on EPA's Request for Comment on Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles (Oct. 5, 2017), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9166>.

<sup>21</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42,987 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>22</sup> U.S. Environmental Protection Agency, Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022-2025 (March 2017), <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas> (citing Letter from CEO Mitch Bainwol on Behalf of the Alliance of Automobile Manufacturers to Mr. Scott Pruitt, U.S. Environmental Protection Agency (Feb. 21, 2017), <https://autoalliance.org/wp-content/uploads/2017/02/Letter-to-EPA-Admin.-Pruitt-Feb.-21-2016-Signed.pdf>). (Attachment 8).

<sup>23</sup> See ICCT Word Frequency Diagram, CONSUMERS UNION (Oct. 24, 2018). (Attachment 9).

would have remained the same as that of the first final determination: the existing standards finalized in 2012 remain appropriate.

EPA's departure from standard practice and appropriate process under the APA is carried over into the agencies' joint NPRM. While the NPRM includes modeling and analysis lacking in EPA's second final determination, it suffers from errors, as described in detail below, with respect to cost estimates, vehicle sales, safety, and consumer impacts.

The following paragraph from the NPRM encapsulates the agencies' problematic, and unsupported reasoning, which fails to meet its obligations under the law:

*“There remains no single technology that the majority of vehicles made by the majority of manufacturers can implement at low cost without affecting other vehicle attributes that consumers value more than fuel economy and CO<sub>2</sub> emissions. Even when used in combination, technologies that can improve fuel economy and reduce CO<sub>2</sub> emissions still need to (1) actually work together and (2) be acceptable to consumers and avoid sacrificing other vehicle attributes while also avoiding undue increases in vehicle cost. Optimism about the costs and effectiveness of many individual technologies, as compared to recent prior rounds of rulemaking, is somewhat tempered; a clearer understanding of what technologies are already on vehicles in the fleet and how they are being used, again as compared to recent prior rounds of rulemaking, means that technologies that previously appeared to offer significant “bang for the buck” may no longer do so. Additionally, in light of the reality that vehicle manufacturers may choose the relatively cost-effective technology option of vehicle lightweighting for a wide array of vehicles and not just the largest and heaviest, it is now recognized that as the stringency of standards increases, so does the likelihood that higher stringency will increase on-road fatalities. As it turns out, there is no such thing as a free lunch.”*

Achieving compliance with CAFE/GHG standards has never relied on a single technology for compliance; no silver bullets are needed. In fact, the CAFE/GHG performance-based standards are just that, based on performance, enabling manufacturers to find solutions that best fit at the least cost. And as shown in the TAR and other independent reports, the pathways to compliance are plentiful.<sup>24</sup> Improving fuel economy is more than “acceptable to consumers,” as demonstrated by a positive willingness to pay for it.<sup>25</sup> The agencies' reference to so-called “sacrificing other vehicle

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<sup>24</sup> See *Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards* (July 2016), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100OXEO.PDF?Dockkey=P100OXEO.PDF>. See also 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](https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf). (Attachment 10).

<sup>25</sup> Christine Kormos & Reuven Sussman, *Auto Buyers' Valuation of Fuel Economy: A Randomized Stated Choice Experiment* (June 12, 2018) <https://consumersunion.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018-%E2%80%9393-Auto-buyers-valuation-of-fuel-economy.pdf>. (Attachment 4).



attributes” lacks data to back up this claim; and in fact, vehicles have been increasing acceleration and improving safety and fuel economy, all while prices have remained stable.<sup>26</sup> Further, lightweighting as a cost-effective compliance strategy is nothing “new,” as demonstrated by the Ford-F150,<sup>27</sup> which stands in sharp contrast to the agencies reliance on unrealistic applications of mass reduction and coefficients that are not statistically significant as support for claims of fatalities.<sup>28</sup>

Lastly, it is true that “there is no such thing as a free lunch,” and it is consumers who will have to pay the price if the agencies follow through on this proposal to roll back the CAFE/GHG standards.

## **2. Cost-Benefit Analysis of Standards for Consumers**

The agencies consistently use very high costs of compliance without adequate justification, abandoning techniques the National Academy of Sciences (NAS) recommended they expand the use of,<sup>29</sup> and undervaluing benefits of improving fuel economy and reducing greenhouse gas emissions. For example, as shown in the joint comment from Consumers Union, Consumer Federation of America, and ACEEE (“joint CU/CFA/ACEEE comment”) the agencies’ sales model ignores consumer willingness-to-pay for fuel economy and the value of fuel economy.<sup>30</sup> In addition, the agencies’ project automaker overcompliance after 2020 even as the rule flatlines, which has the effect of 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.<sup>31</sup>

### **a. Inflated cost of compliance**

The agencies estimate an average price increase for a MY2026 vehicle of \$2,700 compared to MY 2016, and \$2,000 compared to their “Preferred Alternative” (which

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<sup>26</sup> See *Fuel Saving Innovations, Two Decades of Fuel-Economy Performance*, CONSUMER REPS. (APR. 2008) (Attachment 35); U.S. Environmental Protection Agency, EPA-420-R-18-001, Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2017 7 (Jan. 2018), <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGDW.pdf>; 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>. (Attachment 7).

<sup>27</sup> “Aluminum for us is about more than weight: it handles better, brakes faster, hauls more, tows more. We were able to put that weight savings into more capability for the customer. We thought it was the perfect material for what customers do with their vehicles.” Sustainability Report 2017/18, Ford Motor Company; <https://corporate.ford.com/microsites/sustainability-report-2017-18/customers-products/reducing-emissions/fuel-economy.html>.

<sup>28</sup>The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,111 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>29</sup> 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#>. (Attachment 11).

<sup>30</sup> See joint CU/CFA/ACEEE comment submitted to Docket [NHTSA–2018–0067].

<sup>31</sup> 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>. (Attachment 7).

assumes the market will drive some fuel economy improvement).<sup>32</sup> These estimates represent a dramatic (and largely unexplained) departure from even the agencies' own prior analyses. For example, in the original FRM, EPA estimated average per-vehicle incremental compliance costs of only \$1,182 between MY 2020 and MY 2025.<sup>33</sup> EPA's subsequent draft TAR analysis revised this figure further downward, finding that due to technological advances, compliance costs would be only \$1,017.<sup>34</sup> And as noted in ICCT's analysis of the proposed rule, the difference in the compliance cost of achieving the augural 2025 standards and the existing 2025 GHG standards, as assessed in the 2018 NPRM, increased by 50-100% from the joint-agency Draft TAR from 2016, and over 100% from EPA's original 2016 Proposed Determination and 2017 Final Determination.<sup>35</sup> This increase is unjustified and unsupported. 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.<sup>36</sup> The agencies' cost-benefit analysis is unsubstantiated and flawed by its reliance on inflated compliance and vehicle costs. 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.

#### **b. Low estimates of fuel savings**

The agencies' use of AEO 2017 instead of AEO 2018 fuel prices underestimates the value of fuel savings from the augural/existing standards. While this may have been due to NHTSA's need to start the analysis before AEO 2018 was available, a Synapse analysis finds the difference in fuel price estimates when combined with a doubling of previous used VMT price rebound value results in underestimating fuel savings from the augural/existing standards by at least \$70 billion.<sup>37,38</sup>

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<sup>32</sup> See The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,263-64 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>33</sup> Regulatory Impact Analysis: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA-420-R-12-016, August 2012, at Table 7.4-5, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZI1.PDF?Dockey=P100EZI1.PDF>.

<sup>34</sup> See *Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards (July 2016)*, Table 12.17, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100OXEO.PDF?Dockey=P100OXEO.PDF>.

<sup>35</sup> See ICCT comments submitted to Docket [NHTSA–2018–0067].

<sup>36</sup> 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](https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf). (Attachment 10). A new 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, 27 (Oct. 25, 2018), [http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety\\_18-062\\_2.pdf](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1)

<sup>37</sup> 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>. (Attachment 7).

<sup>38</sup> See Ken Small comments on rebound submitted to Docket [NHTSA–2018–0067].

The agencies' new proposal partially offsets the consumer losses of lower fuel economy by raising the cost of driving and limiting vehicle miles traveled (VMT), thus yielding reduced estimates of emissions and fuel use attributable to consumers driving less due to higher costs. However, reduced VMT from higher fuel costs (rebound) indicates a consumer welfare loss (people choose to drive more thanks to higher fuel economy because it is welfare enhancing), but the agencies' analysis fails to account for the loss created by restrained VMT achieved by raising fuel costs for consumers.

### **c. Market projections externalize costs of roll back**

- 1. The agencies' market-based projections of overcompliance when standards are frozen are unsupported.*

The agencies imply in the NPRM's sections on sales impacts that OEMs struggle to sell more efficient vehicles,<sup>39</sup> but then they inexplicably assume that consumer demand and market forces will continue to increase fuel economy past 2021 even though the standards are frozen at 2020 levels.<sup>40</sup> The agencies' assumption that fuel economy will continue to improve due to "market forces" post-2021 without increasing standards is counter to the factual record<sup>41</sup> and contradicted by their own assertions in the proposed rule that automakers struggle to sell vehicles with better fuel economy.

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.

### **d. Affordability of fuel-efficient vehicles**

Errors from agencies' flawed cost estimates and sales model permeate the overall cost-benefit analysis, including its turnover, fatality, and net benefits calculations. When these and other errors are corrected, the direction of the impact of the roll back is reversed, so the rollback slows fleet turnover, increases or has no impact on fatalities, and inflicts a net cost on consumers.

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<sup>39</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,993 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85) ("...the likelihood that a large majority of American consumers could consequently continue to place a higher value on vehicle attributes other than fuel economy, it makes manufacturers' ability to sell light vehicles with ever higher fuel economy and ever-lower carbon dioxide emissions increasingly difficult").

<sup>40</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,260 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>41</sup> 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), at 7, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100TGDW.pdf>.

1. *The proposed rule will decrease consumer savings.*

Contrary to the agencies' assertions, the proposed rule will cost consumers money. In fact, the preferred alternative would impose a net cost on consumers relative to finalizing the standards issued in 2012, because the loss to fuel savings is greater than the reduction in vehicle prices. According to an MJ Bradley analysis that uses reasonable compliance costs, freezing the standards in 2020 would cost the average household an additional \$200-500 each year, or \$1,200 to \$3,000 over 6 years, the typical length of time a family owns a car.<sup>42</sup> They also find that a vehicle meeting the 2025 existing/augural standards would start saving vehicle buyers in the first month of ownership, because the monthly fuel savings outweighs the additional monthly payment from the technology costs. A separate analysis from Synapse finds that the proposed rollback will increase net costs to consumers by \$130-\$370 billion, equivalent to \$400 and \$1,100 per new vehicle through 2035.<sup>43</sup> While these analyses utilize different methodologies, they are consistent in their application of reasonable cost estimates and assumptions and are aligned in their conclusions that the proposed rollback will harm consumers. Once the agencies' adoption of over-inflated technology cost estimates (consistent with requests of the auto industry), are corrected, cost-effective improvements to fuel economy will be far from exhausted in 2020, especially for larger vehicles, which have the largest room for improvement and carry the highest price tags and profit margins.<sup>44</sup>

2. *Fuel economy improvements have not negatively impacted vehicle affordability.*

Fuel economy has improved over the last decade, while entry-level new vehicle prices have remained flat and used vehicle prices have fallen.<sup>45</sup> As evidenced by NHTSA's

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<sup>42</sup> M.J. Bradley & Associates, *Clean Car Roll Back*, EVNTL. DEFENSE FUND (July 20, 2018), [https://www.edf.org/sites/default/files/MJ\\_Bradley\\_Clean\\_Cars\\_rollback\\_report.pdf](https://www.edf.org/sites/default/files/MJ_Bradley_Clean_Cars_rollback_report.pdf). (Attachment 12).

<sup>43</sup> Per vehicle numbers calculated by dividing the aggregated perceived net price premium from Table 7 by the total number of new vehicles from the scenario which was 338,000,00 for the baseline plus or minus the sales change for each scenario.

Jamie Hall et al., *Effects of the Draft CAFE Standard Rule on Vehicle Safety*, Synapse, 27 (Oct. 25, 2018), at 27, [http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety\\_18-062\\_2.pdf](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>44</sup> See e.g. Jesse Snyder, *Crossovers and SUVs Fatten Profit Margins*, AUTOMOTIVE NEWS (July 24, 2017, 12:01 AM), <http://www.autonews.com/article/20170724/RETAIL01/170729911/crossovers-suvs-fatten-profit-margins> (explaining that "even in the increasingly competitive compact segments, SUVs/crossovers (such as the Toyota RAV4 and Ford Escape) sold for \$7,889, or 39 percent, more than compact cars such as the Toyota Corolla and Ford Focus"). (Attachment 13).

<sup>45</sup> 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>. (Attachment 7).

own figure I-2, its alleged “affordability gap” between median income and new car prices opened up in the 1990s, when fuel economy was flat and SUVs first took off.<sup>46</sup> The trends toward larger vehicles and luxury features have been the primary drivers of average vehicle price increases in nominal dollars,<sup>47</sup> but when adjusting for inflation, the average price is also relatively flat and tracks well below the CPI.<sup>48</sup> A further discussion of vehicle price trends is found in the joint CU/CFA/ACEEE comments.<sup>49</sup> In addition, consumer preferences have shifted toward larger vehicles in part because these vehicles have seen significant improvements in fuel economy, which lowers operating costs and thus increases their appeal.<sup>50</sup>

### **3. Safety Considerations**

#### **a. Rolling back fuel economy standards does not save lives**

The evidence shows that vehicles are getting more fuel-efficient and safer.<sup>51</sup> The past decades have shown steadily increasing fuel economy, as well as lower fatality rates.

Despite this, the agencies assert that the existing fuel economy and GHG standards will significantly impact public safety by leading to *more* fatalities and injuries. But the agencies’ basis for these claims is flawed, and the outcome is more likely to be no effect on safety or lives saved from the augural/existing standards.

The agencies assert that the rollback will save more than 12,600 lives (and prevent additional injuries) compared to the augural CAFE standards, and more than 15,600

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<sup>46</sup> 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).

<sup>47</sup> Alan Baum & Dan Luria, *Affordability of Vehicles Under the Current National Program in 2022-2025 for Detroit Three Automakers*, CERES (Dec. 19, 2016), <https://www.ceres.org/sites/default/files/reports/2017-05/Affordability%20Analysis.pdf>. (Attachment 14).

<sup>48</sup> 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>. (Attachment 7).

<sup>49</sup> See joint CU/CFA/ACEEE comment submitted to Docket [NHTSA–2018–0067].

<sup>50</sup> Jeff S. Bartlett, *The Most Fuel-Efficient SUVs*, CONSUMER REPORTS (Oct. 3, 2018), <https://www.consumerreports.org/suvs/the-most-fuel-efficient-suvs-best-mpg/>. (Attachment 15).

<sup>51</sup> 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](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1). 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/> (stating that “[n]ew vehicles are among the safest, environmentally cleanest and most fuel efficient we’ve ever seen on U.S. roads... We are experiencing the most innovative time in automotive history. Automakers continue to drive a revolution in vehicle safety and fuel-efficient technologies. Until recently, these goals – maximizing safety and maximizing environmental progress – were not always aligned. But the very nature of today’s crash avoidance technology helps harmonize safety and environmental objectives.”). (Attachment 19).

lives (and additional injuries) compared to the existing CO<sub>2</sub> standards.<sup>52</sup> This assertion is unsupported, as described below.

With respect to the fatalities and non-fatal crash costs attributed to mass reduction, the agencies themselves admit that, “None of the estimated effects have 95-percent confidence bounds that exclude zero, and thus are not statistically significant at the 95-percent confidence level.”<sup>53</sup> In other words, fatalities from changes made to vehicles as a result of the standards—even taking the agencies’ analysis at face value—could go up slightly, could go down slightly, or could be zero. It is arbitrary to justify a decision not to fulfill the agencies’ statutory obligations on a projection of fatality impacts that is statistically indistinguishable from zero.

In addition, the agencies’ analysis does not capture the trends of a weakening relationship between mass and fatality risk. A review of peer reviewed research and real world crash tests shows that vehicles can achieve significant weight reduction with comparable or even improved vehicle safety performance, and minimal increases in vehicle production costs.<sup>54</sup> Further, the best evidence available to the agencies—which the agencies have not considered—shows that manufacturers will predominantly lightweight their heavier vehicles, as there is greater opportunity for weight savings and it safer to do so, leading to overall safety gains.<sup>55,56</sup>

The fatalities and non-fatal crash costs attributed to rebound come from the agencies’ projections of the increased driving due to the fact that new, more fuel-efficient vehicles will be cheaper to drive. Even if the rebound effect were as large as the agencies project, which is not supported by the best available research,<sup>57</sup> the increased driving that results from the consumer choice to drive more—and the fatalities that result from

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<sup>52</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, Tables II-74 and II-77, (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>53</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,111 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>54</sup> 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/>. (Attachment 2)

<sup>55</sup> See News Release, *Automotive Aluminum Industry Statement on Today’s EPA Determination on Emissions Regs*, DRIVE ALUMINUM (Aug. 2, 2018), <https://www.drivealuminum.org/news-releases/automotive-aluminum-industry-statement-on-todays-epa-determination-on-emissions-regs/>. (Attachment 20).

<sup>56</sup> See NRDC comment (October 2018), Appendix A: Evaluation of Mass Reduction Assumptions in NHTSA Volpe Model submitted to Docket [NHTSA–2018–0067].

<sup>57</sup> See Kenneth Gillingham, et al., *Heterogeneity in The Response to Gasoline Prices: Evidence From Pennsylvania and Implications For The Rebound Effect*, 52 Energy Economics S41-S52 (Dec. 2015) (Attachment 21); see also Tom Wenzel & K. Sydney Fujita, *Elasticity of Vehicle Miles of Travel to Changes in the Price of Gasoline and the Cost of Driving in Texas*, LAWRENCE BERKELEY NAT’L LAB. (March 2018) (Attachment 22).

increased driving—are not appropriately attributed to the standards. The agencies themselves concede this,<sup>58</sup> though they nevertheless, erroneously, include rebound fatalities in their justifications supporting the rollback.<sup>59</sup> These fatalities stemming from an increase in driving are not relevant to decisions about the stringency of the standards.

The remaining projected fatalities are the product of the agencies' scrappage model, sales model, and dynamic fleet share model (what the agencies label "sales impacts"). As numerous experts and stakeholders have pointed out, these models are deeply flawed, and any reliance on them to calculate fatalities (or anything else) is unfounded. Moreover, they (improperly) predict a massive expansion of fleet size, which leads - automatically, under the agencies' modeling - to many more vehicle miles traveled. The unjustified retention of existing vehicles and the vehicle miles they are assumed to travel are the sole causes of the fatalities predicted by the scrappage model. The fatalities projected by the fleet share model are similarly wholly the result of an unsupported projected switch from car purchases to truck purchases, and the unsupported assumption that the same individuals will drive more if they buy a truck than they would have if they had purchased a car.

The increase in the existing fleet size and the increase in VMT that results from these models are not justified by the agencies, and run directly counter to the economic literature. Further, even without the appropriate corrections to the models or their fleet size and VMT projections, there is no basis to attribute VMT fatalities to fuel economy standards. As noted above, the agencies state that they consider "rebound" VMT "to be freely chosen rather than imposed by CAFE [standards],"<sup>60</sup> and should not attribute these fatalities to increased fuel economy standards. Inconsistent with their treatment of rebound VMT, however, the agencies do attribute "scrappage-induced" VMT fatalities (and dynamic fleet share-induced VMT fatalities) to increased fuel economy standards.

There are many important ways to make driving safer, and we urge the Administration to pursue those opportunities through the finalization of unfinished vehicle safety standards, enhancements to NHTSA's NCAP program, improvements in road design, efforts to reduce impaired driving, and efforts to reduce the frequency of passengers traveling in vehicles without wearing seatbelts, as elaborated in subsection c below.

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<sup>58</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,107 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>59</sup> See The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,266 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85). See Ken Small comments on rebound submitted to Docket [NHTSA-2018-0067].

<sup>60</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,148 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

This is a core part of NHTSA's mission. However, reducing driving and traffic-related fatalities by making driving more expensive and by (allegedly) increasing scrappage (via a deeply flawed scrappage model) are not appropriate approaches to protecting people from their choice to drive. Attributing fatalities from a projected increase in driving to the fuel economy and greenhouse gas emission standards is inconsistent with the agencies' own statements. Furthermore, citing the risks of increased driving as a rationale for rolling back these standards highlights NHTSA's recent lack of progress on improving highway safety and represents a failure of the agencies to fulfill their duties to address the nation's clear need to save energy and improve public health by reducing vehicle emissions.

It is worth noting in this context that the agencies do not provide a plausible justification for departing from their prior practice of using fatalities-per-VMT as the relevant safety metric; the prior practice automatically accounts for the fact that mobility has value, and that the federal government's broad goal should be to ensure that the driving that individuals choose to do is as safe as possible. Moreover, the fatalities rates (by model year) that the agencies have now developed to calculate the total fatalities (by multiplying those rates by the total projected VMT) are overestimated, further undermining the reliability of these projections.<sup>61</sup>

As a safety agency, NHTSA has critical opportunities to improve safety, but weakening fuel economy standards is not one of them. NHTSA could and should move forward on safety regulations and other steps that will have a real and substantial effect on improving safety.

## **b. Mass reduction and lightweighting**

The agencies have not justified their departure from their own prior analysis recognizing that mass reduction from small cars is unlikely.<sup>62</sup> The agencies' findings that the effects from lightweighting will be negative run counter to the evidence, and are contradicted by the agencies' own modeling that shows mass reductions in larger footprint vehicles have a positive safety outcome. The agencies have also not included the influence of mass reductions achieved through the substitution of advanced materials with improved crash properties. In modeling studies and real world crash tests

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<sup>61</sup> 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](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>62</sup> See *Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards (July 2016)* at p. 8-28, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100XEO.PDF?Dockey=P100XEO.PDF>.



these materials have been shown to achieve similar or improved crash performance in lightweight vehicles in comparison to their heavier counterparts.<sup>63</sup> Instead, the agencies estimate higher fatalities from mass reduction, which is counter to strong evidence showing that removing weight from most vehicle classes is either safety neutral or reduces fatality risk, that reducing weight from the fleet overall while maintaining size reduces societal fatalities, and that the influence of mass on fatality risk has been weakening over time.<sup>64</sup> Ironically, even with the arbitrary use of a non-zero value and the failure to capture the weakening relationship between mass and safety, mass reduction only accounts for 1-3% of all the fatalities estimated in the NPRM, but these also rely on unreasonable assumptions.

Statistical analysis of the historic relationship between mass and fatalities and NHTSA's previous analysis indicate that footprint-based fuel economy standards are either safety neutral or can improve safety when weight is removed from the heaviest vehicles.<sup>65</sup> While the NPRM and PRIA coefficients for the safety impact of mass reduction by class support this premise,<sup>66</sup> and the agencies acknowledge that attribute-based standards help safety,<sup>67</sup> the agencies nonetheless apply uneconomic and unreasonable

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<sup>63</sup> 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/>. (Attachment 2)

<sup>64</sup> 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#> (Attachment 11); Tom Wenzel, *Assessment of NHTSA's Report "Relationships Between Fatality Risk, Mass and Footprint in Model Year 2004-2011 Passenger Cars and LTVs"*, LAWRENCE BERKELEY NAT'L LAB. (March 28, 2018), <https://cloudfront.escholarship.org/dist/prd/content/qt4726g6jq/qt4726g6jq.pdf?t=p6dou3> (Attachment 23); Antonio Bento et al., *The Effect of Fuel Economy Standards on Vehicle Weight Dispersion and Accident Fatalities*, NBER (April 2017), <https://www.nber.org/papers/w23340.pdf> (Attachment 24).

<sup>65</sup> Compare Tom Wenzel, *Assessment of NHTSA's Report "Relationships Between Fatality Risk, Mass and Footprint in Model Year 2004-2011 Passenger Cars and LTVs"*, LAWRENCE BERKELEY NAT'L LAB. (March 28, 2018), <https://cloudfront.escholarship.org/dist/prd/content/qt4726g6jq/qt4726g6jq.pdf?t=p6dou3> (Attachment 23), with Antonio Bento, Kenneth Gillingham & Kevin Roth, *The Effect of Fuel Economy Standards on Vehicle Weight Dispersion and Accident Fatalities*, NBER (April 2017), <https://www.nber.org/papers/w23340.pdf> (noting that the agencies reached this same conclusion in the 2012 rule making, and in the TAR) (Attachment 24). 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#>. (Attachment 11).

2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62741-46 (Oct. 15, 2012) (to be codified at 40 C.F.R. pt. 85); See *Draft Technical Assessment Report for Model Year 2022–2025 Light Duty Vehicle GHG Emissions and CAFE Standards (July 2016)*, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100XEO.PDF?Dockey=P100XEO.PDF>.

<sup>66</sup> NHTSA and 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-pria-180823.pdf>.

<sup>67</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,016 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

assumptions that the lightest vehicles will shed significant weight, and fail to take into account the advanced high-strength materials that are used now and will be used in the future to make vehicles more fuel efficient while maintaining or improving safety.

1. *Mass reduction from heavier vehicles is economic and practicable, while mass reduction from the lightest vehicles is less economic, and unlikely to occur.*

Depending on the approach taken, removing weight from the lightest vehicles can harm safety, while removing weight from the heaviest vehicles clearly benefits safety. And the most cost-effective lightweighting and market trends indicate that automakers have and will remove weight from heavier vehicles. The Aluminum Association's analysis based on industry-reported data, "Recent and Planned Weight Reduction by Vehicle" demonstrates that no weight reductions are planned for the smallest vehicles, and that the largest mass reductions are planned for the largest vehicles.<sup>68</sup>

The Ducker report and database, based on input from OEMs and their suppliers, states that mass reductions will largely occur from "full frame vehicles, large unibody SUVs, minivans, luxury sedans and PHEV/ZEVs" through 2025.<sup>69</sup> This is consistent with their findings for vehicles from MY2012-MY2020, which show an average increase in aluminum content of 324 lbs. for pickups, 81 lbs. for SUVs and CUVs, and only 1lb. and 23 lbs. for the two smallest car segments.

Analysis of the economics of lightweighting show why this is the case. Smaller vehicles are by definition lower weight, and are often also lower cost; alternatively, larger vehicles are heavier and often more expensive. For example, a 2018 Chevrolet Spark LS hatchback has an MSRP of \$13,050 and weighs 2,246 pounds; the cost per pound is \$5.81. Compare this to a 2018 Chevrolet Malibu L, a mid-size car, which has an MSRP of \$21,680 and weighs 3,086 pounds; the cost per pound is \$7.03. These cost differentials allow higher-priced vehicles to use more expensive materials such as UHSS, aluminum and magnesium, and still maintain a competitive MSRP.<sup>70</sup>

Research from the NRDC shows that existing trends in lightweighting vehicles are concentrated almost exclusively on larger vehicles, and are expected to continue along this trend through at least 2025.<sup>71</sup> The research also explores trends in weight for the

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<sup>68</sup> See News Release, *Automotive Aluminum Industry Statement on Today's EPA Determination on Emissions Regs*, DRIVE ALUMINUM (Aug. 2, 2018), <https://www.drivealuminum.org/news-releases/automotive-aluminum-industry-statement-on-todays-epa-determination-on-emissions-regs/>. (Attachment 20).

<sup>69</sup> Summary Report, *Aluminum Content in North American Light Vehicles 2016 to 2028*, DUCKER WORLDWIDE (July 2017), [http://www.drivealuminum.org/wp-content/uploads/2017/10/Ducker-Public\\_FINAL.pdf](http://www.drivealuminum.org/wp-content/uploads/2017/10/Ducker-Public_FINAL.pdf). (Attachment 25).

<sup>70</sup> 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/> (noting the detailed analysis at Section VII). (Attachment 2).

<sup>71</sup> See NRDC comment (October 2018), Appendix A: Evaluation of Mass Reduction Assumptions in NHTSA Volpe Model submitted to Docket [NHTSA-2018-0067].

top 10 compact vehicles (representing 85% of the market segment) from 2000 to 2017, and finds that automakers have largely increased weight in this segment over time. Specifically, the NRDC finds a sales-weighted-average increase in weight of 125 lbs from MY2010 to MY2018. Based upon these trends, the weight distribution of the fleet is most likely to narrow under the existing standards, resulting in a net safety benefit.

Despite the above body of evidence, the agencies have, without sufficient justification, modified their modeling parameters to significantly increase weight reductions to small and large passenger cars relative to their modeling in the prior rulemaking. This change was made without any factual basis or analysis to support it. Reverting to the previously used parameters on lightweighting vehicles is more consistent with actual experience and realistic forecasts, and would likely lead to projected safety improvements from the current standards.

2. *NHTSA's own most recent statistical analysis shows that the relationship between mass reduction and fatalities is not statistically significant at the 95% CI.*

According to NHTSA's own analysis, the fatality calculation for weight reduction includes zero in each vehicle category at the 95% CI,<sup>72</sup> yet the agencies extrapolate these values as the lynchpin for ascribing fatalities attributable to mass reduction to the aural standards, and fatality reductions to the "preferred alternative." In fact, this relationship has been weakening (95% CI, then 90% CI, and now only 85% CI for two vehicle categories and even lower for remaining three categories).

3. *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,<sup>73</sup> 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 starting in the 2012 model year.<sup>74</sup> 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

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<sup>72</sup> NHTSA and 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-pria-180823.pdf>.

<sup>73</sup> NHTSA and 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-pria-180823.pdf>.

<sup>74</sup> 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>.

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.

As demonstrated by MMTC, 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.<sup>75</sup> 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 37% BIW weight reduction and a 31% total vehicle weight savings, and met key FMVSS crash requirements at near cost parity.<sup>76</sup> 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.<sup>77</sup> The 2011 Lightweight Silverado Study predicted a 20.8% mass reduction with comparable modeled crash test performance to the all-steel version.<sup>78</sup>

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.<sup>79</sup> It also received a 5 star rating from NHTSA. This was an improvement over the 4 star rating the previous, all-steel 2014 version of the F-150 received.<sup>80</sup> Chevy has followed suit implementing some of the weight savings from the 2011 modeling study. The 2019 Silverado base model shaves over 200 lbs. relative to the 2018 model, while also reducing MSRP. The larger premium model shaves almost 500 lbs.<sup>81</sup>

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 crash. Many real-world examples are

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<sup>75</sup> 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/>. (Attachment 2).

<sup>76</sup> 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](https://www.arb.ca.gov/msprog/levprog/leviii/final_arb_phase2_report-compressed.pdf). (Attachment 26).

<sup>77</sup> 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](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/3-singh-edag-nhtsa_2013.pdf). (Attachment 27).

<sup>78</sup> 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?Dockey=P100MS0E.PDF>. (Attachment 28).

<sup>79</sup> Joann Muller, *In Crash Tests, Ford's Aluminum F-150 Is The Safest Pickup* Forbes, (Apr 12, 2016), <https://www.forbes.com/sites/joannmuller/2016/04/12/in-crash-tests-fords-aluminum-f-150-is-the-safest-pickup/#d55d01422367>.

<sup>80</sup> 2014 Ford F-150 Regular Cab, NHTSA Ratings, (Accessed Oct 26, 2018), <https://www.nhtsa.gov/vehicle/2014/FORD/F-150%252520REGULAR%252520CAB/PU%252520FRC/4x2>, subset of <https://www.nhtsa.gov/ratings>.

<sup>81</sup> 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/>. (Attachment 2).

highlighted by MMTC that illustrate improved handling performance of reduced weight vehicles, which can contribute to improved safety.<sup>82</sup> 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.

*4. NHTSA's characterization of new vehicles as safer overestimates the MY/safety relationship, because it excludes critical demographic and behavioral variables.*

The adoption of new technologies and practices has made new vehicles safer over time. However, behavioral and demographic characteristics dominate fatality statistics, which the agencies do not account for, which leads them to miscalculate the magnitude of the safety benefit of newer vehicles. While no one would dispute that newer vehicles are generally safer than older vehicles (whether by age or model year), NHTSA's calculation of CAFE-induced fatalities relied on analysis for the NPRM that did not control for demographic and behavioral factors. In other analyses, NHTSA has controlled for demographic and behavioral factors that are a huge driver of fatalities,<sup>83</sup> both of which they did not do in the analysis referenced in the NPRM.<sup>84</sup>

*5. The agencies miscalculated the direction of the sales impact due to errors in the sales model, and inflated compliance costs.*

Most importantly, the agencies also miscalculate the direction of the effect of standards on vehicle sales. 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. In addition, the agencies use erroneous technology cost and rebound effect assumptions, which further bias the sales analysis in an inaccurate direction. When these factors are accounted for, projected sales increase rather than decrease with augural/existing standards in place.<sup>85</sup>

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<sup>82</sup> 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/>. (Attachment 2).

<sup>83</sup>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?Dockey=P100MS0E.PDF>. (Attachment 28).

<sup>84</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 43,136, 43,208 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>85</sup> Jamie Hall et al., *Effects of the Draft CAFE Standard Rule on Vehicle Safety*, SYNAPSE, 20-27 (Oct. 25, 2018), [http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety\\_18-062\\_2.pdf](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

Synapse utilized a total cost of ownership model to correct for these erroneous assumptions.<sup>86,87</sup> They included the total cost of ownership, used a more reasonable 10% value for rebound effect (vs. the unsupported value of 20% utilized by the agencies),<sup>88</sup> and applied three different sets of compliance costs for extra corroboration.<sup>89</sup> The results of the Synapse analysis are shown in Figure 1 and Table 1. They illustrate that the decrease in fuel economy (and therefore increase in fuel spending) that would result from moving from the augural/existing standards to the draft rule 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 effect on vehicle sales that might result from changing the standards, their estimates of fatalities avoided and vehicle sales are incorrect in both magnitude and direction.

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<sup>86</sup> Avi Allison et al., *Cleaner Cars and Job Creation: Macroeconomic Impacts of Federal and State Vehicle Standards*, SYNAPSE (March 27, 2018), <http://www.synapse-energy.com/sites/default/files/Cleaner-Cars-and%20Job-Creation-17-072.pdf>. (Attachment 29).

<sup>87</sup> Avi Allison & Jamie Hall, *Macroeconomic Analysis of Clean Vehicle Scenarios for Colorado*, SYNAPSE (June 12, 2018), <https://www.e2.org/wp-content/uploads/2018/06/CO-Clean-Vehicle-Macroeconomic-Impacts-Final-Report-20180612-FINAL.pdf>. (Attachment 30).

<sup>88</sup> See Kenneth Gillingham, et al., *Heterogeneity in The Response to Gasoline Prices: Evidence From Pennsylvania and Implications For The Rebound Effect*, 52 *Energy Economics* S41-S52 (Dec. 2015) (Attachment 21); see also Tom Wenzel & K. Sydney Fujita, *Elasticity of Vehicle Miles of Travel to Changes in the Price of Gasoline and the Cost of Driving in Texas*, LAWRENCE BERKELEY NAT'L LAB. (March 2018) (Attachment 22).

<sup>89</sup> The compliance costs included in the NPRM are notably larger than those included in the agencies' 2016 Draft TAR. Therefore, three more realistic compliance cost estimates (UCS, ICCT, and CARB) were applied. In the UCS sensitivity, compliance costs were developed by UCS in a modified version of the Volpe model. The model was modified to better align with the EPA OMEGA results provided in the 2016 TAR. In the ICCT sensitivity, the compliance costs associated with the standards were developed by the International Council on Clean Transportation (ICCT). In the CARB sensitivity, compliance costs were developed by the California Air Resources Board (CARB) using the CAFE Model developed for the 2016 Draft TAR.

Figure 1. Estimates of changes in vehicle sales from the draft rule<sup>90</sup>

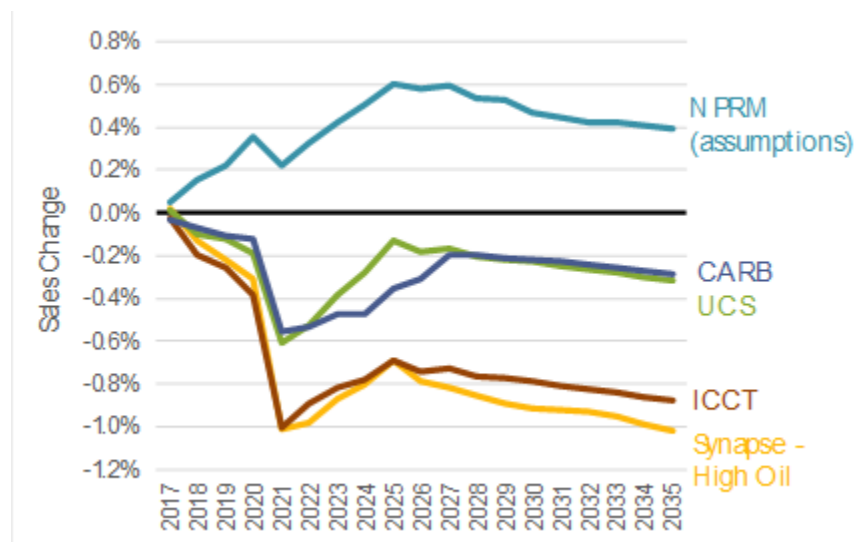


Table 1. Cumulative change in vehicle sales (2017-2035) from the draft rule (by scenario and sensitivity)<sup>91</sup>

Cumulative Change (2017-2035)	NPRM Assumptions	Synapse Scenario 1 (UCS)	Synapse Scenario 2 (ICCT)	Synapse Scenario 3 (CARB)	Synapse Scenario 1 (UCS) – High Fuel Price Sensitivity
Aggregated Gross Price Premium <sup>92</sup> (Billions, 2017\$)	-\$520	-\$390	-\$250	-\$380	-\$450
Aggregated Fuel Spending (Billions, 2017\$)	\$400	\$470	\$470	\$470	\$700
Vehicle Sales	1,368,000	-848,000	-2,338,000	-918,000	-2,528,000

<sup>90</sup> Jamie Hall et al., Effects of the Draft CAFE Standard Rule on Vehicle Safety, Synapse, 25, Figure 9 (Oct. 25, 2018), [http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety\\_18-062\\_2.pdf](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>91</sup> Jamie Hall et al., Effects of the Draft CAFE Standard Rule on Vehicle Safety, Synapse, 27, Table 7 (Oct. 25, 2018), [http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety\\_18-062\\_2.pdf](http://www.synapse-energy.com/sites/default/files/Effects-of-Proposed-CAFE-Standard-Rollback-Vehicle-Safety_18-062_2.pdf). (Attachment 1).

<sup>92</sup> Aggregated gross price premiums multiply gross price premiums by vehicle, by projected vehicle sales.

### c. What NHTSA can do to improve safety

As a safety agency, NHTSA is missing opportunities to improve safety in safety-related rulemakings. NHTSA can and should move forward on safety regulations that would improve safety. For example, initiatives on rear seat belt reminders,<sup>93</sup> advanced driver assistance safety features (such as 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),<sup>94</sup> V2V communications systems,<sup>95</sup> distracted driving guidelines,<sup>96</sup> and on-board systems to detect drunk drivers have the potential to save thousands of lives annually.<sup>97</sup> And, as in all of its past safety rules, we trust that NHTSA will not use unfounded scrappage and VMT growth projections to assume that the safety standards will so dissuade new car purchases as to have safety detriments.

Agencies' lightweighting claims are highly uncertain, at best. 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.

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<sup>93</sup> See Janette Fennell et al., Press Release, *The Center and KidsAndCars.org Sue DOT/NHTSA to Force Action on Rear Seat Belt Reminder Rule*, CENTER FOR AUTO SAFETY (Aug. 16, 2017), <https://www.autosafety.org/cas-kidsandcars-org-sue-dotnhtsa-force-action-rear-seat-belt-reminder-rule/> (Attachment 31); see also 49 U.S.C. § 30127 (2018).

<sup>94</sup> See, e.g., *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](http://www.iihs.org/media/3b08af57-8257-4630-ba14-3d92d554c2de/mYL9rg/QAs/Automation%20and%20crash%20avoidance/IIHS-real-world-CA-benefits-0518.pdf) (noting that lower crash rates are a clear benefit of crash avoidance technologies) (Attachment 32); *Driver Assistance Technologies*, NHTSA, <https://www.nhtsa.gov/equipment/driver-assistance-technologies> (noting that the vast number of vehicle crashes are tied to human error) (last visited Oct. 24, 2018) (Attachment 33).

<sup>95</sup> Federal Motor Vehicle Safety Standards and V2V Communications, 82 Fed. Reg. 3,854 (Jan. 12, 2017).

<sup>96</sup> Visual-Manual NHTSA Driver Distraction Guidelines for Portable and Aftermarket Devices, 81 Fed. Reg. 87,656 (Dec. 5, 2016).

<sup>97</sup> See, e.g., *NHTSA's Research on Seatbelt Interlock and Alcohol Detection Technologies*, NHTSA 17 (Feb. 1, 2018), <https://www.gsa.gov/cdnstatic/NHTSA's%20Research%20on%20Seatbelt%20Interlock%20and%20Alcohol%20Detection%20Technologies.pdf> (demonstrating that drunk driving costs approximately 10,000 lives and \$194 billion each year in the U.S. and that new safety devices could reduce that statistic) (Attachment 34).



#### **4. Other Legal Concerns**

##### **a. Statutory authority to set rules for more than 5 model years**

NHTSA acts outside its statutory authority when it seeks to set fuel economy standards for MY 2021-2026, which covers more than five model years. The plain language of the Energy Policy and Conservation Act (EPCA) states that NHTSA may only *prescribe* fuel economy standards for a maximum of five model years. Specifically, “[t]he Secretary shall...issue regulations under this title prescribing average fuel economy standards for at least 1, but not more than 5, model years.”<sup>98</sup> EPA has no such limitation. In the 2012 rulemaking, NHTSA also stated that it could only set standards for five years.<sup>99</sup>

But, contrary to plain language of the statute and NHTSA’s own language in the 2012 rulemaking, NHTSA now seeks to set fuel economy standards for six model years—MY 2021, 2022, 2023, 2024, 2025, and 2026. NHTSA seems to hypothesize that because it seeks to only establish new standards for MYs 2022-2026—five years—and amend the previously-established final standard for MY 2021, the agency has not overstepped its statutory authority.<sup>100</sup> But in “amending” standards for MY 2021, NHTSA is prescribing standards for that model year, and the 5-year limitation does not make a distinction or exception for amendments.

If Congress intended the statute to only apply to the establishment of *new* standards, as the agencies contend, it certainly could have stated as such. But Congress did not include any language even hinting at this interpretation. Thus, NHTSA has exceeded its statutory authority by surpassing the five-year limitation in prescribing standards for MYs 2021-2026—six model years.

##### **b. Revocation of state authority**

The proposal by EPA claims that both the EPCA and the Clean Air Act (CAA) preempt state regulation of motor vehicle emissions.<sup>101</sup> As part of the proposal, the EPA intends “to withdraw the waiver granted to California in 2013 for the GHG and ZEV

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<sup>98</sup> 49 U.S.C. § 32902(b)(3)(B) (2018).

<sup>99</sup> 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62,630 (Oct. 15, 2012) (to be codified at 40 C.F.R. pt. 85).

<sup>100</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 43,208 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>101</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42,999 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

requirements of its Advanced Clean Cars program.”<sup>102</sup> We expect other public comments will address the legal arguments demonstrating the very low probability that EPA even possesses authority to withdraw a waiver once granted. Even if EPA had such authority in theory, it presents no facts that would support a denial of a waiver for California’s standards, let alone a withdrawal.

There are no statutory factors for withdrawing a waiver—because such authority is not delineated or contemplated in the CAA. Nonetheless, in its proposed withdrawal, EPA arbitrarily assumes that the grounds for withdrawing a waiver would be the same as for granting a waiver, but then goes on to outline rationales that are unrelated to these criteria, such as unsupported economic arguments, and supposed preemption by EPCA.

On the economic front, EPA claims that the ZEV requirement forces automakers “to sell such products at a loss,” and “[a]ll of this is paid for through cross subsidization by increasing prices of other vehicles. . . throughout the country.” Nowhere in the docket is there support for these blanket statements. Indeed, all major automakers have committed billions of dollars to continue to increase electrification, and sales of electric vehicles have increased 65% in the last year alone.<sup>103</sup>

On their assertions of EPCA preemption, the agencies raise previously settled arguments about greenhouse gas emission standards being the same as fuel economy standards, arguments that have already been raised and dismissed by the U.S. Supreme Court, as discussed below.<sup>104</sup>

In the past, NHTSA has stated that its EPCA preemption only affect states with “a regulation that relates to fuel economy and which addresses the same public policy concern as the CAFE statute.”<sup>105</sup> Now, however, NHTSA and EPA propose one national standard set exclusively by the federal government to preempt state regulations concerning a different issue and public policy concern: emissions and public health.<sup>106</sup>

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<sup>102</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42, 999 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>103</sup> Steven Loveday, *September 2018 Plug-In Electric Vehicle Sales Soar In U.S.*, INSIDEEVS (Oct. 5, 2018), <https://insideevs.com/september-2018-plug-in-ev-sales-soar-in-u-s/>. (Attachment 16).

<sup>104</sup> See *Green Mt. Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 306 (D. Vt. 2007). See also 49 U.S.C. § 32902 (2018).

<sup>105</sup> National Highway Traffic Safety Administration, Light Truck Average Fuel Economy Standards Model Years 2005-07, 67 Fed. Reg. 77,025 (Dec. 16, 2002).

<sup>106</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42,999 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

The California GHG standards aim to protect and ameliorate public health, while the CAFE standards aim to improve the efficiency of motor vehicles.<sup>107</sup>

Further, compliance with GHG standards can be achieved through approaches such as switching to low-carbon fuels or different vehicle air conditioning refrigerants, neither of which are fuel economy improvements. And the ZEV program itself requires the sale of vehicles that use energy sources other than gasoline and diesel, a clear indication that it is not a fuel economy program. The agencies' chain of logic that "Improving fuel economy means getting the vehicle to go farther on a gallon of gas; a vehicle that goes farther on a gallon of gas produces less CO<sub>2</sub> per unit of distance; therefore, improving fuel economy necessarily reduces tailpipe CO<sub>2</sub> emissions, and reducing CO<sub>2</sub> emissions necessarily improves fuel economy"<sup>108</sup> is incorrect because it fails to consider essential elements of the GHG and ZEV programs that reduce CO<sub>2</sub> emissions, but do not improve fuel economy.

Regardless, the Supreme Court held in *Massachusetts v. EPA* that even if two obligations overlap, they are able to coexist and avoid inconsistency and that, "EPA has been charged with protecting the public's 'health' and 'welfare,' ... a statutory obligation wholly independent of DOT's mandate to promote energy efficiency."<sup>109</sup> Furthermore, in two separate cases, *Green Mountain* and *Central Valley Chrysler-Jeep* the court held that the EPCA does not preempt California's GHG emissions standards for motor vehicles.<sup>110</sup>

Finally, the existence of the joint proposal itself inherently refutes the claim of preemption. EPA is regulating greenhouse gases under the CAA, which explicitly

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<sup>107</sup> *The Advanced Clean Cars Program*, [https://www.arb.ca.gov/msprog/acc/acc\\_conceptdraft.htm](https://www.arb.ca.gov/msprog/acc/acc_conceptdraft.htm) (last modified Sept. 1, 2017). (Attachment 36).

<sup>108</sup> The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, 83 Fed. Reg. 42,986, 42,999 (Aug. 24, 2018) (to be codified at 40 C.F.R. pt. 85).

<sup>109</sup> "EPA finally argues that it cannot regulate carbon dioxide emissions from motor vehicles because doing so would require it to tighten mileage standards, a job (according to EPA) that Congress has assigned to DOT. See 68 Fed. Reg. 52929. But that DOT sets mileage standards in no way licenses EPA to shirk its environmental responsibilities. EPA has been charged with protecting the public's "health" and "welfare," 42 U. S. C. §7521(a)(1), a statutory obligation wholly independent of DOT's mandate to promote energy efficiency. See Energy Policy and Conservation Act, §2(5), 89 Stat. 874, 42 U. S. C. §6201(5). The two obligations may overlap, but there is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency." *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007).

<sup>110</sup> See *Green Mt. Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 306, 354 (D. Vt. 2007) (holding that "nothing in EPCA or its legislative history indicates that Congress intended to displace emission regulation by California that would have an effect on fuel economy; on the contrary, the legislative history is quite clear that Congress expected NHTSA to take such regulations into consideration"); see also *Central Valley Chrysler-Jeep v. Witherspoon*, 456 F. Supp. 2d 1160, 1172 (E.D. Cal. 2006) (stating that there is "no indication that Congress intended to allow an EPA-approved California regulation to disrupt the CAFE program").

provides for states to adopt stronger standards so long as they follow California's standards. Therefore, NHTSA's recognition of EPA's authority and the agencies' own actions to work together demonstrate that the programs are overlapping, but not identical and not in conflict.

## **5. Consumers support strong fuel economy/GHG standards**

Consumers want better fuel economy for their vehicles, and support stronger standards by a wide margin. Nationally representative surveys have repeatedly demonstrated overwhelming public, bipartisan support for continuing to strengthen fuel economy standards. Consumers Union's 2017 survey<sup>111</sup> was submitted into the 2017 DEIS docket, and the results from the most recent survey in 2018 are included below.

### **a. Survey research**

In a nationally representative survey published in July 2018, Consumers Union found that fuel economy is the number one attribute vehicle owners would like to see improved.<sup>112</sup> 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 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.

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<sup>111</sup> *Nearly 9 in 10 Americans Want Automakers to Raise Fuel Efficiency According to Latest Consumers Union Survey*, CONSUMERS UNION (June 29, 2017), <http://consumersunion.org/news/2017-fuel-economy-survey/>. (Attachment 17).

<sup>112</sup> Shannon Baker-Branstetter, *2018 Automotive Fuel Economy Survey Report*, CONSUMERS UNION (July 30, 2018), <https://consumersunion.org/research/2018-automotive-fuel-economy-survey-report/>. (Attachment 3).

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%	21%	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

In the same nationally representative survey published in July 2018, Consumers Union also found strong majority support for robust fuel economy standards.<sup>113</sup> 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.

While stated preference surveys have their limitations, the agencies' counterarguments that consumers do not care about fuel economy are poorly supported. The agencies' statements about "whether consumers will purchase the vehicles and in what quantities" seems to be based on the notion that automakers cannot make desirable vehicles with better fuel economy. They present no data to support this claim, only statements from automaker whose stated motivation is to weaken the standards. Automakers' alleged poor performance selling hybrids or electrics does not evidence that improving the fuel economy in internal combustion vehicles will affect consumer acceptance, and such claims fail to account for pricing discrimination and feature bundling. In fact, the research that does get at this question shows that models that have improved their efficiency (importantly, holding vehicle class constant) have seen higher sales than

<sup>113</sup> Shannon Baker-Branstetter, *2018 Automotive Fuel Economy Survey Report*, CONSUMERS UNION (July 30, 2018), <https://consumersunion.org/research/2018-automotive-fuel-economy-survey-report/>. (Attachment 3).

those for which efficiency remained stagnant.<sup>114</sup> And as mentioned above, fuel economy is the number one attribute consumers would most like to see improved. Fuel efficiency packages are frequently part of higher selling trims and luxury packages, indicating that fuel economy is indeed an attribute that consumers find desirable and for which they are willing to pay more.

Despite consumers' clear preference for vehicles with higher fuel efficiency, consumer choices are limited in the market, with 2/3rds of car models getting within 5 mpg of the model average and nearly 2/3rds (63%) of truck models getting within 3 mpg of the model average.<sup>115</sup> Furthermore, a team of UC Davis researchers analyzed auto advertisements and found that performance is mentioned three times as frequently as either fuel economy or safety.<sup>116</sup> In 2017, a mere 7% of ads mentioned fuel economy.<sup>117</sup> This is despite the fact that consumers have shown a willingness to pay two to three times more for improvements in fuel economy and safety than they are for improvements in acceleration, and their willingness to pay increases with information on fuel economy.<sup>118</sup>

And finally, the agencies' calculation of retail price equivalent (RPE) includes return on capital (profit) and therefore anticipates that OEMs do earn profit on adding the technology that improves fuel economy.

## **b. Consumer petition**

CU collected 51,764 signatures in support of the augural fuel economy standards, which are included in this submission as Attachment 38.

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<sup>114</sup> Jack Gillis, *Fuel Economy Standards: There is No Tradeoff With Safety, Cost and Fleet Turnover*, CONSUMER FED'N OF AMERICA (July 24, 2018), <https://consumerfed.org/wp-content/uploads/2018/05/fuel-efficiency-vs-safety-cost-and-fleet-turnover-1.pdf>. (Attachment 18).

<sup>115</sup> Calculated from the EPA's 2018 fuel economy guide at <https://www.fueleconomy.gov/feg/download.shtml>.

<sup>116</sup> Gwen Arnold et al. *Content Analysis of Unique Auto Ads in the United States: 2005, 2012, 2015, and 2017* Figure E.1 <https://consumersunion.org/wp-content/uploads/2018/10/Final-Report-Auto-Ad-Content-Analysis-080318-1-1-1.pdf> (Attachment 5).

<sup>117</sup> Gwen Arnold et al. *Content Analysis of Unique Auto Ads in the United States: 2005, 2012, 2015, and 2017* Section 5B <https://consumersunion.org/wp-content/uploads/2018/10/Final-Report-Auto-Ad-Content-Analysis-080318-1-1-1.pdf> (Attachment 5).

<sup>118</sup>Christine Kormos & Reuven Sussman, *Auto Buyers' Valuation of Fuel Economy: A Randomized Stated Choice Experiment* (June 12, 2018), <https://consumersunion.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018-%E2%80%93Auto-buyers-valuation-of-fuel-economy.pdf>. (Attachment 4).

## **6. Conclusion**

In conclusion, the proposal in the NPRM suffers from significant calculation errors, unsupported inputs and assumptions, and faulty modeling. Many of these problems could have been resolved had the agencies relied on their own thorough Technical Assessment Report from 2016, or had they updated that comprehensive document in a balanced, transparent manner consistent with the extensive docket. A few of the major flaws of the current analysis include inflated technology cost estimates, inflated rebound estimates, faulty safety assumptions, and arbitrarily restrained VMT. Based on independent research and analysis, were these errors corrected, the impacts of the rollback would be revealed as very different: the rollback reduces or has no effect on vehicle sales and fleet turnover, increases or has no effect on fatalities, and creates more costs for Americans.

In closing, Consumers Union urges NHTSA to finalize the augural standards and EPA to reinstate the first final determination. Alternatively, the agencies should conduct a fair and updated assessment of the costs and consumer benefits of further strengthening the augural CAFE and existing GHG emission standards.

Respectfully Submitted,

Shannon Baker-Branstetter  
Senior Policy Counsel, Washington Office