

April 5, 2019

Via electronic submission and U.S. Mail

Heidi King
Deputy Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Andrew R. Wheeler
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attn: Docket No. NHTSA-2017-0069
Docket No. NHTSA-2018-0067
Docket No. EPA-HQ-OAR-2018-0283

Re: Supplemental Comments of Public Health, Consumer, and Environmental Organizations on National Highway Traffic Safety Administration's and Environmental Protection Agency's Proposed Rule: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42,986 (Aug. 24, 2018)

The undersigned organizations hereby submit in the above dockets this supplemental comment concerning additional studies and reports on climate change and its impacts – specifically:

- “Preliminary US Emissions Estimates for 2018,” published by the Rhodium Group on January 8, 2019;¹
- “Changing available energy for extratropical cyclones and associated convection in Northern Hemisphere summer,” published in Proceedings of the National Academy of Sciences on March 5, 2019;²
- “A Summer of Storms and Smog Is Coming,” published by Bloomberg on February 19, 2019;³

¹ Rhodium Group, Energy & Climate Staff, Preliminary US Emissions Estimates for 2018 (Jan. 8, 2019), <https://rhg.com/research/preliminary-us-emissions-estimates-for-2018>.

² Charles G. Gertler and Paul A. O’Gorman, “Changing available energy for extratropical cyclones and associated convection in Northern Hemisphere summer,” Mar. 5, 2019 (<https://www.pnas.org/content/116/10/4105>).

³ Eric Roston, “A Summer of Storms and Smog Is Coming: Climate change has made urban pollution more dangerous and thunderstorms more destructive,” Feb. 19, 2019 (<https://www.bloomberg.com/news/articles/2019-02-19/summer-2019-climate-change-will-bring-strong-storms-and-smog>).

- “Dynamic flood modeling essential to assess the coastal impacts of climate change,” published in Scientific Reports, an online journal from the publishers of Nature, on March 13, 2019;⁴ and
- The Environmental Protection Agency’s 2018 Automotive Trends Report, EPA-420-R-19-002, dated March 2019⁵.

All of these studies and reports were released after the closing of the period for public comment on the above-referenced proposed rule (“Proposal”). Because they contain material “of central relevance to the rulemaking,”⁶ we are submitting this letter and the documents in EPA’s rulemaking docket. We are also submitting them in NHTSA’s dockets for the Proposal and the Draft Environmental Impact Statement.

As we noted in our previous comments on the Proposal, the agencies have failed to address the relationship between the devastating current and future damage caused by climate change and the policy reversals they now propose.⁷ While the agencies have previously acknowledged the critical importance of conserving energy and reducing motor vehicle emissions in light of – among other things – climate change and the transportation sector’s massive contribution to that problem, they have failed to justify departing from that view by proposing to freeze or severely weaken the standards they originally set in place. Instead, the Proposal largely ignores climate change and fails to take a hard look at how freezing or weakening standards to address emissions from the largest source of greenhouse gas emissions in the United States can be consistent with any coherent and reasonable response to the endangerment climate change causes. The attached studies further demonstrate the irrationality and recklessness of the agencies’ proposal to freeze or greatly weaken the emission-reducing trajectory of vehicle emissions standards.

Even while action to steeply reduce greenhouse gas emissions within the next decade is more urgently needed than ever, the Rhodium report notes that U.S. emissions of carbon dioxide (CO₂) “rose sharply” last year, reversing a previous three-year decline. Rhodium estimates that emissions increased by 3.4% in 2018, marking “the second largest annual gain in more than two decades – surpassed only by 2010 when the economy bounced back from the Great Recession.”⁸

⁴ Patrick L. Barnard et al., “Dynamic flood modeling essential to assess the coastal impacts of climate change,” Mar. 13, 2019 (<https://www.nature.com/articles/s41598-019-40742-z>).

⁵ EPA, The 2018 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology Since 1975 (2019).

⁶ 42 U.S.C. § 7607(d)(4)(B)(i). *See also id.* § 7607(d)(7)(A) (providing that such material forms part of the administrative record for judicial review).

⁷ See Comments of Center for Biological Diversity, Conservation Law Foundation, Earthjustice, Environmental Defense Fund, Environmental Law and Policy Center, Natural Resources Defense Council, Public Citizen, Inc., Sierra Club, Union of Concerned Scientists on the Proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Docket Nos. NHTSA-2018-0067, EPA-HQ-OAR-2018-0283, NHTSA-2017-0069, Appendix A at 6-10 (EPA-HQ-OAR-2018-0283-5070; NHTSA-2018-0067-12000, NHTSA-2017-0069-0593); Joint Comments of Center for Biological Diversity, Earthjustice, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Public Citizen, Inc., Regarding the Proposed Greenhouse Gas Emissions and Fuel Efficiency Standards for Light-Duty Vehicles, Model Years 2021-2026: Comments Specific to Climate Change, Attachment I, at 3-4 (EPA-HQ-OAR-2018-0283-6583; NHTSA-2018-0067-12088; NHTSA-2017-0069-0613).

⁸ Rhodium Group, Energy & Climate Staff, Preliminary US Emissions Estimates for 2018 (Jan. 8, 2019), <https://rhg.com/research/preliminary-us-emissions-estimates-for-2018>, at 1.

With respect to light-duty vehicles, Rhodium’s analysis shows that despite a 0.3% increase in vehicle miles traveled (VMT) for the first nine months of 2018 relative to 2017, efficiency improvements in the fleet still resulted in a 0.1% decrease in gasoline consumption over this period. This indicates that the fuel economy standards NHTSA now proposes to undermine are reducing fuel use – and weakening them would reverse this trend, adding to the United States’ oil consumption. The Rhodium report also notes that while “efficiency improvements and electrification [are] beginning to make a dent” in transportation-sector greenhouse gas emissions, it is “not nearly a big enough one to meet medium- and long-term US emissions targets.” In light of these facts, the agencies’ proposal to move in the opposite direction by freezing or weakening the standards is a reckless abandonment of their duty to conserve energy and to protect the public’s health and welfare, especially as it is eminently feasible for automakers to comply with the standards using existing technology, as the record before the agencies demonstrates.

Technical feasibility is further documented by EPA’s Automotive Trends Report, which documents that most manufacturers have deployed only a small subset of available efficiency technologies and have yet to deploy available technologies across their fleets - yet more evidence that ample technology remains available to automobile manufacturers for continued improvements.⁹ Moreover, the report shows that manufacturers are complying with the current standards and in Model Year 2017 produced the lowest CO₂-emitting and highest fuel economy fleet to date, despite a dramatic shift away from lower-emitting passenger cars to higher-emitting SUVs and trucks. As documented in the report, automakers also have a significant number of compliance credits available to them due to overcompliance in previous years – specifically, 249 million metric tons (MMT) of CO₂ credits entering Model Year 2018 – and they used fewer such credits to achieve compliance in Model Year 2017 than 2016 (18 MMT worth v. 30 MMT). The report further shows that use of “off-cycle” technology credits is growing ahead of EPA’s projections, illustrating that EPA’s and NHTSA’s analyses in the 2012 rulemaking failed to account for these technologies, which in fact enable automakers to achieve greater overall emission reductions and fuel economy improvements than reflected even in the current EPA and NHTSA standards. The overarching message from EPA’s Automotive Trends Report is that the agencies and automakers can and should keep moving forward with strong greenhouse gas and fuel economy standards.

In addition, two new studies provide yet more evidence of the severity of damage to human health and welfare caused by unmitigated climate change. The first, by Charles G. Gertler and Paul A. O’Gorman of the Massachusetts Institute of Technology, analyzed precipitation and temperature data stretching back to 1979 and is described in the Bloomberg article. The study finds that climate change is altering the atmosphere’s heat structure, leading to weaker extratropical cyclones. Because extratropical cyclones are the force behind both powerful nor’easters and everyday thunderstorms, the weakening of these cyclones translates into a weakening of the winds that help dissipate summer smog and push more powerful storms along. As a result, dangerous pollution can remain in the ambient air over cities longer and storms can

⁹ See Trends Report, Figure 4.2 (Manufacturer Use of Emerging Technologies for Model Year 2018) at 38.

deliver “more rainfall from short, intense bursts.”¹⁰ The study also found that the weaker extratropical cyclones may be contributing to longer heat waves.¹¹

The second study, by Barnard et al., finds that the consequences of sea-level rise (SLR), storms, and flooding have been underestimated in prior studies because the majority of those studies have looked only at long-term SLR with a static tide level, and have not accounted for dynamic effects such as tidal non-linearity, storms, short-term climate variability, erosion response (beach erosion and cliff retreat) and the effects of these forces in combination with flooding.¹² They find that properly including these dynamic effects dramatically increases the number of people and the amount of property exposed to flooding impacts (displacement, damage, and adaptation costs) due to climate change. Focusing on California as a test case, they find:

For the vast majority of the urbanized coast of California, the inclusion of storms in coastal flooding projections – in combination with the range of SLR expected by 2100 (i.e. 0.50 to 2.00 m) – increases population and property exposure from 16% for the annual storm to 57% for the 100-year storm compared to the no-storm scenarios... More than 600,000 people and \$150 billion (2010 dollars) are at risk for the 2.00 m SLR + 100-year storm scenario. ... [T]hese projected flood impacts represent 1.6% of the current California population and 6.3% of the state’s GDP, despite only directly affecting 0.3% of the state’s land area. ... However, this example only estimates exposure from a single extreme, 100-year storm: under the same SLR scenario of 2.00 m, the recurring annual storm, which is more relevant to emergency response planning, is estimated to expose 483,000 residents (based on 2010 census data) and \$119 billion (2010 dollars) in property by 2100.¹³

The study notes that many low-lying, exposed, and densely-populated areas are currently protected by levees or other defenses, but that most of these were not designed to withstand the effects of climate change and that “many sensitive areas may be overwhelmed during storm conditions combined with small amounts of SLR expected within just a few decades.”¹⁴ Across the area studied, the analysis projects that 1.00-2.00 m of SLR would permanently inundate 670-990 km² of land and an additional 15-19% of land would be flooded during a 100-year storm.¹⁵ With .25 m or .50 m SLR, 48% and 32% more land would flood, respectively, during a 20-year storm than would be inundated due to SLR alone. The latest SLR projections for California suggest that .25 m of SLR may occur by the 2040s and .25 m more by the 2060s.¹⁶ SLR of 1.00-2.00 m by 2100 would result in complete erosion of up to 67% of the beaches.

¹⁰ Eric Roston, “A Summer of Storms and Smog Is Coming: Climate change has made urban pollution more dangerous and thunderstorms more destructive,” Feb. 19, 2019 (<https://www.bloomberg.com/news/articles/2019-02-19/summer-2019-climate-change-will-bring-strong-storms-and-smog>).

¹¹ *Id.*

¹² Patrick L. Barnard et al., “Dynamic flood modeling essential to assess the coastal impacts of climate change,” Mar. 13, 2019 (<https://www.nature.com/articles/s41598-019-40742-z>).

¹³ *Id.* at 6-7.

¹⁴ *Id.* at 2.

¹⁵ *Id.* at 3.

¹⁶ *Id.*

The authors further note that the economic impacts of projected future coastal flooding in California are of the same order of magnitude as Hurricane Katrina (\$127 billion), and an order of magnitude higher than the most costly natural disasters in California history, the 1989 Loma Prieta Earthquake (\$10 billion) and the 2017 Wildfire Season (\$18 billion), and conclude that the “comparison suggests to policy makers that future coastal flooding due to storms and sea level rise must be considered an economic threat on par with the state’s and the world’s most costly historical natural disasters.”¹⁷ The study points out that the “alarming scale of these impacts does not account for the ripple effects such extreme events have across economic sectors such as those related to closures of ports, disruption of transport of goods and services, business closures, and impairment of utilities both today and into the future.”¹⁸

The study further found that, “Including dynamic water levels and storm-driven beach erosion for the 100-year storm with long-term coastal change for both the 1.00 m and 2.00 m SLR scenarios tripled population risk compared to the prior study,” and that this “suggests that first-order studies of climate impacts that do not account for dynamic water levels and shifting coastlines may vastly underestimate hazard risks to coastal populations over the next century.”¹⁹ This is particularly relevant to the impacts that climate change will cause in California, given its extensive coastline and the high concentrations of people and property along it.

The reports and studies we submit provide further evidence of the lawlessness of the agencies’ Proposal. Weakening the existing standards will significantly increase greenhouse gases even as climate change’s enormous harm escalates in alarming ways, and our time to steeply reduce emissions has shrunk to just the next decade. The reports and studies further document that finalizing the Proposal would be arbitrary, capricious, and unlawful.

Please contact Erin Murphy, emurphy@edf.org, (202)-572-3525, if you have any questions regarding this comment.

Respectfully submitted,

**CENTER FOR BIOLOGICAL DIVERSITY
CONSERVATION LAW FOUNDATION
ENVIRONMENTAL DEFENSE FUND
NATURAL RESOURCES DEFENSE COUNCIL
PUBLIC CITIZEN, INC.
SIERRA CLUB
UNION OF CONCERNED SCIENTISTS**

¹⁷ *Id.* at 7.

¹⁸ *Id.*

¹⁹ *Id.*