

December 20, 2018

VIA ELECTRONIC SUBMISSION

National Highway Traffic Safety Administration  
Docket Management Facility, M-30  
U.S. Department of Transportation  
West Building, Ground Fl., Rm. W12-140  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Environmental Protection Agency  
EPA Docket Center (EPA/DC)  
Air and Radiation Docket, Mail Code 28221T  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

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

**Re: Comments on Proposed Rule: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks**

The undersigned consumer, environmental, and public health groups request that the National Highway Traffic Safety Administration (“NHTSA”) and the Environmental Protection Agency (“EPA”) take steps necessary to correct fundamental flaws in this rulemaking. First, the Agencies must place in the rulemaking docket additional material (described herein) that is “of central relevance to the rulemaking,”<sup>1</sup> the unavailability of which precluded adequate opportunity for public comment on the Proposed Rule (the “Proposal” or “NPRM”). Second, the Agencies must provide the public with an opportunity to comment on other, centrally relevant material that was not made publicly available until so late in the comment period as to preclude meaningful opportunity for comment. Specifically, the Agencies must reopen the comment period for 60 days to give the public adequate opportunity to comment on the additional material (once it is made publicly available) and the belatedly docketed material, as well as any new analyses, models, or methodologies the Agencies may rely upon in a final rulemaking. Each of those steps is a prerequisite to a lawful rulemaking. The Agencies should correct the fundamental flaws in the rulemaking, issue a new proposal, and provide for an appropriate comment period, rather than rushing forward with a flawed process that will result in an unlawful outcome that will not survive judicial review.

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<sup>1</sup> 42 U.S.C. § 7607(d)(4)(B)(i). *See also* 5 U.S.C. § 553(c).

As a threshold matter, we reiterate our comments that the overwhelming balance of the evidence indicates that there is no justification for weakening the standards in any respect.<sup>2</sup> To the contrary, the standards can and should be strengthened.

As noted above, the opportunity for public comment on the Proposal has been fundamentally flawed. *First*, at least the following materials in the possession of NHTSA and/or EPA have been improperly excluded from the docket to date, despite their central relevance to the rulemaking:

1. **Documents and data related to EPA’s Optimization Model for reducing Emissions of Greenhouse Gases from Automobiles (OMEGA model) and related EPA modeling tools.** As discussed in more detail in the NGO Joint Legal Comment (Docket #EPA-HQ-OAR-2018-0283-5070; NHTSA-2018-0067-12000), these materials are critical to meaningful analysis of, and comment upon, the Agencies’ Proposal. EPA’s OMEGA model provides estimates of the technology cost for manufacturers to achieve variable fleet-wide levels of vehicle greenhouse gas emissions and has served as EPA’s primary tool in evaluating and setting all prior light-duty vehicle GHG standards, including the standards the Agencies are now proposing to roll back, and the technical assessment of those standards that accompanied the Mid-Term Evaluation. In addition, EPA’s related Advanced Light-Duty Powertrain and Hybrid Analysis (ALPHA) model is used to develop the estimates for the effectiveness of the technologies used in OMEGA.

In March 2018, EDF, NRDC, Safe Climate Campaign, and UCS sent EPA a letter requesting that the Agency make publicly available a range of materials relating to the OMEGA and ALPHA models. No response was received. EDF and NRDC subsequently submitted a Freedom of Information Act request for these materials in July 2018. In September 2018, EDF, NRDC, Safe Climate Campaign, and UCS submitted an updated version of their letter request to EPA. The updated request highlighted that documents published in the rulemaking docket and elsewhere show that EPA staff continued to develop and conduct runs of the OMEGA model to assess alternative standards and vehicle technology developments during the interagency review process of the current Proposal—further reinforcing the central relevance of these materials to the proceeding at hand. Information in the docket also suggests these results estimated costs of the existing standards that were half of those found by NHTSA’s modeling. None of these requests has received a response,<sup>3</sup> and none of the requested information has been made available for public review and comment. On December 3, 2018, EDF and NRDC sued EPA in the U.S. District Court for the Southern District of New York, alleging that the Agency had

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<sup>2</sup> See, e.g., Comment by the Center for Biological Diversity, et. al., Docket #NHTSA-2018-0067-12000 and EPA-HQ-OAR-2018-0283-5070; Comment by Natural Resources Defense Council, Docket #NHTSA-2018-0067-12057 and EPA-HQ-OAR-2018-0283-6219; Comment by Environmental Defense Fund, Docket #NHTSA-2018-0067-12108 and EPA-HQ-OAR-2018-0283-5775; Comment by Union of Concerned Scientists, Docket #NHTSA-2018-0067-12039 and EPA-HQ-OAR-2018-0283-5840; Comment by Consumers Union, Docket #NHTSA-2018-0067-12074 and EPA-HQ-OAR-2018-0283-6175; Comment by the American Council for an Energy-Efficient Economy, Docket #NHTSA-2018-0067-12122 and EPA-HQ-OAR-2018-0283-5772.

<sup>3</sup> EPA has confirmed receipt of the FOIA request but has not released any documents in response, despite the passage of FOIA’s statutory deadline.

violated the Freedom of Information Act by withholding information related to the ALPHA and OMEGA models.<sup>4</sup>

Meanwhile, the California Air Resources Board (CARB) also submitted a request for OMEGA and ALPHA materials in September 2018. In response, EPA acknowledged that it has continued to create and use updated drafts of the OMEGA and ALPHA models. Additionally, two days before the close of the comment period, EPA posted to the docket an Excel file labeled “2016-2035 Production Summary Baseline 10.15.2018 Docket.”<sup>5</sup> This file was not accompanied by any further documentation or description of the file itself, its purpose, or the reason it was submitted to the docket. Nevertheless, this spreadsheet appears to be an extensively updated version of certain previously released OMEGA spreadsheets. But without additional modeling files and other associated documentation, the updates appear to render this spreadsheet unusable in any publicly available version of OMEGA. This document thus appears to further demonstrate that EPA has continued to develop the OMEGA model, but EPA has failed to provide any responsive updated OMEGA or ALPHA materials to California or the public. Specifically, EPA has disclosed neither a working version of the updated OMEGA or ALPHA models themselves, nor the underlying data inputs and other modeling tools and information that CARB and the NGOs have requested.

The centrality of the modeling to a full and accurate assessment of the Proposal makes EPA’s failure to place these relevant materials in the public docket or otherwise disclose them when the Proposal was released inexplicable, inexcusable, and unlawful under both the Clean Air Act and FOIA. Not only must the OMEGA model and associated documents and data be disclosed—and an additional period for comment provided to the public—but EPA must also explain why the Agency has thus far refused to rely on its own, best-available modeling tool for conducting this rulemaking, particularly when it appears that the agency continued to use its model to assess the current proposed alternatives, and found results at odds with those included in the proposed rule. (NGO Joint Legal Comment at 201-03.)

2. **IHS/Polk registration data, including survival rates aggregated by model year, calendar year, and body style.** NHTSA states that the Agency relies on IHS/Polk registration data from calendar years 1975 through 2015 for certain elements of the NPRM analysis.<sup>6</sup> Specifically, this data is needed to understand the derivation of the new CAFE model coefficients that are used to generate predictions for vehicle retirement (scrappage), but this data has not been made available. (See CARB Document Request letter, September 11, 2018.) NHTSA purports to have withheld the data on the grounds that it is proprietary. But the information must be disclosed in some manner so that interested parties may review and understand the Agencies’ rationale for its rulemaking.<sup>7</sup>

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<sup>4</sup> *Natural Resources Defense Council, et al. v. EPA*, No. 1:18-cv-11227 (S.D.N.Y.).

<sup>5</sup> Docket #EPA-HQ-OAR-2018-0283-3264.

<sup>6</sup> 83 Fed. Reg. at 43,095.

<sup>7</sup> See *Flyers Rights v. FAA*, 864 F. 3d 738, 745-46 (D.C. Cir. 2017) (although agencies may properly decline to disclose confidential business information, they must provide as much information as possible to the public, explain

To take one demonstration, when economists at Harvard and Yale requested and were finally given access to certain otherwise unavailable data underlying the sales model that the Agencies used in the NPRM, the reviewers were able to conclude that the Agencies had made a fundamental math error which, if corrected, would reduce the NPRM lost sales estimate by approximately 70%. (Comment by James H. Stock, Kenneth Gillingham, and Wade Davis (EPA-HQ-OAR-2018-0283-6220).) It is imperative that the Agencies release the centrally relevant IHS/Polk data to enable similar critiques of their use of that data in the development of the scrappage model.

- 3. Data used by the Agencies to derive the new statistical model that predicts fatality rates.** (See CARB Document Request letter, September 11, 2018.) As noted by CARB, “The coefficients of the model are provided, but without the data it is not possible to evaluate whether the coefficients were properly derived. Additionally, the [vehicle age] coefficients provided in the PRIA [Preliminary Regulatory Impact Analysis] are different (significant digits and sign changes) than those identified in the actual model source code (which are also commented out [i.e., turned off] such that they are non-functional) and are different from the model year based coefficients used in the input files. This renders unclear what coefficients the analysis in the NPRM is based upon.” NHTSA responded that the data used to derive the new statistical model for fatality rates is proprietary information. In its response to CARB, NHTSA again failed to clarify what coefficients the NPRM safety analysis was based upon, or whether the coefficients provided in the PRIA, the model source code, or neither, are correct. This response is untenable. First, as noted above with respect to the sales model, a model’s underlying data is critical to assessing the validity of the model’s results – for example, they can reveal basic errors in the modeling that could not be identified otherwise. Given the Agencies’ reliance on the information in question, the Agencies must either affirmatively disclose the information or make the necessary findings to avoid disclosure; it is insufficient to simply say that this centrally relevant data is proprietary.<sup>8</sup>

Second, the Agencies still have not provided any additional clarity on the coefficients used in the model. From what commenters were able to discern, the Agencies’ safety model “generates implausible results when turning on the vehicle age portion of the model,” and “only the vehicle model year portion of the model is actually implemented in the rulemaking analysis.” (CARB Comments at 262-63.) (This is in addition to other problems with the Agencies’ safety model.<sup>9</sup>) And despite revising the PRIA in mid-October (as discussed below), the Agencies’ only revision to the section discussing the safety model added to the confusion rather than resolving any of it. Specifically, the Agencies altered Figure 11-5, which provides data the Agencies used to construct the

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clearly why other information is not disclosed, and be prepared to provide all information relied upon to a reviewing court (under seal if necessary)).

<sup>8</sup> See *id.*

<sup>9</sup> See, e.g., CARB Comments, NHTSA-2018-0067-11873 and EPA-HQ-OAR-2018-0283-5054, at 258-66; Comment by Dynamic Research, Inc., R.M. Van Auken, NHTSA-2018-0067-11881 and EPA-HQ-OAR-2018-0283-5051; Comment by the Institute for Policy Integrity at New York University School of Law (Policy Integrity), NHTSA-2018-0067-12213 and EPA-HQ-OAR-2018-0283-5083, at 91-99.

model of fatalities rates by age and model year.<sup>10</sup> The updated figure indicates that data is now presented by Model Year (MY) instead of Calendar Year (CY) and the data inputs to the graph appear to have changed. The text fails to explain how or why the data inputs have changed or the import of the changes for the analysis.<sup>11</sup> This further underscores the necessity of the Agencies' providing the data underlying their safety model.

Moreover, an extensive discussion in the October PRIA update inexplicably continues to convey that the Agencies' modeling represents fatality rates as a function of vehicle age as well as Model Year, even though the modeling for the NPRM turned off (or "commented out" in modeling terms) the age variable and another portion of the PRIA discusses taking this step.<sup>12</sup> These contradictory discussions in combination with the Agencies' failure to provide sufficient data about the development of the fatalities model and rates made it impossible for stakeholders to understand and therefore provide comment on the analysis of fatality rates underlying the Proposal. The Agencies must clarify the construction and implementation of their model, including by providing the underlying data, and then provide an additional comment period to allow the public to properly review and comment on the model. This is particularly critical here, where the Agencies have based their proposed rollback in large part on the reduction in fatalities that they project will occur—using this statistical model—under the preferred alternative rather than the current/augural standards. In addition, the Agencies have not conducted any peer review of the model, in violation of applicable peer review requirements, and which is contrary to law, arbitrary, and prejudicial to stakeholders. (NGO Joint Legal Comment at 190-99.) If the Agencies reinstate the vehicle age variable in the analysis at the time of rule finalization, this would be another reason that an additional 60-day comment period must be provided, in part because doing so would make the analysis even more flawed and unsuitable for use in policy development.

4. **Information regarding the methodology used to develop the Agencies' "fleet share" model, which projects the ratio of car and light truck sales by model year.** The rulemaking materials state that NHTSA used a fleet share model from EIA, but modified its application. But the Agencies do not provide any explanation of or detail on precisely which model was modified and how. The Agencies also did not provide any of the data used to construct this model. (NGO Joint Legal Comment at 204.) In response to CARB's request, the Agencies provided limited information regarding the model. The Agencies' failure to specify the specific model that was modified, how it was modified, and what coefficients were used, deprived the public of information with central

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<sup>10</sup> The uncorrected PRIA figure appears as Figure II-5 in the NPRM as well. 83 Fed. Reg. 43,137.

<sup>11</sup> In addition, Figure 11-4, which is purportedly based upon the same data, continues to indicate that the data is presented by Calendar Year, rather than Model Year.

<sup>12</sup> See, e.g., NHTSA and EPA, *PRIA for the The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021–2026 Passenger Cars and Light Trucks* (July 2018, updated August 23, 2018, and October 16, 2018), at 1384-86 (setting out the equation for the calculation of fatalities per billion miles (which includes age as a variable), as well as the age and Model Year coefficients the Agencies developed, and noting "This function is now embedded in the CAFE model, so the combination of VMT per vehicle and the distribution of ages and model years present in the on-road fleet determine the number of fatalities in a given calendar year."), and 1394-95 ("it is important to control for behavioral aspects associated with vehicle age so only vehicle design differences are reflected in the estimate of safety impacts. To address this, the CAFE safety model was run to control for vehicle age.").

relevance to the rulemaking and makes effective public comment impossible. Moreover, the Agencies have not conducted any peer review of the model, in violation of applicable peer review requirements, and contrary to law, arbitrary, and prejudicial to stakeholders. (NGO Joint Legal Comment at 190-99.)

5. **The data the Agencies used to develop VMT-by-age schedules.** NHTSA states that the PRIA analysis relies on IHS/Polk odometer data from model years 2000 through 2015 to develop new mileage accumulation schedules for vehicles covered by the Proposal.<sup>13</sup> NHTSA has not disclosed this data. This data is needed to understand the derivation of the CAFE model and reproduce, test, and provide comment on the Agencies' VMT and VMT-by-age analyses. In addition, the Agencies only summarily described the procedures used to process the data, and a full explanation is needed to allow for meaningful public comment. Thus, little can be said about their appropriateness and accuracy without disclosure of the centrally relevant IHS/Polk data and processing methodology. (NGO Joint Legal Comment at 204.)
6. **An explanation of how non-battery costs of electric vehicles were developed, including the data used.** The Proposal fails to explain its methodology for determining non-battery costs for electric vehicles, which is of central relevance to critiquing the Agencies' analysis. In contrast to the lack of explanation provided in the Proposal, the 2012 rulemaking included an extensive discussion of this issue.<sup>14</sup> (NGO Joint Legal Comment at 204-05.) The difficulty of understanding EV cost assumptions for the NPRM analysis was aggravated by the PRIA's erroneous direct cost values for mild hybrids, which were not corrected until a revised PRIA was submitted to the EPA docket with only four days remaining in the comment period. The Agencies' actions again made effective public review and comment impossible.
7. **Battery technology and cost modeling information.** The NPRM analysis is missing centrally relevant information about the BatPaC model and the model's inputs that are vital to assess how battery technology was modeled and costed. In particular, the Agencies failed to identify which version of BatPaC was used in their rulemaking documents. In response to CARB's request that the Agencies identify which version of BatPaC was used, NHTSA responded that the Agencies used BatPaC version 3.0, which is *not* the latest version of BatPaC. That the Agencies used a superseded version of BatPaC for their analysis, without acknowledging, explaining, or defending the decision to use that superseded version and while misleading the public as to which model was in fact used, is wholly arbitrary and materially impaired the public's ability to comment. Moreover, the Agencies have previously released the ANL BatPaC model and battery sizing files that were used to develop the battery specifications and costs in prior rulemaking processes. For this NPRM, the Agencies only provided Autonomie output files containing partial BatPaC model input/output information, which are insufficient for

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<sup>13</sup> See 83 Fed. Reg. at 43,089.

<sup>14</sup> Joint Technical Support Document: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA and NHTSA, EPA-420-R-12-901 (August 2012) at page 3-203, Table 3-116, available at: [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/joint\\_final\\_tsd.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/joint_final_tsd.pdf).

a comprehensive assessment of the battery-related modeling. EPA raised this concern during the course of interagency review, without any apparent resolution: “Overall, battery costs included in this analysis are higher than what EPA has obtained from the most recent version of the BatPaC model. There is not enough detail provided for EPA to determine what is contributing to these higher costs, but two potential factors are notable. First, the text refers to both ANL/ESD-15/28 and the BatPac model, so there are potentially inconsistencies in the application of assumptions from one of these sources to the other. Second, the text frequently refers to the BatPaC model to lend authority to the battery cost estimates, without providing sufficient information on the much more significant issue of how battery sizing or other model inputs were determined, much less the battery sizings or cost estimates that resulted.” (NGO Joint Legal Comment at 205 (citing EPA Comments on the PRIA (July 12, 2018), p. 347, available at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0453>.) To state the obvious, if one of the two Agencies that is proposing a rulemaking based on this record did not have sufficient information to identify which version of BatPaC was being used -- much less to understand and examine the underlying analysis -- the public clearly did not have access to this centrally relevant information, and was likewise unable to adequately review and comment on the Proposal.

8. **Fuel Economy Impact Database.** The CAFE model is built around a fuel economy impact database developed by Argonne National Laboratory (ANL). The NPRM version of the CAFE model has been modified since previous versions to rely entirely on the ANL database, which greatly elevates the primacy of the ANL database in determining and limiting which technologies are allowed as pathways within the CAFE model and, by extension, within NHTSA’s regulatory analysis. If specific technologies were not modeled during the development of the ANL database, those technology packages are not available for adoption in the CAFE model—even if they are in fact available for deployment in real-world vehicles. It is therefore essential that the centrally relevant ANL database be made publicly available and that the database predictions are shown to be reasonable and properly validated, and appropriately reflect available technologies. It is unclear that this validation has been accomplished, as some of the data directly extracted appears to show that it has not been. (Meszler Engineering Services: Technical Memorandum on The NPRM CAFE Model’s Treatment of Technology Benefits and Costs (discussing various examples that illustrate that the ANL data appears to be incorrect across both vehicle classes and technology combinations.)
9. **Disaggregated data on turbocharging and downsizing costs.** There is no transparency as to whether the cost of engine downsizing in the turbocharged engine pathways is reflected or properly assessed in the Proposal. This is because the turbocharging and downsizing costs are aggregated without information on the proportions of each component. (NGO Joint Legal Comment at 205.) The Agencies’ projected costs or savings for each component (turbocharging and downsizing) are of central relevance and must be disclosed.
10. **Social Cost of Greenhouse Gas Information.** As described more fully in the letter and comment submitted to the docket by the Institute for Policy Integrity at New York

University School of Law, (Docket #EPA-HQ-OAR-2018-0283-0899; NHTSA-2018-0067-5641; Docket #EPA-HQ-OAR-2018-0283-6184; NHTSA-2018-0067-12213), the dockets for the Proposed Rule do not contain adequate information to allow the public to provide meaningful comments on the Agencies' calculations of the social cost of greenhouse gases. Estimates of the forgone benefits from the greenhouse gas consequences of reducing the CAFE/CO<sub>2</sub> standards are essential to understanding the costs of the proposed rollback. While the PRIA states that a full set of results on the social cost of greenhouse gases is available in the docket and that they are important "to better understand how the results" for estimates of the social cost of carbon "vary across scenarios," these results do not in fact appear to be included anywhere in the docket. (PRIA at 1108-09.) The PRIA also states that "a detailed description of the methods used to construct these alternative values" for the social cost of methane and nitrous oxide "is available in the docket for this rule," (PRIA at 1546, n.906), but these also do not appear to be anywhere in the docket. The failure to disclose these centrally relevant results and methods deprived the public of information with central relevance to the rulemaking.

11. **Information related to safety impacts of mass reduction.** In response to CARB's document request, NHTSA stated that it intends to publish a technical summary of the logistic regression analysis and its results, which underlie its point estimates for fatality increases attributable to mass reduction, "in the near future." The Agency also stated that it intends to publish a report that "will describe the methodological process by which the results were derived." NHTSA describes this information as "pre-decisional agency deliberation, opinions or recommendations" exempt from disclosure. Detailed information regarding the logistical regression methodology, analysis, and results underpinning the Agencies' analysis regarding mass-reduction-related fatalities are not pre-decisional data, but rather foundational data on which the Agencies' analysis in the Proposal is based. The Agencies' failure to disclose this centrally relevant data has materially impaired the public's ability to comment on the Proposal.

*Second*, and relatedly, the Agencies should reopen the public comment period to provide the public adequate opportunity to comment on both the additional materials listed above, and other material listed below, that was not added to the rulemaking docket until the end of the original comment period or, in some cases, added either after that period already had closed or not at all.

1. **Hearing transcripts.** Although it appears (both from the signature date on the reporters' transcripts and from metadata) that the hearing transcripts were available to the Agencies just days after the hearings (*i.e.*, in late September), the Agencies did not make the transcripts available to the public until October 25, the day before public comments were due.<sup>15</sup> This belated docketing was inconsistent with the Clean Air

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<sup>15</sup> The transcript of the September 24 hearing in Fresno, CA, contains unsigned certifications from multiple court reporters dated October 1, 2018, and the metadata indicates the last modification to the document was October 1, 2018. The transcript of the September 25 hearing in Dearborn, MI, was certified by the court reporters on September 27, 2018, and the metadata in the PDF confirms creation of the document on that date (with one modification date on October 25). The transcript of the September 26 hearing in Pittsburg, PA, was certified by the court reporter on September 26, and the metadata shows a creation date of September 28, 2018 (with one modification date on October 25).



Act's requirements that "The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings." 42 U.S.C. 7607(d)(4)(B). The Agencies' unexplained delay in making the hearing transcripts available effectively deprived commenters of access to the testimony in preparing their written comments. This is particularly significant given that the testimony provided at the hearings came from a great variety of organizations, entities, and individuals, who were nearly unanimous in opposing the Proposal. An overview of the hearing testimony is provided in Exhibit 1 of this comment.

2. **ALPHA and OMEGA modeling information.** As noted above, two days before the close of the comment period EPA posted to the docket an excel file labeled "2016-2035 Production Summary Baseline 10.15.2018 Docket."<sup>16</sup> This file was not accompanied by any further documentation or description of it, its purpose, or the reason it was submitted to the docket. The Agencies' unexplained delay in releasing this document, together with their failure to release all other associated ALPHA and OMEGA documentation as described above, deprived commenters of access to documentation with central relevance to the rulemaking.
3. **Updated PRIA.** Four days before the end of the public comment period, on October 22, 2018, EPA posted to its docket a version of the PRIA labeled as having been revised on October 16, 2018.<sup>17</sup> Apparently the same document was posted as a comment in the NHTSA docket five days after the comment period closed, on October 31,<sup>18</sup> and was posted again five days after that (on November 5, 2018), this time labeled as having been issued by NHTSA.<sup>19</sup> These documents contain material revisions. The delay in disclosing these revisions, and the failure to provide these revisions until late in, or after, the comment period materially impaired commenters' ability to analyze the Agencies' Proposal. For example, the revised PRIA:
  - a. Provided cost estimates for mild hybrid batteries that have been significantly increased as compared to the original PRIA. Previously, these costs were only available in CAFE model documentation, and it was unclear whether they were direct or total costs, as the model documentation's values were in conflict with all of the tables that were described as providing these same costs in the PRIA;
  - b. Demonstrated that the coefficients and statistical test results of the sales model provided in the original PRIA were incorrect, and provided revised coefficients and results;

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<sup>16</sup> Docket #EPA-HQ-OAR-2018-0283-3264.

<sup>17</sup> Docket #EPA-HQ-OAR-2018-0283-3041.

<sup>18</sup> Docket #HTSA-2018-0067-12263.

<sup>19</sup> Docket #NHTSA-2018-0067-12299.

- c. Revised, without explanation, the data presented as underlying the Agencies' fatality analysis, which, as noted above, added to the Agencies' already confusing and contradictory explanation of that analysis; and
- d. Provided results for sensitivity runs of EPA's GHG standards that were incorrect in the original PRIA, which had frustrated the public's ability to understand the implications of different assumptions on the analysis of the GHG standards.

The Agencies' failure to make these revisions available until late in or after the comment period – and until at least six days after the revisions were made – effectively deprived commenters of access to information of central relevance and impaired commenters' ability to analyze the Agencies' analysis and prepare written comments.

- 4. **Presentation regarding Electric Vehicle (“EV”) costs.** On October 16, 2018, EPA posted to the docket a presentation entitled “Predicting Powertrain Costs for Battery Electric Vehicles Based on Industry Trends and Component Teardowns, Presentation by Michael J. Safoutin, U.S. Environmental [sic] Protection Agency, EVS31, October 3, 2018.” This document shows that EPA's own data demonstrates that EVs should be significantly lower cost than EPA has previously projected in its publicly available modeling from EPA's 2017 Proposed and Final Determination,<sup>20</sup> which in turn demonstrates the non-battery costs projected by EPA and NHTSA in the TAR were too high and that revising those costs upward still further in the proposed rule is arbitrary. EPA's delay in releasing this document, together with its failure to release all other associated documentation regarding updated EV cost projections (including the ALPHA and OMEGA documentation as described above), deprived commenters of access to material of central relevance to the rulemaking.
- 5. **Data and documentation related to the sales model.** First, as noted above, the coefficients and statistical tests for the sales model were wrong in the PRIA (Table 8-1) prior to the October 16, 2018 update. In addition, the data used to develop the Agencies' sales model, including historical vehicle sales and price data and economic data used to develop the autoregressive distributed-lag (ARDL) model, was provided to CARB just three days before the end of the comment period in response to CARB's document request. This data still has not been posted to the docket nor otherwise made publicly available. The failure to release this centrally relevant data publicly made it impossible for members of the public to replicate and test the Agencies' derivation of the sales model. The importance of the Agencies' failure to provide this information and the other missing information described in this comment is demonstrated by the fact that economists at Harvard and Yale, who were apparently given access to this information previously, were able to use this data to demonstrate

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<sup>20</sup> See Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation, Technical Support Document, EPA-420-R-16-021 (November 2016), EPA-HQ-OAR-2015-0827-5941.

that the Agencies made a fundamental math error that significantly impacted the sales model's results. Correcting this single error reduces the NPRM's estimate of lost sales by approximately 70%. (Comment by James H. Stock, Kenneth Gillingham, and Wade Davis, Docket #EPA-HQ-OAR-2018-0283-6220.)

6. **NERA/Trinity Report.** The Alliance of Automobile Manufacturers ("Alliance") has included with its comments an entirely new cost-benefit analysis conducted by NERA Economic Consulting and Trinity Consultants (together, "NERA/Trinity") of several of the alternative standards evaluated by the Agencies. The Alliance asserts that this modeling "now serves as an independent directional verification of net benefits described in the Proposed Rule," and that it "reinforces that all three of the alternatives examined offer positive net benefits when compared to the no-action alternative standards, even if safety benefits are excluded." The Alliance encourages the Agencies to review the study's methodologies "for adoption or to refine their own models." To the extent the Agencies intend to rely on any of this new analysis (including its models, methodologies, or assumptions), or any other, in the final rule, they must (1) so indicate and provide for public comment on the alternative analysis, (2) provide an updated environmental impact statement, and (3) make available information that is essential for any meaningful public evaluation of the analysis. None of these conditions are currently met as to the Alliance's proposed alternative analysis. We discuss some of the patent deficiencies in the NERA/Trinity analysis in Appendix A of this comment, but the critical point is that the Agencies must provide meaningful opportunity for comment on any model or analysis on which it proposes to rely. At present, thorough review and comment of the NERA/Trinity analysis is impossible, as only very limited information is available. The information described below would need to be made publicly available, flaws in the analysis corrected (including those noted in Appendix A), and all assumptions, conclusions, or new methodologies justified if this analysis were to be relied upon in supporting a final regulatory action by either NHTSA or EPA. Most notably, data and information gaps include:

- a. The NERA/Trinity analysis includes new sales, scrappage, fleet size, and VMT models, but none of these models are provided or publicly available anywhere. In addition, the report either fails to provide any information, or provides grossly incomplete information, regarding the following: the theoretical and methodological justification for the chosen models and the underlying equations, the data and inputs used to estimate the model coefficients, the values of all the estimated model coefficients, the results, and the statistical validation of the model results (in and out of sample). As just one example, nowhere does the report identify the total difference in fleet size or VMT between the augural standards and the preferred alternative under the NERA/Trinity analysis, even though these elements were the most influential drivers of the Agencies' cost-benefit analysis. The report also does not provide achieved fuel economy and GHG emission values for any of the scenarios, nor the change in fuel consumption by model year, each of which is a fundamental output. Moreover, the models NERA/Trinity developed have

not been subject to peer review, and the Agencies' reliance on them in a final rule, absent such peer review, would be in violation of applicable peer review requirements and contrary to law, arbitrary, and prejudicial to stakeholders.<sup>21</sup>

In addition, NERA/Trinity base their sales and scrappage models on proprietary sales data from J.D. Power that is not publicly available, which, as described in detail above, could not be relied upon without disclosing the information in a manner sufficient to enable public comment. Further, NERA/Trinity apply an elasticity factor to the scrappage model that is not justified and has very significant effects on the model's results. We further note that because the public has none of the underlying information used to develop (or used as inputs for) NERA/Trinity's scrappage model, including the data used to develop the elasticity factor or its validation (in and out of sample), the model cannot be used to justify a final regulatory action by either Agency.

- b. The analysis develops and utilizes a quantification of consumers' purported "willingness-to-pay" for fuel economy when purchasing a vehicle, but provides inadequate explanation for how it derived this number, none of the underlying data, and no meaningful rationale for it. Moreover, the economic literature does not provide any support for the NERA/Trinity approach of only counting fuel savings that reflect a consumer's willingness to pay at the time of making a vehicle purchase.<sup>22</sup>
- c. The analysis proffers a new methodology for calculating "Petroleum Market Externalities," but with insufficient explanation for how these externalities are assessed and without providing sufficient justification for the legitimacy of the methodology.

Finally, we note that the Alliance has requested that the Agencies shift 2-wheel drive utility and crossover vehicles that are currently classified as cars into the light-truck fleet. Given the absence of a backstop standard that would ensure a specific level of energy conservation and

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<sup>21</sup> See, e.g., NGO Joint Legal Comment at 190-99; Information Quality Act, 44 U.S.C. § 3516 note 2000: enacted Dec. 21, 2000 by Pub. L. No. 106-554, § 515, 114 Stat. 2763, 2763 A-153 (requiring OMB to issue guidelines "that provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies"); OMB's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 8452 (Feb. 22, 2002); OMB, Final Information Quality Bulletin for Peer Review, 70 Fed. Reg. 2664, 2675 (Jan. 15, 2005); EPA, Peer Review Handbook, at 20 (4th ed., 2015), <https://www.epa.gov/osa/peer-review-handbook-4th-edition-2015>; DOT, Information Dissemination Quality Guidelines at 1, 11 (Aug. 2002), <https://www.transportation.gov/regulations/dot-information-dissemination-quality-guidelines> (issuing information quality guidelines consistent with OMB Information Dissemination Guidelines).

<sup>22</sup> See Gloria Helfand & Ann Wolverton, *Evaluating the Consumer Response to Fuel Economy: A Review of Literature*, 5 International Review of Environmental and Resource Economics 103 (2011); Soren T. Anderson, Ian W. H. Parry, James M. Sallee & Carolyn Fischer, *Automobile Fuel Economy Standards: Impacts, Efficiency, and Alternatives*, 5 Rev. of Env'tl. Econ. & Pol'y 89 (2011); and David Greene, Anushah Hossain, Julia Hofmann, Gloria Helfand & Robert Beach, *Consumer Willingness to Pay for Vehicle Attributes: What Do We Know?*, 118 Transp. Res. 258 (2018).

environmental protection regardless of fleet-wide market shifts,<sup>23</sup> any change to the categorization of vehicles that are currently classified as “cars” into “light-trucks” could have even more dramatic implications for energy conservation and emissions and therefore conflict with the Agencies’ respective statutory mandates to maximize fuel economy and minimize dangerous air pollution. In addition to being unwarranted, such a reclassification would fundamentally change the feasibility of the standards and the associated cost of compliance, and therefore require the analysis underpinning the standards, as well as the standards themselves, to be redone, with a new public comment period. The Alliance of Automobile Manufacturers has previously stated, “If the definitions applicable to MYs 2017-2025 were changed, it would require a complete reevaluation of virtually all other aspects of the proposed rules, including the stringency of the standards, the cost of compliance and the adequacy of the program flexibilities.”<sup>24</sup> And NHTSA has observed that, “[i]f the determination of maximum feasible standards is based on a balancing of factors that accounts, in part, for the unique capabilities of a given fleet, then any changes to that fleet that affect its overall capabilities could presumably change the balancing, and thus the level of stringency that is maximum feasible.”<sup>25</sup> If the Agencies move any vehicles currently classified as cars into the light truck category, a reanalysis of the appropriate and maximum feasible standards would be required, as would a new public-comment period, and, in the case of the Alliance’s request, that analysis would necessarily demonstrate that tightening of both the passenger car standards and the light truck standards would be required.<sup>26</sup>

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<sup>23</sup> Several of our organizations have previously argued in favor of “backstop” standards; *see, e.g.*, EPA and NHTSA, *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*, 75 Fed. Reg. 25,324, 25,368 (May 7, 2010).

<sup>24</sup> Alliance of Automobile Manufacturers, *Comments on the Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for MY 2017-2025* (Docket #EPA-HQ-OAR-2010-0799-9487), submitted Feb. 13, 2012, at 7 (also noting that “amendments to the classification rules would necessitate a brand new, top-to-bottom reanalysis of the standards by all manufacturers as well as NHTSA and EPA,” and “it is highly probable that large portions of the rulemaking package would need significant readjustment as a result of that exercise”); *see also*, EPA and NHTSA, *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards; Final Rule*, 77 Fed. Reg. 62,624, 63,124 (Oct. 15, 2012).

<sup>25</sup> *Id.*

<sup>26</sup> *See, e.g.*, NHTSA, *Average Fuel Economy Standards Passenger Cars and Light Trucks Model Year 2011; Final Rule*, 74 Fed. Reg. 14,196, 14,204 (March 30, 2009) (discussing how reclassifying certain vehicles from the truck fleet to the car fleet resulted in lowering the average fuel economy required for both the truck and car fleets – the opposite effect of what would happen if vehicles currently classified as cars were reclassified as light trucks); *see also* 75 Fed. Reg. at 25,660.

We appreciate your consideration of this comment.<sup>27</sup> The proposed rule should be withdrawn for reasons stated in earlier comments made by the undersigned. If the Agencies do not withdraw the proposed rule, however, they must place all centrally relevant material in the docket, and reopen the comment period for at minimum 60 additional days in order to give the public a meaningful opportunity to respond to omitted and late-filed materials.

Sincerely,

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Center for Biological Diversity

*Gregory Cunningham*  
*Emily K. Green*  
Conservation Law Foundation

*Howard Fox*  
*Paul Cort*  
Earthjustice

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*Vera Pardee*  
On Behalf of Sierra Club

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*Travis Annatoyn*  
Democracy Forward  
Counsel for Union of  
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*Michelle Robinson*  
Union of Concerned Scientists

cc: Heidi King  
Deputy Administrator  
National Highway Traffic Safety Administration  
U.S. Department of Transportation

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<sup>27</sup> See 49 C.F.R. § 553.23; 83 Fed. Reg. 43,471.

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## APPENDIX A

Even without the data and information required to fully understand the NERA/Trinity analysis, including its relevance and reliability, and thus to comment upon it, the following problems are among those that are evident on its face, which make it unusable as a justification for rational rulemaking.

### 1. The NERA/Trinity analysis reuses many of the Proposal's flawed model designs, inputs, and assumptions.

The NERA/Trinity analysis adopts many of the same errors and unjustified assumptions as the Agencies' analysis, without providing any new, much less sufficient, rationales for the approach taken by the Agencies. For example, the analysis adopts the Agencies' unsupportable inflation of technology costs and benefits; unjustifiable level of the rebound effect; and baseless assumption that it is the size and age of the fleet—rather than demand for driving—that determines total vehicle miles traveled (VMT). (See, e.g., Comment by the Institute for Policy Integrity at New York University School of Law (Policy Integrity), Docket #EPA-HQ-OAR-2018-0283-5083; NHTSA-2018-0067-12213, at 79-86.)

In addition, it is unclear what the total impact of NERA/Trinity's scrappage model is on fleet size – as the report does not provide even this basic information – but it appears highly possible that the analysis contains some of the same fundamental flaws as the Agencies' model, and as a result may similarly produce the non-credible result that overall fleet size increases when car prices increase, contrary to economic theory. (Comment by Policy Integrity at 59-72.) Moreover, like the Agencies' scrappage regression model, the NERA/Trinity analysis also appears to omit several key variables, including the price of scrapped metal and environmental causes of scrappage, and also fails to control for several variables that affect used vehicles and are independent of new vehicles, such as odometer readings and vehicle brand. (See, e.g., Comment by Policy Integrity at 72-73.)<sup>28</sup> Like the Agencies, NERA/Trinity also fail to index vehicle price by maintenance and repair costs, which may have led to problems with the elasticity estimates. (See Comments by Policy Integrity at 72.)

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<sup>28</sup> Jacobsen and van Benthem (2015) potentially addresses some of the issues (like the environmental causes of scrappage). (See, Jacobsen, M. R. & Van Benthem, A. A. "Vehicle Scrappage and Gasoline Policy." *American Economic Review*, vol. 105, no. 3, 2015, pp. 1312–1338., doi:10.1257/aer.20130935.) However, the NERA/Trinity report significantly modifies the estimation strategy of Jacobsen and van Benthem (2015) to identify the scrappage elasticity by: (1) replacing used vehicle price with new vehicle price, and (2) ignoring the potential endogeneity of vehicle price by appearing to employ Ordinary Least Squares instead of an Instrumental Variables estimation strategy (Jacobsen and van Benthem, 2015, p. 1318 to 1324). These significant changes invalidate the NERA/Trinity estimation strategy without peer review to indicate whether their novel approach is valid. For example, it is unclear if the Jacobsen and van Benthem (2015) fixed effect identification strategy is sufficient when NERA/Trinity substitute new vehicle price for used vehicle price without including all other explanatory variables (e.g., odometer reading, vehicle brand, etc.) for used vehicle price (Comment by Policy Integrity, p. 72-73). Further, the unknown reliability of the NERA/Trinity estimation method is compounded by its failure to address the endogeneity of vehicle price.



These critical errors seem to have led NERA/Trinity to find scrappage elasticities of between -1.307 and -2.336, which is contradicted by the literature. Current economic literature shows that scrappage is inelastic.<sup>29</sup> (See Comment by Policy Integrity at 63.)

Also, as in the Agencies' analysis, the sales and scrappage models do not appear to be connected, which fundamentally undermines their results. (See, e.g., Comment by Policy Integrity at 63-64.) All of these flaws in the Agencies' modeling have been described and criticized in detail elsewhere, and nothing in the new analysis responds to, much less sufficiently addresses those critiques. The NERA/Trinity analysis also adopts the Agencies' erroneous assumption that only 50% of the increased gasoline consumption under the rollback/preferred alternative would be supplied by increased domestic refining and that 90% of the additional domestic refining would use imported crude petroleum, improperly undercounting the negative air quality impacts of the increase in oil extraction, domestic refining, and gasoline consumption that would happen under a rollback. (See, e.g., Comments of the Environmental Defense Fund (EDF), Docket #EPA-HQ-OAR-2018-0283-5775, NHTSA-2018-0067-12108, Appendix A at 37-38, 45.) NERA/Trinity's analysis also includes only the domestic portion of the social cost of carbon, another major flaw of the Agencies' analysis that has been critiqued extensively in the record.

## **2. NERA/Trinity's sales model is so uncertain as to be unreliable, as the Agencies have previously found with consumer-choice models, and it is deeply flawed.**

NERA/Trinity use a consumer choice model to estimate the effects of the standards on new vehicle sales. As noted elsewhere, the Agencies have been skeptical of the predictive abilities of such models. (See, e.g., NGO Joint Legal Comment at 171-85.) Even though EPA has spent years developing such a model, the Agency has so far declined to use it in any rulemaking due to concerns regarding the uncertainty of the model's predictive ability, as well as the fact that it is "difficult, if not impossible, to disentangle the effects of the standards on vehicle sales from the effects of macroeconomic or other conditions on sales."<sup>30</sup> In the 2012 rulemaking for fuel economy and GHG standards for light-duty vehicles, EPA stated that it had been developing a consumer-choice model to provide a quantitative estimate of the standards' effect on vehicle sales, but that the model was not ready for use in policy-making and would continue to be refined. EPA had conducted a peer-review of the model, and stated that reviewers had generally found the model "reasonable, while pointing out, first, that its use in policy analysis depended on its integration with EPA's OMEGA, and second, that conducting uncertainty analysis would be important given the uncertainties around the model's parameters."<sup>31</sup> EPA further noted that the

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<sup>29</sup> "Bento et al. (2018) estimated that scrappage elasticity [with respect to used vehicle price] is -0.4 and Jacobsen and van Benthem (2015) estimated that it is -0.7... Though less relevant due to age, older papers estimate that the elasticity of scrappage with respect to new vehicle price is between -0.7 to -1.0. Walker (1968), at 505; Gruenspecht (1982b), at 330." (Policy Integrity Comments at 86.)

<sup>30</sup> EPA, NHTSA, and California Air Resources Board, *Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025*, (EPA-420-D-16-900) (July 2016), at 6-1 (cited in the NGO Joint Legal Comment at 173.

<sup>31</sup> EPA and NHTSA, *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, 77 Fed. Reg. 62,623, 62,916 (Oct. 15, 2012); see also, EPA, *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) (Aug. 2012), at 8-14 (noting that "concerns remain that vehicle choice models have rarely been validated against real-world data. In response to these concerns, we would

“quality of the information that would come from a vehicle choice model is not well understood.”<sup>32</sup> The Agencies reiterated these concerns in the 2016 Draft Technical Assessment Report, with EPA concluding that it still would not use its consumer choice model in its current modeling work; the Agencies encouraged further research in the validation of consumer choice models for policy analysis.<sup>33</sup> (See NGO Joint Legal Comment, 172-74.)

In the current NPRM, the Agencies continue to note the uncertainty regarding sales impacts of the standards.<sup>34</sup> Further, they point out that if one were to use a consumer choice model (like what NERA/Trinity have used) to predict sales impacts of the standards, “it would be necessary to include additional relationships about ... how manufacturers might strategically price these modified vehicles. This requires a strategic pricing model, which each manufacturer has and would likely be unwilling to share.” 83 Fed. Reg. at 43,076-077. The Agencies further note that, “[i]f a consumer choice model were to drive projected sales of a given vehicle model below some threshold, as consumers have done in the real market,” the model would need to “generate a new vehicle model to take its place,” as this is how manufacturers adapt to demand changes. 83 Fed. Reg. at 43,077. “Absent that flexibility in the compliance simulation, even the more accurate consumer choice model may produce unrealistic projections of future sales volumes at the model, segment, or manufacturer level.” *Id.* The NERA/Trinity analysis does not discuss, much less address any of these concerns raised by the Agencies with respect to consumer choice models.

In addition, NERA/Trinity use a new vehicle sales elasticity of -1.0. This estimate appears to date back to the 1990s, calling into question its continuing validity. It is also likely a short-run elasticity, which is not the most appropriate elasticity to use. Cars are a durable good, so demand becomes less elastic over time, not more elastic.<sup>35</sup> The use of a short-run elasticity is also inappropriate when the Agencies and NERA/Trinity use a long-run rebound effect in their analysis, as the time frames for analysis should be the same. (See Comment by Policy Integrity at 117 and 125.) (We note also that the 20% rebound that the Agencies and NERA/Trinity use is still unjustifiable, even for a long-run effect.) In addition, any assumption of a higher new vehicle sales elasticity (like what NERA/Trinity use) would likely cause the amount of compliance costs that automakers pass-through to consumers to decline. (See Comment by Policy Integrity at Section II.B.)

### **3. NERA/Trinity reuse the Proposal’s wholly unjustified assumption, contrary to all available evidence, that fuel economy will improve without standards in place.**

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expect any use of the model to involve, at the least, a number of sensitivity analyses to examine the robustness of results to key parameters.”).

<sup>32</sup> 77 Fed. Reg. at 62,916.

<sup>33</sup> EPA, NHTSA, and California Air Resources Board, *Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025* (EPA-420-D-16-900) (July 2016), at 6-5.

<sup>34</sup> See, e.g., NGO Joint Legal Comments at 181 (quoting, e.g., 83 Fed. Reg. at 43,186 (“there is limited historical evidence that the average price of a new vehicle is a strong determining factor in the total number of annual new vehicle sales”)).

<sup>35</sup> See EPA, *Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation*, (EPA-420-R-16-020) (Nov. 2016), at A-40 to A-41.

NERA/Trinity use their purported “willingness-to-pay” factor as justification for including in the “rollback”/preferred alternative fleet any fuel economy technology that pays for itself in 60 months. This exaggerates the Agencies’ similarly unjustifiable approach in the NPRM of including all fuel economy technology that pays for itself in 30 months. As comments submitted to the record demonstrate, this assumption is unsupported and contrary to the evidence of the historical record, which conclusively proves that fleetwide fuel economy does not improve in the absence of a regulatory mandate. As the International Council on Clean Transportation (ICCT) pointed out in its comments on the proposed rule, “The data clearly and unambiguously demonstrate that when fuel economy or GHG standards do not get more stringent, new vehicle fleet-wide fuel economy will not increase and GHG emissions will not decrease.” (ICCT Comments, Docket #EPA-HQ-OAR-2018-0283-5456, NHTSA-2018-0067-11741, Attachment 3, p. II-1.) Using EPA’s own data from 1975 to 2015, ICCT showed that during “the periods where fuel economy and GHG standards require improvement, improvements in test cycle fuel economy occur,” whereas during “the period where standards did not get more stringent, from 1986 through 2004, no fuel economy and GHG benefits are evident.” (ICCT Comments, p. II-1 to II-2; see also, Comments of Meszler Engineering Services for the Natural Resources Defense Council (NRDC), Attachment 3, “Technical Memorandum on The NPRM CAFE Model’s Vehicle Activity Forecasting Methods,” Docket #EPA-HQ-OAR-2018-0283-5838, NHTSA-2018-0067-11723, p. 26; Comments of Consumers Union, Docket #EPA-HQ-OAR-2018-0283-6175, NHTSA-2018-0067-12074, p. 10; Comments of the Union of Concerned Scientists (UCS), “UCS MY2021-2026 NPRM Technical Appendix,” Docket #EPA-HQ-OAR-2018-0283-5840, NHTSA-2018-0067-12039, p. 37-38; EDF Comments, p. 4-5, Appendix A, p. 73-75, and Appendix B, p. 29-32; and Comment of the California Air Resources Board (CARB), Docket #EPA-HQ-OAR-2018-0283-5054, NHTSA-2018-0067-11873, p. 164-166.) Moreover, as the Environmental Defense Fund states in its comments, “the majority of this unrequired, ‘cost-effective’ technology being applied by the Volpe Model in 2017 and beyond under the rollback standards has been available for years and has not been extensively applied by manufacturers to date. (Otherwise, it would already be in the 2016 baseline fleet.)” (EDF Comments, Appendix B, p. 31 (citations omitted).)

This assumption that manufacturers will improve fuel economy even in the absence of standards grossly warps the cost-benefit analysis by including all the most cost-effective technology in the “business as usual” baseline/preferred alternative scenario, along with the benefits of those fuel savings and emissions reductions. (See, e.g., Comments of Meszler Engineering Services for NRDC, Attachment 3, at p. 26; ICCT Comments at p. II-1 to II-3; UCS Comments, “UCS MY2021-2026 NPRM Technical Appendix,” at 37-38; EDF Comments, p. 4-5, Appendix A, p. 73-75, and Appendix B, p. 29-32; CARB Comments, p. 164-66.) There is simply no justification for this assumption, and its use fatally undermines the Agencies’ analysis of the costs and benefits of the proposed rollback. Moreover, as several commenters pointed out, any assumption by NHTSA that manufacturers will apply all technologies with a certain payback level – whether 30-months (as used by the Agencies) or 60-months (as used by NERA/Trinity) or some other amount – even without standards in place, while actually setting standards below those levels, would clearly violate the Agency’s statutory obligation to set fuel economy standards at the “maximum feasible” level. (ICCT Comments, p. II-3; Comments of Consumers Union, et. al., Docket #EPA-HQ-OAR-2018-0283-6182 (Comment), NHTSA-2018-0067-11731 (Attachment

A), p. 26-27; Comments of Consumers Union, p. 10; EDF Comments, Appendix A, p. 73-75; CARB Comments, p. 164-166.)

**4. NERA/Trinity fail to count actual fuel savings as benefits to consumers, in violation of basic logic and long-established federal cost benefit analysis guidance.**

The NERA/Trinity analysis improperly undercounts actual fuel savings in the cost-benefit analysis by failing to include the fuel savings beyond those it asserts consumers will value when purchasing a vehicle. This approach is unfounded and without merit. To begin with basic logic, the NERA/Trinity approach argues that Americans value only 60 months of the fuel savings that a relatively more efficient vehicle would deliver when making a vehicle purchasing decision, and that after those 60 months have passed, those drivers will have extra money in their wallets and bank accounts to which they will assign a value of \$0. This is implausible in the extreme. Nowhere does the Alliance or NERA/Trinity provide a justification for this illogical approach, and it unsurprisingly runs counter to the underlying purpose of cost-benefit analysis. The purpose of the cost-benefit analysis is to measure societal benefits, not to constrain an analysis of societal costs and benefits based on what consumers purportedly value at a specific moment in time and in a specific context. As EPA noted in the 2012 rulemaking, “[r]egardless [of] how consumers make their decisions on how much fuel economy to purchase, EPA expects that, in the aggregate, they will gain these fuel savings, which will provide actual money in consumers’ pockets.” 77 Fed. Reg. at 62,924. To fail to account for these savings would be wholly counter to the basic principles of cost-benefit analysis. OMB Circular A-4 directs that “Analyses should include comprehensive estimates of the expected benefits and costs to society based on established definitions and practices for program and policy evaluation.” It further provides for recognizing “both tangible and intangible benefits and costs” and quantifying benefits and costs “even when it is not feasible to assign monetary values.” It would be in direct violation of the guidance provided in Circular A-94—which directs a broad, inclusive assessment of benefits and costs including those that cannot be monetized—to fail to account for *actual money* that would be in the pockets of consumers. In the Preliminary Regulatory Impact Analysis that accompanied the proposed rollback, the Agencies did not include only the compliance costs, pollution reduction health benefits, mobility benefits, refueling benefits, national security benefits, accident and congestion costs to the extent that consumers appear to value those costs and benefits when purchasing a vehicle. The Agencies—in compliance with OMB guidance— included *all* of the costs and benefits in the PRIA, including *all* of the money that consumers will save if their vehicles are more efficient and require less gasoline.<sup>36</sup> This is consistent with both Agencies’ long-standing history of counting all of consumers’ fuel savings in cost-benefit analyses, further demonstrating the irrationality and lack of support for NERA/Trinity’s approach. Moreover, the NERA/Trinity approach appears to rely on their estimate of consumer valuation of fuel savings. Measuring consumer valuation of fuel savings is universally acknowledged as a highly uncertain analysis. The Agencies cannot reasonably rely on NERA/Trinity’s or any other arbitrary assertion of the “correct” level of consumer valuation, which will necessarily be highly uncertain, to omit counting actual dollars saved as benefits to vehicle purchasers.

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<sup>36</sup> To be clear, due to the Agencies’ flawed analysis, we do not believe that they included an *accurate* assessment of the costs and benefits of the Proposal, but they did include the full amount of the costs and benefits of the rule (as they calculated them), not just consumers’ valuation of those costs and benefits.

## EXHIBIT 1

### OVERVIEW OF PUBLIC HEARING TESTIMONY

EPA and NHTSA jointly held public hearings on successive days in late September in Fresno (Sept. 24, 2018), California, Dearborn, Michigan (Sept. 25), and Pittsburgh, Pennsylvania (Sept. 26). The three hearings revealed an overwhelming chorus of opposition to the proposal from a wide variety of voices. By our count, taken together, 337 individuals spoke at the hearings. Of those speakers, some 317 speakers opposed the agencies' proposal. Only six speakers expressed some support for the proposal (14 speakers did not express a position for or against).

A sampling of the testimony from the three hearings demonstrates the breadth and depth of public opposition to the agencies' proposal. As striking as the near unanimity of opposition was the wide variety of voices – from state and local governmental leaders, heads of national and local health organizations, distinguished scientists, and health care providers to students, parents, and community groups, clean car technology manufacturers – expressing opposition, and the strong terms in which they expressed it. The three public hearings stand as a measure of the great unpopularity of the agencies' proposal. We provide a brief sampling of some of the hearing testimony below, one that leaves out scores of speakers who expressed vehement opposition to the proposal on behalf of themselves or their institutions. This overview is organized in the following categories:

- Labor Community: highlighted that the rollback will cause the U.S. to fall behind and jeopardize jobs.
- Private Sector: highlighted that strong standards are achievable and support jobs and economic investment.
- Public Health Community: underscored the health impacts at stake with increased pollution from light-duty vehicles.
- Technical Experts: disputed the agencies' technical assessment and emphasized that the existing standards are achievable.
- National Security Community: noted that rolling back the clean car standards would exacerbate America's oil reliance.
- State and Local Officials: repeatedly protested the agencies' attack on state authority to implement more protective standards.
- Consumer Groups: underscored the increased costs for more gasoline that will stem from the proposed rollback.
- Environmental Community: highlighted the tremendous risks of climate change and air pollution that will result from weakening the clean car standards.
- Community Members: discussed the wide range of negative outcomes for their families and communities that would occur with the proposed rollback.

#### **Labor Community:**

**Jennifer Kelly**, Research Director with the **United Autoworkers (UAW)**, explained that the UAW played a role in building consensus to support the existing Clean Car standards and UAW opposes the administration's ill-advised proposal to roll back those standards. She stated, "The proposed rule has not been made by consensus, and threatens to disrupt the one national program, creating uncertainty for the industry. It also fails to promote environmentally friendly innovation, and weakens our progress in addressing climate change, which is urgently needed." *Dearborn*, pg. 40.

Kelly also testified that strong Clean Car standards are crucial for maintaining US automakers' global competitiveness: "Fuel efficiency is the auto industry's future.... If we ignore these realities, you can see the U.S. auto industry fall behind." *Dearborn*, pg. 41. She further stated, "The vehicle assembly and parts industries are vital to the U.S. economy, and it's imperative that we stay strong, competitive now and into the future. Radically weakening standards will adversely impact investments in key technologies and will put domestic manufacturers behind the global marketplace. The long-term health of the industry is critically important to the 900,000 people who work in auto and auto parts manufacturing." *Dearborn*, pg. 40.

**Frank Hammer**, a retired GM employee and former president of **UAW Local 909**, observed that the current standards "provide regulatory certainty to the automakers and were coupled with loans and grants to the manufacturers to invest in advance [sic] vehicle technology." *Dearborn*, pg. 224. Mr. Hammer further stated that "today thousand [sic] of UAW members are making the vehicles of the future." *Dearborn*, pg. 224.

**Khari Mosley** testified on behalf of the **BlueGreen Alliance**, an organization that unites America's largest labor unions and major environmental organizations, that:

The automotive industry has brought back hundreds of thousands of jobs over the past decade and returned to profitability under our current fuel economy and vehicle greenhouse gas standards. Americans are building innovative new cars, trucks, and SUVs. Consumers are buying them at record levels and it is understandable why. The innovative vehicles are and will continue to save consumers billions of dollars a year at the pump, enhance America's energy security, and support hundreds of thousands of American manufacturing jobs but that progress will be put in jeopardy if we do as the agencies have proposed and freeze the standards. By stepping away from certain standards now, we risk sending the next generation of vehicle innovation and jobs overseas.

*Pittsburgh*, pg. 294-95. Mr. Mosley described a 2017 BlueGreen Alliance study finding that "over 1200 factories in 48 states" and "almost 300,000 workers" make the technologies that improve fuel economy – "nearly two and a half times as many factories and engineering facilities and almost twice as many workers" as in 2011. *Pittsburgh*, pg. 295. He explained that:

Today, almost every new vehicle in America pollutes less than just seven years ago. For example, as of 2016, the fuel efficiency advancements made to a single model, the Ford F-150, have cut carbon emissions equivalent to the total electricity use of the city of Boston. A decade ago, we could have never dreamed of full-sized pickup trucks getting more than 20 miles a gallon on the highway, much less than models that currently are pushing 30 miles a

gallon on the highway. Would we have had those trucks today if not for strong fuel economy standards that have spurred innovation, manufacturing job growth, and never before seen levels of fuel economy? If history is any indication, the answer is no. We need these standards to push the envelope and ensure that technology and innovation don't stagnate. That achievement -- the achievement required innovation and investment in vehicle design, assembly, robotics, and worker training by Ford in Michigan and Missouri. It also required the innovation by aluminum companies from Tennessee to Iowa and steel companies in states like Indiana, Ohio, and here in Pennsylvania. This is just one example of a larger revival. A recent BlueGreen Alliance report found that since 2008, U.S. automakers invested approximately \$64 billion in facilities across the country, including 258 investments in 100 factories with an additional \$12.4 in investments at 42 facilities promised by 2020 and this does not even include the billions in additional investment by suppliers.... I urge you to reject this freeze and embrace innovation and manufacturing growth, creating and sustaining tens of thousands of jobs in the auto industry that will be supported by the strong, long-term common sense fuel economy standards that we already have in place. *Pittsburgh, pg. 296-98.*

**Frank Houston**, regional program director for the **BlueGreen Alliance**, described Michigan's recovery from the "economic downturn of a lifetime," credited "the strong fuel economy standards we're considering rolling back today," and observed that "long-term fuel economy standards have helped bring back quality American manufacturing jobs that support our communities" and that "fuel efficiency is a job driver in Michigan." *Dearborn, pg. 297.* Mr. Houston also noted that "Automakers have already committed over 23 billion in investments in Michigan in over 41 facilities since 2008, and a large part of that is because of fuel economy standards that are driving innovation." *Dearborn, pg. 297.* Mr. Houston further stated that the "instability created by this whole change jeopardizes our progress and risks the very instability that took Michigan years to recovery [sic] from." *Dearborn, pg. 299.*

**Zoe Lipman**, testified on behalf of the **BlueGreen Alliance** that:

Over the past decade, under our current fuel economy and vehicle greenhouse gas standards, the automotive industry has brought back hundreds of thousands of jobs, returned to profitability and competitiveness. American workers are building innovative new cars, trucks and SUVs that consumers have purchased at record levels. These vehicles save consumers billions of dollars a year at the gas pump, enhance America's energy security, cut pollution and are helping spur a revival of American manufacturing. Leading fuel economy and greenhouse gas standards have been a critical driver of this innovation, investment and growth. If we step away from strong long-term standards now, we risk sending the next generation of vehicle innovation, investment and jobs overseas. In a 2017 study that the BlueGreen Alliance produced with the Natural Resources Defense Council we found over twelve hundred factories and engineering facilities in forty-eight states and nearly three hundred thousand American workers building the advanced components and materials that go into improving fuel economy in today's vehicles. This is two and a half times as many factories and almost twice as many workers as we found in a similar study in 2011. *Dearborn, pg. 166-67.*

Ms. Lipman added that:

Freezing fuel economy standards will, by the agencies' own estimate, result in billions less annually in technology investment, and as others have mentioned accordingly, fifty to sixty thousand fewer manufacturing jobs in America. This number is bad enough but the ultimate economic impact could be even worse. Not only does purchasing advanced vehicle technology mean fewer jobs building that technology, but weakened and uncertain standards diminish the value of investments that companies have already made, undermine the certainty they need to commit to major investments in future and gut incentives for investing the next generation of technology in American rather than abroad. ....

Over the past decade, automakers, suppliers and American workers have proven that with the right tools we can compete globally, rebuild jobs in manufacturing and cut pollution at the same time. ... But continuing this success will depend on maintaining our commitment to clean vehicle leadership, manufacturing and good jobs here at home. *Dearborn, pg. 168-69.*

### **Private Sector:**

**Mario Greco**, testified for **Arconic**, a leading supplier of aluminum sheets to the automobile industry, that:

numerous flawed assumptions in the draft's rule are misleading and overstate potential unfavorable impacts on safety, societal cost of the regulation and new vehicle sales. ... I will highlight one example today. The draft's rule assumes automakers will reduce weight evenly across vehicle segments, including the smallest of passenger cars. That's not an accurate representation of real world experience. Thanks in part to NHTSA's footprint-based CAFE formula, which we continue to fully support, automakers direct their mass reduction strategies primarily where they get the biggest results to boost fuel economy. That's their larger heavier cars and trucks and SUVs. The reality is F-150s, not smart cars, are getting lighter. And for the record, the top-selling, latest generation aluminium-bodied F-150 dropped nearly seven hundred and fifty pounds delivering segmentally fuel economy, along with a five star NHTSA crash rating, which is an increase from four stars from the previous generation, all for an average sticker price increase of only three hundred and ninety-five dollars above its predecessor. *Dearborn, pg. 207-208.*

**Craig Lewis**, Director of Strategy and Business Planning for **Constellium**, a global manufacturer of structural aluminum aerospace and automotive products, observed that:

Automakers are not looking to take weight out of small cars. They have not indicated they will do this with any type of regulation. The opposite is true. Automakers are concentrating their light-weighting strategies on vehicles on the other end of the spectrum, the largest and heaviest cars and trucks where the greatest light-weighting benefits exist. *Fresno, pg. 165.*

Mr. Lewis also stressed the importance of regulatory certainty, stating that "Constellium has invested heavily in the U.S. in the recent years, creating hundreds of good manufacturing jobs in



several states” and that “further investments need to reflect the long-term vision of the market.” *Fresno, pg. 166.*

**Joseph DeMatteo** of **Duquesne Light Company**, and member of the Edison Electric Institute, testified in support of a “transition to a transportation sector fueled by electricity,” noting that the benefits include “lower fuel costs for our customers, fewer emissions to improve air quality in our region, better utilization of the electric grid, creating a more affordable price of electric to all, including those who do not drive an electric vehicle.” *Pittsburgh, pg. 257.* He testified that the agencies proposal “would likely slow electric vehicle innovation and market development, and “could negatively impact the growing and necessary investment in electric vehicle charging infrastructure across the country.” *Pittsburgh, pg. 257.*

**Urvi Nagrani** of **Motiv Power Systems**, a company that that designs and manufactures electric chassis, spoke in opposition to the agencies’ proposal to override state emissions and zero-emission vehicle standards. Mr. Nagrani noted that California is “one of the largest car markets in the world,” and that “automakers have shown they are capable of meeting and exceeding our standards.” *Dearborn, pg. 186.* He testified that “The current rules and waiver structure have been successfully supporting clean air, a growing economy, [and] local manufacturing jobs.” *Dearborn, pg. 186.*

Mr. Nagrani called it “inconceivable” that meeting the standards was infeasible, given the hundreds of thousands of ZEVs already on the road, and stated that “Motiv ... would not exist today if it were not for a suite of policy solutions advanced both by the EPA and the State of California to address the air quality challenges that lead to multiple federal non-attainment areas within the State of California.” *Pittsburgh, pg. 136.* He testified that “California’s push for cleaner vehicles has also changed the jobs environment of many states where electric vehicles are manufactured,” and that “The current rules and waiver structure have been successful in supporting clean air, a growing economy, [and] local manufacturing jobs.” *Pittsburgh, pg. 137.*

**Ken Lockin**, Director of **Impax Asset Management**, stated that “the proposed rule will have a negative impact on the U.S. auto sector and the broader economy, and that will affect investors and American workers.” Mr. Lockin noted that “Changing the rules now will put this important American economic sector at a disadvantage and dramatically, drastically slow the pace of investment and innovation, undermining the interests of hundreds of thousands of workers in twelve hundred U.S. factories and engineering facilities in forty-eight states that develop and manufacture advanced technologies to reduce vehicle pollution and improve fuel economy.” *Dearborn, pg. 244.* Mr. Lockin also observed that “savings from more fuel-efficient vehicles have broad economic benefits because they lead to increased consumer spending in other areas that create local jobs and boost American economic growth.” *Dearborn, pg. 244.*

**Alan Baum**, with Baum and Associates, engages in forecasting and analysis for automotive industry stakeholders. He testified that “The current fuel economy emission standards are in the economic interest of the auto industry by providing regulatory certainty and enhancing its ability to compete globally,” and that rolling back the Clean Car standards “will result in increased cost for automakers ... which will cost consumers.” *Dearborn, pg. 36-37.* Baum explained that, according to research conducted by his firm, “If the standards are weakened, suppliers in the

U.S. could lose 20 billion in sales of fuel-efficient technologies between 2021 and 2025. Furthermore, in the case of higher fuel prices, the Detroit Three could lose 300,000 units of vehicle sales, \$1 billion in profits, and 1.9 percentage points of market share on an annual basis.” *Dearborn, pg. 37-38.*

**Kevin George Miller** spoke on behalf of **ChargePoint**, the largest network of electric vehicle charging stations with more than 54,000 charging spots in the United States. Miller expressed support for the existing Clean Car standards, stating that the rollback proposal “would inject a significant amount of uncertainty into the auto industry, rollback significant gains for electrification in the states across the nation, and dramatically affect the United States global leadership in electrification and advanced transportation technologies.” *Dearborn, pg. 75.* Miller also testified in support of California’s waiver to set its own vehicle emission standards, stating that the waiver will “contribute to the expansion of the 200,000-plus American jobs in the current alternative fuels industry, which is only growing.” *Dearborn, pg. 77.*

**David Schatz** also testified for **ChargePoint**. Mr. Schatz testified that “The rule would inject uncertainty into the auto industry, roll back the significant gains of electrification in states across the nation, and dramatically affect the United States’ global leadership in electrification and advanced transportation technologies.” *Pittsburgh, pg. 138.* “At a time when auto manufacturers are announcing significant investments in bringing electric models to market,” he explained, “when Americans are adopting EVs at a rate of 34 percent annually, year-over-year, the rule proposes a departure from trends in industry that have been years in the making and require years of planning.” *Pittsburgh, pg. 138.* He explained that the agencies’ proposal “would nullify the ZEV Program and stifle EV markets across the country at a time of rapid growth.” *Pittsburgh, pg. 140.*

**Katherine Stinken**, policy director with **Plug In America**, testified that “Plug In America stands here today to defend clean air, national security, public health, the global climate and American competitiveness and innovation from the devastating effects the proposal would have.” *Fresno, pg. 66.* She stated, “Weakening vehicle standards would completely undermine the global competitiveness of the U.S. auto industry and stifle innovations[.]” *Fresno, pg. 66.* She concluded, “Your proposal has run counter to what Americans actually want. Americans want clean air. Americans want clean cars.” *Fresno, pg. 68.*

**Jaymi Wilson**, Vice President of Strategy and Marketing for **Gentherm**, a thermal technology developer, stated that “a freeze or rollback of current standards would have an adverse economic impact on manufacturing jobs and investments into new technologies that improve vehicle fuel efficiency and reduce emissions.” *Dearborn, pg. 226.* Referring to off-cycle and air conditioning credits, Ms. Wilson further observed that “Gentherm opposes alternate scenarios that would eliminate or phase out these credits. The results would be detrimental to funding research and new technologies that create skilled, technical American jobs and provide benefits to American car buyers.” *Dearborn, pg. 226.*

**Helen Walter-Terrinoni** testified for the **Chermours Company** regarding EPA’s proposal to exclude the refrigerant leakage credit for the use of alternate air conditioning refrigerants after model year 2020. She testified: “We urge the EPA to retain these credits. Eliminating the

refrigerant leakage credits can result in lower demand of these products for new U.S. manufacturing plants, which may jeopardize jobs, future investments in the United States, and American's technological leadership.” *Dearborn*, pg. 119-20.

**Rick Winick**, representing **Honeywell Corporation**, testified in opposition to the agencies’ proposal to eliminate the refrigerant leakage credits, explaining that “Refrigerant leakage credits advanced American industry and technological leadership and help maintain the U.S. advantage over Chinese industry”; American manufacturers “have made significant planning and investment decisions based on the availability of refrigerant leakage credits beyond model year 2021”; and the proposal “fails to provide reasonable justification for eliminating the refrigerant leakage credits beyond the desire to harmoniz[e] the programs.” *Dearborn*, pg. 109. He testified that “Retaining the refrigerant leakage credits will help American industry maintain the technology leadership and advantage over Chinese technology,” and that EPA’s refrigerant leakage credits “critical” in order “to further incentivize the use of and drive the transition to more environmentally friendly American products.” *Dearborn*, pg. 110.

**Micaela Preskill**, Midwest advocate for **Environmental Entrepreneurs**, observed that the current clean car standards “provide an environment that encourages innovation that makes American automakers competitive” and that the standards have “led to 288,000 manufacturing and engineering workers in 1,200 facilities across 43 states.” *Dearborn*, pg. 268. Ms. Preskill also noted that “If we roll back our current standards, we will see market share to international competitors who are already quickly moving to capitalize on our lack of leadership” and that “business leaders across America know that as a nation we prosper when we prioritize innovation and competition.” *Dearborn*, pg. 269.

**Greg Winks** also testified on behalf of **Environmental Entrepreneurs** about “the economic value of maintaining ambitious but achievable challenges for the GHG vehicle standards at the EPA and the CAFE standards at the Department of Transportation.” *Pittsburgh*, pg. 278. Mr. Winks explained:

Business leaders across America know that, as a nation, we prosper when we prioritize innovation and competition, while ensuring a stable business policy environment. All this requires leadership from our elected officials and decision-makers from agencies such as EPA and the Department of Transportation. Strong long-term standards have been critical and remain essential to continued recovery of the automotive sector since the crash last decade to ongoing innovation and job growth, and to a further strengthening of our manufacturing sector. Since these standards were put in place in 2012, we have seen record high sales and fuel economy, coupled with growing employment. These standards, when maintained, provide certainty for the investment that drives innovation. That innovation makes domestic automakers and their vast network of suppliers competitive in a global market that continues to demand cleaner vehicles....

In 1985, ... more than two-thirds of the Detroit III unit sales were in North America. By 2025, it is projected only one-third will be sold in North America. In those markets, consumers demand and governments often mandate more fuel efficient and cleaner vehicles. They also ensure American cars can compete in nations which have far higher gas prices than

we do in the U.S. If we rollback on these standards, we will concede market share to international competitors already quickly moving to capitalize on our lack of leadership. *Pittsburgh, pg. 279-80.*

**Marc Geller**, the vice chair of the **Electric Auto Association**, testified that “The new policies proposed by the EPA take us backwards in terms of air quality, in terms of the health of our people, in terms of national security, and economic development.” *Fresno, pg. 74.* He concluded, “The proposed rule should be withdrawn.” *Fresno, pg. 74.*

**Laurie Holmes**, senior director of Environmental Policy for the **Motor & Equipment Manufacturers Association (MEMA)**, testified that MEMA “supports California retaining its 2013 waiver.” *Fresno, pg. 43-44.* She also testified that “MEMA urges the agencies to establish continued year-over-year increases to the standards. MEMA opposes the agencies’ proposal to eliminate progress.” *Fresno, pg. 44.*

**Rasto Brezny**, executive director for **Manufacturers of Emission Controls Association (MECA)**, testified that “MECA urges the Federal and State agencies to negotiate an outcome that preserves one national program, which continues to reduce GHG emissions. The U.S. must maintain its leadership role as a producer and exporter with advanced clean and efficient vehicle technology, and we need the support of a regulatory policy that keeps investments and jobs in this country.” *Fresno, pg. 43.*

**Tim Johnson** with Corning Incorporated testified on behalf of **MECA** in support of the existing standards and California’s historic role. He explained that the Clean Car standards “have led to the development of an unprecedented number of new technologies that achieve real world greenhouse gas reductions both on cycle and off cycle, including greenhouse gases, like methane, nitrous oxides, and HFCS.” *Dearborn, pg. 63.* Johnson stated that a survey of MECA members “proposed alternative will see our technology leadership position to other countries and drive investment overseas where tighter standards demand continual development of innovative technologies. It’s a key point. We go where the regulations demand our products.” *Dearborn, pg. 63-64.*

**Steven Douglas**, with the **Alliance of Automobile Manufacturers**, stated that “climate change is real and automakers are taking action to reduce carbon from being emitted from new vehicles. Automakers are also committed to continued improvements in fuel economy.” *Fresno, pg. 30.* He explained, “We urge EPA and NHTSA to continue to work for all stakeholders, including California, to develop a lasting rule that enables manufacturers to plan and build a single fleet of vehicles in the U.S.” *Fresno, pg. 31.* He concluded, “We urge California and the Federal government to find a common sense solution that sets continued increases in vehicle efficiency, while also meeting the needs of America’s values.” *Fresno, pg. 32.*

**Chris Nevers**, speaking on behalf of the **Alliance of Automobile Manufacturers**, stated emphatically that “climate change is real and automakers are taking action to reduce carbon emissions from new vehicles. Automakers are also committed to continue improvements in fuel economy.” *Dearborn, pg. 20.*

**Julia Rege**, director of Environment and Energy at **Global Automakers**, testified that “the regulations should require fuel-efficiency improvements each year[.]” *Fresno*, pg. 38.

**Bob Holycross**, director of Sustainability and Vehicle Environmental Matters for **Ford Motor Company**, also stated that “climate change is real.” *Dearborn*, pg. 31. Holycross said, “Let me be clear, we do not support standing still. Clean car standards should increase year over year with the inclusion of provisions that promote ongoing investment and technology that will further drive greenhouse gas reductions.” *Dearborn*, pg. 32-33.

### **Public Health Community:**

**Katie Huffling**, Executive Director of the **Alliance of Nurses for Healthy Environments**, testified that “Emissions from road transportation are the leading single cause of air pollution,” and that “air pollution from vehicle emissions contributes to over 53,000 premature deaths every year”; “Besides the human cost of the health impacts associated with air pollution caused by transportation-related emissions, the burden on the healthcare system is enormous.” *Pittsburgh*, pg. 122. “For example, reversing these emission standards would worsen asthma symptoms for the 24 million Americans, including 6.3 million children, who suffer from asthma.... Those at greatest risk to the health effects of air pollution are some of the most vulnerable among us, including infants, children, and pregnant women.” *Pittsburgh*, pg. 123.

**Jenny Bard**, director of Grassroots and Health Partnerships for the **American Lung Association** in California, testified that “The American Lung Association is opposed to the ... proposal to roll back emission standards between both California and State authorities to adequately protect the health of our citizens against harmful pollution.” *Fresno*, pg. 36. She continued, “We cannot roll back the limited safeguards we have in place to fight climate change. Protection of public health is crucial, and the American Lung Association supports policies that safeguard health and improve health outcomes.” *Fresno*, pg. 37. She concluded, “This proposal moves us in the wrong direction.” *Fresno*, pg. 38.

**Dr. Janelle Lee**, an emergency medicine resident physician at **UCSF Fresno**, observed the role of vehicle emissions standards in attenuating the physical impacts of air pollution. She noted that, “Every day, I see patients suffer from the effects of air pollution in the emergency room.” She stated that, from heart attacks and strokes to respiratory emergencies, “Air pollution has detrimental impacts on everybody’s health.” *Fresno*, pg. 128. Dr. Lee also observed that:

Being at the front lines, I have seen and experienced the suffering firsthand. I can only patch them up the best that I can. I can stabilize them, and then send them back into the terrible stagnant air and await their next ER visit, hoping I can once again save them. *Fresno*, pg. 129.

Dr. Lee noted that “Air pollution does not discriminate by race, age, religion, gender” and that poor air quality “triggers a cascade of inflammatory responses in our bodies, and we are still learning more each day, on serious long-term affects [sic] that air pollution has on our health.” *Fresno*, pg. 129.

**Dr. Alex Sheriffs** and his wife began practicing family medicine in California's Central Valley in 1982 and observed that "we immediately saw very high rates of asthma in children and an increasing number of older individuals developing lung disease with no prior history of smoking. An increasing body of science links those observations to the major air pollution challenges we still face in the San Joaquin Valley." *Fresno*, pg. 144. Dr. Sheriffs credited California's waiver for the progress the community has made in improving air quality, stating that "protective standards would not have been achieved without the waiver which has allowed California to collaborate with the auto industry in setting ambitious mileage and emission standards needed to meet our state's particular health threats." *Fresno*, pg. 144. Dr. Sheriffs further observed that:

This valley annual premature mortality, deaths from air pollution, are still measured in the hundreds. We cannot afford to move backwards, away from achievable goals, nor should we be abandoning the tools that have done so much for our health over recent decades. *Fresno*, pg. 145-146.

**Kevin Hamilton**, a respiratory therapist and director of the **Central California Asthma Collaborative**, noted that 600,000 residents of the San Joaquin Valley suffer from asthma and that the "primary cause of the trigger for asthma in our area is polluted air." *Fresno*, pg. 182. Mr. Hamilton further stated that "One in six children has asthma in the valley, which is the highest childhood rate in the nation, and they are missing out on doing things they love for fear of struggling to catch a breath." *Fresno*, pg. 183.

**Maureen Swanson** director of the Healthy Children Project for the **Learning Disabilities Association of America**, testified that:

While the medical community and public have long understood that smog and ozone contribute to asthma and other respiratory illness, we now know that air pollution from vehicles and other sources can damage children's developing brains and contribute to lifelong problems with learning and behavior. Mounting scientific evidence links traffic-related air pollution with decreased cognitive function in children and reductions in children's IQ, memory, and attention. A study published this month in the Proceedings for the National Academy of Sciences indicates that breathing polluted air is linked to a steep reduction in scores on verbal and math tests. In particular, the association between traffic-related air pollution and autism is becoming increasingly clear, with more than 25 peer-reviewed scientific studies finding that prenatal and childhood exposure to these air pollutants increases children's risks for autism. And I will be submitting all of these studies to the docket.... EPA's proposed so-called SAFE Rule will hurt our communities, it will hurt our country, it will hurt our children and future generations. Our kids deserve clean air to help them learn, play, and grow to their full potential. EPA's proposed rule is anything but safe for our children and families and should be withdrawn. *Pittsburgh*, pg. 90-92.

**Dr. Jean Gash**, a nurse practitioner and associate professor of community health at **University of Detroit-Mercy**, testified to oppose the rollback proposal and speak to the importance of protecting public health: "I am concerned about the effects of particular matter released from the emissions of vehicles. The chemicals in these [emissions] have been scientifically linked to the

following diseases, which we've heard a lot about this morning: Asthma, bronchitis, COPD, lung cancer, and the exacerbation of cardiovascular disease." *Dearborn*, pg. 84-85.

**Ken Fletcher**, Director of Advocacy with the **American Lung Association of Michigan**, testified that the existing standards "reduce pollution and improve mileage," and the industry has been meeting them ahead of schedule in a cost-efficient manner." *Dearborn*, pg. 126. "The existing standards reflect the urgent action needed to protect public health against climate change health impact. Millions of Americans face greater risk from these threats, including children, older adults, people with chronic lung diseases like asthma, people with cardiovascular disease, and even healthy adults who work or exercise outdoors." *Dearborn*, pg. 126. Mr. Fletcher urged the agencies "to withdraw this proposed rule and instead work in cooperation with California to implement the existing greenhouse gas emissions standard and stay the course on federal rules to improve fuel economy. Our nation's health depends on these decisions." *Dearborn*, pg. 128.

**Dr. Trisha Koman**, an environmental epidemiologist who served for 22 years in the U.S. Environmental Protection Agency's Office of Air and Radiation, urged the agencies "to withdraw this flawed proposal and to implement the current standards as quickly as possible," explaining that:

the U.S. EPA has a legal obligation to reduce greenhouse gas emissions and to take actions requisite to protect public health from the threats of climate change. U.S. EPA may not shirk its responsibility under the law or delegate the U.S. Department of Transportation. This is important because our climate system is our life support, thus climate change threatens every being on our planet. The scientific community shares a rare consensus that we are at a critical junction where it is still possible to reduce emissions and avert the worst outcomes. ... [I]f we don't reduce greenhouse gas emissions from all sectors, including transportation, people's health will suffer as was just described. These negative health effects are preventable.... Because of the significant health impacts associated with climate change, major health organizations, such as the American Public Health Association, the American Academy of Pediatrics, and other members of the medical society consortium have called for immediate action to reduce greenhouse gases. *Dearborn*, pg. 129-31.

**Ian Clavel**, a medical student, addressed the public health impacts of air pollution. Mr. Clavel noted that "Poor air quality worsens serious medical conditions such as asthma, bronchitis, and COPD" and that "Acute exacerbations of asthma and COPD, also known as asthma attacks and COPD flare-ups, can and often do cause death." *Dearborn*, pg. 287. Mr. Clavel also observed that "the International Agency for Research on Cancer, which is part of the World Health Organization, has classified outdoor air pollution as a carcinogen and has linked it to causing not only lung cancer, but also bladder cancer." *Dearborn*, pg. 287. Mr. Clavel also stated that:

Not only will having increased rates of life-threatening respiratory ailments and cancer increase costs in our health care system, but it will also affect people's lives. These people are not just numbers on a piece of paper, they are you, they are friends, families, neighbors, the young and old, people in cities and suburbs across our nation, and they are my future patients. *Dearborn*, pg. 287.

**Stuart Batterman**, professor of environmental sciences in the school of public health at the **University of Michigan** and professor in civil and environmental engineering at the University of Michigan, focused on the public health impacts of the proposed rule. Mr. Batterman noted that “the proposed rule is not protective of public health” and will lead to “between 2,300 and 6,700 additional deaths” due to “Acute bronchitis, respiratory emergency room visits.” *Dearborn*, pg. 294. Mr. Batterman further observed that NHTSA’s analysis “does not attempt a quantitative analyze [sic] of greenhouse gas emission impacts,” “does not account properly for the individuals living near major roads,” “does not account for regional differences in the emissions associated with the power grid and growth renewals,” and “does not consider impacts outside of the U.S.” *Dearborn*, pg. 295.

**Dr. Karen Hacker**, Director of the **Allegheny County Health Department** in Pittsburgh, explained the importance of vehicle emissions standards in allowing the Pittsburgh region to attain health-based national air quality standards and reduce climate change. She noted that “our continued ozone progress is absolutely dependent on current EPA emission controls,” and that “mobile sources are contributing more and more to ozone levels,” and that the agencies’ proposal “diminishes the most significant part of our ozone reduction strategy.” *Pittsburgh*, pg. 18. Dr. Hacker also objected to the agency’s authority to override California’s standards and other states’ ability under the Clean Air Act authority to adopt those standards, explaining that Pittsburgh “cannot afford losing the additional protection provided by these standards.” *Pittsburgh*, pg. 19.

**Dr. Bernard Goldstein**, a member of the National Academy of Medicine and former Dean of the University of Pittsburgh’s Graduate School of Public Health, served as President Reagan’s Assistant EPA Administrator for of Research and Development and as chair of EPA’s Clean Air Scientific Advisory Committee. Dr. Goldstein testified that “President Reagan would surely disapprove” of the agencies’ proposal to override California’s judgments about what protections are necessary to protect California’s people and resources. *Pittsburgh*, pg. 35. He noted that climate change research ongoing during his time in the Reagan Administration, and emphasized that evidence of climate change is now definitive and that “We now must confront reality,” to avoid its worsening consequences. *Pittsburgh*, pg. 36.

**Abdul El-Sayed**, a physician, epidemiologist, former Detroit Health Commissioner and Michigan gubernatorial candidate, testified, “I was the Commissioner of Health in a city where our children face three-fold of probability of being hospitalized for asthma, which had everything to do with the quality of air in that city, and the fact is is [sic] that we have a constellation of a number of highways that expose kids to the air that we would be breathing and the consequence of this fatal decision.” *Dearborn*, pg. 188. He stated that: “We have a responsibility to make decisions about a future to protect our kids, and ... any rollback of fuel standards we fail that responsibility, we fail that responsibility to our future and our democracy.” *Dearborn*, pg. 190.

**Susan Eward**, professor at Michigan State University in the College of Veterinary Medicine, testified on behalf of the **American Thoracic Society**, that “Maintaining the current trajectory of standards is an important element in the nation's response to climate change and its subsequent impacts on health,” and that “Reducing greenhouse gas tailpipe emissions and improving fuel



economy are both environmentally responsible and technically feasible.” *Dearborn*, pg. 198. She “strongly urge[d] the administration not to weaken emissions and fuel [] economy standard and instead retain the current trajectory of requirements that will help drive innovations to preserve the health of all Americans and the planet.” *Dearborn*, pg. 200.

**Kindra Weid**, a registered nurse, testified for **MI Air MI Health**, that “Let’s be very clear. Rolling back or weakening these standards will create more public health problems in Michigan and it will cost lives.” *Dearborn*, pg. 158.

**Kathleen Slonager**, Executive, Director of the **Asthma and Allergy Foundation of America** testified about the “air pollution can worsen asthma symptoms, and people with asthma are ... at greater risk for breathing in small particles found in air pollution from trucks and cars. And that causes their asthma to be worse, plain and simple.” *Dearborn*, pg. 139. She testified if emissions standards are weakened, “health outcomes from many groups will head in the wrong direction.” *Dearborn*, pg. 142.

**Larry Junck**, professor at **University of Michigan Medical School**, asked the agencies to retain existing standards “because the proposed change would be bad for the health of the people of the state of Michigan and of this great nation.” *Dearborn*, pg. 145. He noted that air pollution in the United States “causes the death of one hundred thousand or more people per year in the U.S,” “greater than the number of opioid deaths, also greater than the number of deaths from homicides and suicides combined.” *Dearborn*, pg. 146. Whereas the current standards “will save several thousand lives per year,” Dr. Junck testified, the agencies proposal “will lead to thousands more deaths from air pollution, also to children with asthma missing school and growing up with disability.” *Dearborn*, pg. 147.

### **Technical Experts:**

**John German**, a leading expert on automotive technology and innovation with extensive experience with EPA, Chrysler, and Honda, testified for the **International Council on Clean Transportation** on “two main points”:

First, the proposed regulations runs counter to the available data on automotive -- automotive technology, which all showed standards are working well and are increasingly cost-effective due to rapid technology improvements. Second, the proposed rules would put the U.S. auto market out of step with innovation in the rest of the world. *Dearborn*, pg. 218.

Mr. German also testified that:

EPA and NHTSA’s original midterm assessments demonstrated the 2025 standards are [] technologically feasible, could be achieved at much lower costs than estimated in 2012, but these assessments still overestimated costs by thirty to forty percent due to rapidly emerging low cost technologies. Consumer fuel savings are two to three times the technology costs. The agencies have dismissed the most recent data on automotive [] technology developments. Invalid assumptions include the failure to include multiple technologies that are already in production and inappropriate restrictions on the availability of unknown

technologies, inclusion of technologies with little or no efficiency benefit, ignoring consumer value of fuel savings and other technology benefits in order to help decrease new vehicle sales, and artificially propping up the driving of older vehicles to increase fatalities. In our work and regulations around the world we have rarely seen a regulatory assessment that disregarded the technical record like this.

To our second point, the administration's proposal would put the United States out of step with the rest of the global auto markets. About eighty percent of the global market is regulating efficiency, in particular, the policies of China and Europe are increasingly driving global technology innovation and investment tool. Based on the agencies' own analysis, the lost technology investments will be profound, including many millions less turbo chargers, (inaudible) engines, mild hybrids systems and SV transmissions. The proposed freeze would put us back into the cycle that occurred from the mid-1980s to early 2000s when frozen vehicle efficiency standards made domestic manufacturers uncompetitive and contributed to the bankruptcy of General Motors and Chrysler just nine years ago. How quickly we forget. In conclusion, even the most stringent of the proposed options is very weak, as the original standards are far more cost-effective than originally anticipated. We remain hopeful that a more constructive outcome may still emerge due to public commentary. Towards that end, we will continue to press the case for practical, fact-based, future-oriented policies.

*Dearborn, pg. 218-220.*

**Jeremy Michalek**, an engineering and public policy professor at **Carnegie Mellon University** and director of the university's vehicle electrification group testified that the proposed flatlining of standards do not satisfy the "maximum feasible fuel economy" standard "because technological capabilities and costs are constantly improving." *Pittsburgh, pg. 41-42.* He explained that:

Technological innovation and improvement have been used to improve fuel economy and/or horsepower of cars by about two percent per year for the past couple of decades, and the agency's own preliminary regulatory impact assessment assesses that manufacturers will still choose to increase fuel economy every year, exceeding the proposed standards in all years that the standards stays flat. The law requires the standards to be maximum feasible and flat standards just aren't.

*Pittsburgh, pg. 42.* Dr. Michalek also testified that the agencies' analyses relied upon questionable assumptions; disregarded EPA's tested methodology, and that the new model on which the proposal was based "has not been independently peer reviewed and assessed for validity of the changes and assumptions." *Pittsburgh, pg. 43.*

**Eric Junga**, of **American Council for an Energy Efficient Economy (ACEEE)** testified that "The model year 2021 through 2025 standards as adopted in 2012 should be maintained or strengthened," and addressed "a few of the many unrealistic assumptions and poor judgements used to justify this rollback." *Pittsburgh, pg. 197.* He explained that:

As a primary justification the agency is arguing that previously adopted standards will make vehicles unaffordable. This is false. The average consumer expenditure on new vehicles has

remained essentially flat since the early 2000s, even while fuel economy and vehicle features have improved....

Full-size pickup trucks illustrate the success of current fuel economy standards. For example this fall GM will begin selling its redesigned Chevy Silverado, one of the best sellers in this category. Among many new features is a heavily advanced turbo charged four cylinder engine that will come standard in the Silverado's highest volume trim. We estimate that not only will it meet its 2025 fuel economy target but will do so with higher towing and payload capacities than the outgoing model. For this proposed rulemaking the agencies predict that it will cost an additional \$4100 for this truck to meet its 2025 target, yet GM has announce a \$700 price decrease for this over the outgoing model. *Pittsburgh, pg. 198-99.*

Mr. Junga concluded that "Rolling back these standards will burden Americans with unnecessary fuel costs, auto sector job losses, and adverse health and environmental impacts. It will eliminate regulatory certainty and jeopardize domestic automakers global competitiveness. The agency's proposal shows a willful and irresponsible disregard for science and sound policy." *Pittsburgh, pg. 200.*

**Jeff Alson** is an engineer who worked at EPA developing the light-duty vehicle greenhouse gas emission standards over the last decade, and recently retired after 40 years at the agency. Alston first explained how EPA's expert technical staff were sidelined from the process of developing this proposed rule: "The proposal to massively roll back the current EPA standards for eight years, not just six, is based on the most secretive regulatory process, and the most biased and dishonest technical analysis that I have ever seen. It must be withdrawn and successful standards must be maintained.... The EPA has the world's leading vehicle pollution test laboratory and has performed 10,000 formal CAFE tests throughout the years for NHTSA. NHTSA has no laboratory, has never performed a formal CAFE test, yet NHTSA refused to have a single technical working meeting with EPA staff since the November 2016 election." *Dearborn, pg. 47-48.*

Alson identified multiple egregious errors within NHTSA's technical analysis for the proposal. Alson described as "absurd on its face" NHTSA's biased assumption that "used car drivers, completely unaffected by the new car standards or changes in sales, will voluntarily choose to stay home and drive almost a trillion miles less under the rollback than they would under the standards." *Dearborn, pg. 49.* Alson also explained how "NHTSA deceptively claims that the rollback will save 12,700 fatalities," and that the "goal [of this claim] is to scare the American people." *Dearborn, pg. 49.*

**James McCargar**, a former environmental scientist who served in four Presidential administrations in EPA's Office of Transportation and Air Quality, testified that:

In all my career as a scientist I have never reviewed such a blatant, unjustified attempt to subvert a judicially driven mission critical EPA policy. Fundamentally, of course, this proposal isn't about vehicle safety. It's about upending U.S. climate policy. Your GHG analysis is cursory, an afterthought based on dumbfounding modern assumptions about vehicle miles travelled and ignoring the relevant technical underpinnings of EPA's original

rulemakings.... You simply ignored the entire body of ... EPA technical and engineering data, model and analysis that were the valid justifications of the standards you now propose to roll back. *Dearborn, pg. 135.*

### **National Security Community:**

**General James Conway**, retired 34th Commandant of the U.S. Marine Corps and co-chairman of the Energy Security Leadership Council for **Securing America's Future Energy (SAFE)**, testified at the hearing in Dearborn. Conway explained that the Clean Car Standards are "one of our greatest weapons to combat America's oil reliance." *Dearborn, pg. 17.* He stated, "A fuel economy program helps America strike back at ... collusion and market distorting behavior. The federal government's proposal states that the United States should no longer concern itself with reducing oil consumption. Unfortunately, we find this proposal deeply misguided." *Dearborn, pg. 18.*

### **State and Local Officials:**

**Ali Mirzakhali**, vice president of the **National Association of Clean Air Agencies**, testified that the "EPA roll back proposal is contrary to the well founded and technical evidence." *Fresno, pg. 101.* He stated, "This action would stifle innovation that would drive further improvement and would result in more air pollution." *Fresno, pg. 101.*

**Congresswoman Debbie Dingell**, representing Michigan's 12th district, testified in support of strong Clean Car standards: "Nobody can deny that strong fuel economy standards have kept our environment clean, reduced our dependence on foreign oil, and saved consumers money at the pump. The Administration has proposed several options with the most unacceptable being the flatlining of fuel economy standards. Flatlining standards are harmful to American leadership and innovation, as well as to the environment." *Dearborn, pg. 11.* Dingell went on to state, "We all have to work together to ensure strong, workable standards that protect jobs in the environment and keep pace with innovation and technology, so that the United States is competitive, and not only competitive but at the forefront." *Dearborn, pg. 12.*

**Mary Nichols**, chair of the **California Air Resources Board**, testified that the proposal "turns its back on decades of progress and cleaning up cars and trucks, ignores available and cost-effective clean-vehicle technology, wastes gasoline, and pumps more climate-changing gases into the atmosphere. It also blows a hole in our efforts to meet health-based standards for air pollutions[.]" *Fresno, pg. 17.* Chairman Nichols also stated that the proposal "pumps tons of additional carbon pollution into the atmosphere at a time when the evidence of changing climate is all around us." *Fresno, pg. 19.* And she testified that "the technical analysis that underlies this proposal simply makes no sense," is "absurd," and is "not supported by fact." *Fresno, pg. 19.* She concluded that the proposal is "the result of a complete lack of interest in or respect for the benefits of a clear and long-term policy that rewards investments and creates jobs based off or tied to public health and consumer protection that are the set of rules that are in place today." *Fresno, pg. 20.*

**Matt Rodriguez**, Secretary for of the **California Environmental Protection Agency**, testified that “California is vehemently opposed to this proposed rule.” *Fresno*, pg. 12. He stated that the proposal is “unsupported by science or technology and, if adopted, will ultimately hurt consumers, inject significant uncertainty into the automobile industry, jeopardize public health and undermine our efforts to protect our air and climate.” *Fresno*, pg. 12.

**Xavier Becerra**, **Attorney General of California**, testified that “We must continue to tackle the Number 1 source of greenhouse gas emissions, our vehicles. Stopping us from protecting our people, our jobs and economy or our planet is like trying to stop a mother from protecting her child.” *Fresno*, pg. 21. He also noted that “the law requires the agencies to set, quote, the maximum feasible level for fuel-efficiency standards based on technology available today and technology that will be available in 2021 to 2026, among other factors. Instead, your agencies have proposed standards far below what California has already proven to be feasible.” *Fresno*, pg. 22. He concluded, “With every day bringing America news of extreme weather and devastating consequences, this is not a time to backslide on our responsibilities. We have a chance to move our country forward together on our proven, existing and achievable national clean-car standards. We should seize that opportunity.” *Fresno*, pg. 23.

**Jack Broadbent**, executive officer for the **Bay Area Air Quality Management District**, testified that “Any action by the EPA and NHTSA that could lead to an increase in pollution would thwart the Air District’s efforts to achieve attainment, fulfill our mission and protect public health. Allowing the roll back of the standards and freezing them at 2020 levels would result in a slew of negative consequences.” *Fresno*, pg. 24. He also noted that “Governments representing 55 percent of the national auto market have voiced their opposition to this roll back.” *Fresno*, pg. 26. And he stated that “Climate change is an existential threat to our way of life.” *Fresno*, pg. 26.

**Wayne Nastri**, executive director of the **South Coast Air Quality Management District**, testified that the district is “deeply concerned about the damaging air quality impact” of the proposal, “as well as the potential revocation of the California waiver for light-duty vehicles.” *Fresno*, pg. 27. He continued, “The proposal fails to provide credible evidence countering the record EPA provided in their 2016 mid-term evaluation supporting retaining the standards. Notably, the proposal fails to cite any of the specific information provided by CARB in response to EPA’s reconsideration of the standards or in CARB’s own mid-term review, both of which fully supported retaining the current standards and suggested that even more stringent standards may be appropriate.” *Fresno*, pg. 28. And he noted that “It is of paramount importance that California retains its right to establish emission standards for light-duty and other vehicles.” *Fresno*, pg. 29.

**Sharon Weber**, Deputy Director of Air and Climate Programs for the **Massachusetts Department of Environmental Protection**, stated that “Significant reductions in transportation sector GHG emissions are critical to achieve Massachusetts reduction requirements for 2020 and beyond” and that the “Transportation sector is the single largest source of GHG emissions in the commonwealth...” *Dearborn*, pg. 234-235. Ms. Weber further observed that any weakening of the standards or revocation of California’s waiver will threaten “Massachusetts’ efforts to protect

our residents' health by attaining and maintaining air quality standards for ozone..." *Dearborn*, pg. 236.

**Jesse Harvey**, Chief Deputy Attorney General with the **Pennsylvania Office of Attorney General Bureau of Consumer Protection**, testified on behalf of **Attorney General Josh Shapiro** that the proposal would exacerbate air pollution and climate risks to Pennsylvanians, and deprive Pennsylvanians of fuel savings and jobs. Harvey particularly underscored that the agencies' attacks on states' authority to adopt greenhouse gas emissions would harm Pennsylvania. Mr. Harvey concluded that:

these proposals are an affront to the rule of law. These rules will violate the Clean Air Act, the Energy Policy and Conservation Act, the Administrative Procedures Act, and decades of Supreme Court precedent. In short, these proposals are arbitrary, capricious, contrary to law, and will result in serious harm to the people of Pennsylvania. We urge you in the strongest terms to refrain from changing these vital regulations. *Pittsburgh*, pg. 102.

**Congresswoman-elect Rashida Tlaib (MI-6)** testified in support of the Clean Car standards and spoke about her community in Detroit: "Going backwards on fuel efficiency standards has an enormous impact on communities of color, against communities that are already economically challenged, low-income families like my family as we were going up. Again, fuel efficiency standards is a concrete step towards climate change ... [i]t helps us not only protect our public health, but also our environment." *Dearborn*, pg. 95-96.

**Pamela Pugh**, Chief Public Health Adviser of the city of **Flint, Michigan**, testified that she wanted to use her "voice to beg this administration to step away from this decision-making process that is disengaged from sound and resolute voice of medical and public health professionals and to sideline an immeasurable longstanding body of science that show us that these standards are achievable and that our children and our future deserve for them to remain in place." *Dearborn*, pg. 124.

**Steven Flint**, Director of the Division of Air Resources for the **New York State Department of Environmental Conservation**, described New York's extensive efforts to promote energy efficiency and reduce air pollution, and stated that "The proposal before us today would significantly undermine everything we are trying to achieve." *Dearborn*, pg. 149. "To complete the unprecedented rollback with the greenhouse gas and fuel economy standards, NHTSA and EPA have decided they need to repeal the waiver granted to California, thus preventing California or any other states from having any of these other standards." "This is unacceptable, and any attack on state authority to address critical environmental issues like climate change is a line in the sand that can't be crossed." *Dearborn*, pg. 152.

**Sarah McKearman** testified for **NESCAUM**, the regional association of eight state air quality agencies in the northeast. Ms. McKearman testified that:

The northeast states strongly oppose the proposed weakening of federal GHG standards for model years 2021 through 2025 light-duty vehicles, and any curtailment of state rights under the Clean Air Act to adopt motor vehicle emission standards that are at least as stringent as the federal standards. The proposed SAFE Vehicle Rule ignores EPA's responsibility under

federal law to protect the health and welfare of our nation from the adverse impact of air pollution at a time when we are experiencing the dire effects of a changing climate, from record-breaking heat waves, to mega forest fires in the west, to extreme hurricanes.... The technologies needed to meet these standards are here today and at lower costs than projected, and they will drive further innovation. *Dearborn, pg. 173-74.*

Ms. McKearman also testified in opposition to the unprecedented proposal to curtail states' authority to enforce more protective GHG emission standards, "either through revocation of the existing waiver or a finding of preemption by the Energy Policy Conservation Act, which two federal courts have already rejected, and EPA's new and incorrect interpretation that section one seventy-seven does not allow states to adopt California's GHG standards." *Dearborn, pg. 174.* On that issue, McKearman testified:

For decades, California's special authority under the Clean Air Act has been recognized by congress and by EPA on a bipartisan basis as a vital part of our nation's response to air pollution. Twelve states in the District of Columbia have exercised their authority under section one seventy-seven to adopt California's motor vehicle standards in lieu of the federal standards. Together with California, they represent a hundred and fourteen million people and thirty-five percent of new car sales.... Implementation of California's GHG and Zero Emission Vehicle standards is a core part of our state's plans to cut transportation emissions to achieve their science-based targets to reduce emissions by eighty percent by 2050 and to meet aggressive near-term targets. Any curtailment of these rights as proposed by the SAFE Vehicle Rule would deprive states of a critical tool to address motor vehicle pollution and minimize climate disruption.... Our states are fully prepared to defend these rights. *Dearborn, pg. 174-75.*

### **Consumer Groups:**

**Jack Gillis**, Executive Director of the **Consumer Federation of America**, outlined "the key reasons why rolling back the standard would be bad for consumers, bad for U.S. car companies, bad for the economy and bad for America's global competitiveness":

First of all, the car companies are, in fact, fully capable of meeting the agreed upon CAFE standards, and they are able to do so with great savings for consumers. Rolling back the standards would not only hurt Americans already financially beleaguered consumers, but it would hamper vehicle sales and put U.S. car companies at a distinct competitive disadvantage to the Asian car companies who will certainly meet the standards.... Looking at the cost benefit average for the eighty-two all new models in 2018, the added cost of fuel economy averaged three hundred and twenty dollars per vehicle but will save the buyer an average of eleven hundred and ... eighty-four dollars over the next five years, putting eight hundred and sixty-four dollars back into consumer pocketbooks and the American economic engine. *Dearborn, pg. 163.*

Gillis pointed to a new poll commissioned by a CFA finding that 69 percent of Americans support the current standards, including large majorities of Republicans, Democrats, and

Independents. The survey found that in “the four states most dependent on the auto industry, Indiana, Michigan, Missouri, and Ohio, support for the standards was even higher, with seventy-eight percent of the respondents supporting the standard across the board.” *Dearborn, pg. 165*. Accordingly, Gillis concluded, “The Consumer Federation of America implores you not to roll back these standards.” *Dearborn, pg. 165*.

**Shannon Baker-Branstetter**, testified on behalf of **Consumers Union**, the advocacy division of Consumer Reports, that “Even according to the agencies’ own estimates, the proposed rollback increases oil consumption by half a million barrels per day while costing American a hundred and fifty-three billion more on fuel and costing the auto industry hundreds or even thousands of jobs.” *Dearborn, pg. 152*. She testified that “Counter to the agencies’ assertions, the proposed rule would not save consumers money and would not save lives. In fact, the preferred alternative would impose a net cost on consumers relative to finalizing the standards issued in 2012.” *Dearborn, pg. 152*. Ms. Baker-Branstetter testified that:

According to the MJ Bradley analysis, freezing the standards of 2020 would cost the average household an average of -- an additional two hundred to five hundred dollars each year or one thousand two hundred to three thousand over six years, the average length of time a family owns a vehicle. A vehicle meeting the 2025 augural standards would start saving vehicle buyers in the very first month of ownership because the monthly fuel savings outweighs the additional monthly payment from the technology and financing cost with stronger standards.

Once the agencies’ adoption of inflated technology cost estimates using the proposed rule included at the request of the auto industry are corrected, it is clear the cost-effective improvements to fuel economy will be far from exhausted in 2020, especially for larger vehicles.

The agencies’ analysis of the safety effect of rolling back fuel economy standards is based on three fundamental errors in its modeling that include, one, decreases in safety to the existing vehicle fleet due to unrealistic and unsupported scrappage assumptions; two, inconsistent VMT assumptions; and, three, uneconomical predictions of light-weighting distribution. When these errors are corrected the impact of strengthening CAFE on the safety of vehicle fleet is likely positive....” *Dearborn, pg. 155-56*.

**Mel Hall-Crawford**, director of energy programs at the **Consumer Federation of America (CFA)**, testified that “CFA has been poling [sic] the public for over the past decade and has found consistent, strong and broad support for increasing the fuel economy of vehicles and for the government to increase the fuel-economy standards.” *Fresno, pg. 59*. She concluded, “we oppose the proposed roll back and would like to retain the current standards that benefit consumers.” *Fresno, pg. 61*.

**Madeline Page of Public Citizen** testified that the Administration's proposed rollback of vehicle fuel efficiency and greenhouse gas emission standards is “one of the worst de-regulatory decisions in history,” explaining that:



It will dramatically worsen climate pollution, speeding our rush towards climate catastrophe and threatening public health. At the same time not only will it introduce massive regulatory uncertainty for automakers it will cost consumers and the national economy hundreds of billions of dollars. It is not easy to make a decision this bad.... To make matters worse the Trump Administration's proposal gets even more extreme. It would revoke the California Waiver, attacking the state's authority to adopt more protective standards on tailpipe pollution, an unprecedented attack on public health, air quality, and common sense. *Pittsburgh, pg. 214-16.*

### **Environmental Community:**

**Irene Gutierrez**, attorney at the **Natural Resources Defense Council (NRDC)**, testified that the proposed rollback “will lead to dirtier cars on the road, which will, in turn, create more air pollution and the greenhouse gas emissions which spur climate change.” *Fresno, pg. 48.* She continued, “EPA and NHTSA are required by law to set standards that achieve the greatest reduction in pollution and the greatest improvements in fuel economy. This proposal does neither. EPA's attempts to roll back California's waiver also has no legal basis and is flawed.” *Fresno, pg. 49-50.* She concluded, “So we call on EPA and NHTSA to do the right thing and to rescind their dangerous proposal and keep clean car standards in place.” *Fresno, pg. 50.*

**Luke Tonachel**, Director of the Clean Vehicles and Fuels Group with the **Natural Resources Defense Council (NRDC)**, spoke at the Dearborn hearing to express NRDC's strong opposition to the proposed rollback. He discussed how the proposal would have harmful impacts on human health, domestic jobs, and everyday consumers. Tonachel stated, “The proposal is harmful because it will increase pollution and oil consumption relative to the existing 2025 standards. The proposal will stop future progress just at the time that we should be accelerating efforts to reduce pollution from transportation, which is the nation's No. 1 emitter.” *Dearborn, pg. 53.*

**Juan Carlos Perez**, director of advocacy with **GreenLatinos**, testified that the existing “carbon emission standards have been labeled as the best climate policy in our country to date.” *Fresno, pg. 72.* He concluded, “as GreenLatinos, we strongly reject the proposal on the roll back of the carbon emission standards.” *Fresno, pg. 73.*

**David Reichmuth**, a senior engineer with the **Union of Concerned Scientists**, testified that “We oppose changes to weaken vehicle emission standards at the national level and any change to California's ability to set standards. These standards are vital to avoid the worst impact of climate change and to allow the state to meet air quality standards.” *Fresno, pg. 76-77.* He continued, “Rolling back vehicle standards threatens innovation and American automotive leadership. It threatens consumers who will pay more and have fewer choices to reduce the gasoline use. And it threatens our well-being by accelerating climate change and reducing air quality.” *Fresno, pg. 78.*

**Daniel Jacobson**, director of **Environment California**, observed that, when calculating the increased fatalities attributable to the augural standards, the administration “fails to take into account any pollution or climate related deaths,” and that “Air pollution through transportation is

responsible for a staggering 30,000 premature deaths each year.” *Fresno*, pg. 132. Referencing vehicle safety, Mr. Jacobson also noted that, contrary to the administration’s assertions, auto manufacturers are pursuing weight reduction strategies for the heaviest vehicles in their fleets, which will “improve safety because they have a smaller disparity in the weight between the heaviest and the lightest vehicles.” *Fresno*, pg. 133.

**Martha Roberts**, attorney with the **Environmental Defense Fund**, observed that the current clean car standards rest “on an extensive technical record” and that:

The EPA, together with the Department of Transportation and the California Air Resources Board embarked on an exhaustive multi-year technical analysis and public process to review the existing model year 2022 to 2025 standards. The draft technical assessment report, that was jointly issued by all three agencies, strongly upheld the feasibility of the existing standards, concluding that, quote, A wider range of technologies exists for manufacturers to use to meet the Model Year 2022 to 2025 standard at a cost that are similar or lower to those projected in the 2010 to 2012 rule. *Fresno*, pg. 168.

Ms. Roberts also stated that the agencies’ proposed revocation of California’s waiver is an “extreme and indefensible attack on state leadership” and “an effort to block the clean car statutes that numerous states have put in place protecting nearly half our country from dangerous pollution discharge by cars and trucks.” *Fresno*, pg. 169.

**Mark Rose**, Sierra Nevada field representative for the **National Parks Conservation Association**, noted that:

...the National Park Service estimates that well over 40 billion dollars’ worth of park assets are at risk due to sea level rise. Additionally, in 2015 alone, federal taxpayers spent over 2 billion dollars on wildfire suppression. And in 2017, the administration requested nearly 200 million dollars for the Park Service in response to hurricanes. These, and countless other park-related costs, will only continue to rise as even more unnecessary greenhouse gases are emitted and climate impacts increase. *Fresno*, pg. 177.

**Maggie Striz Calnin** testified on behalf of **Southwest Detroit Environmental Vision**, a local nonprofit that advocates for the residents of Southwest Detroit, which “is impacted significantly by mobile source emissions.... We currently have 10,000 trucks a day that go through Southwest Detroit, and passenger vehicles on top of that.” *Dearborn*, pg. 45. Striz Calnin explained why SDEV supports the Clean Car standards: “We cannot discount the impact on quality of life and on the economy around lost workdays, absences, and general public health impacts.... We oppose this so-called SAFE Rule. We know that our automotive companies here are up to the challenge to continue to increase fuel economy and to look to alternatives. We encourage them to do that.” *Dearborn*, pg. 45-46.

**Chet France**, former director of assessment and standards at the Office of Transportation and Air Quality, testified as a consultant for **Environmental Defense Fund**. Mr. France explained why “The technical analysis by NHTSA, in which EPA career experts did not participate, represents an unprecedented departure from EPA’s and NHTSA’s own work over the previous seven years.” *Dearborn*, pg. 50. He stated that NHTSA deceptively claims that its proposal

would reduce fatalities by at least 12,700, but “these so-called reduced fatalities have nothing to do with vehicle safety or sales, but are simply due to NHTSA assuming that Americans will voluntarily reduce their personal mobility under the rollback and drive their vehicles less.” *Dearborn, pg. 51.*

France also explained the proposal contains a biased, incorrect analysis of vehicle technology cost. He stated, “Just two years ago in the TAR, NHTSA projected a vehicle technology cost of \$1,250 to meet the model year 2025 standards. Now it estimates \$2,260 to meet the greenhouse standards, an 80 percent increase.... This gross overestimation can only be possible if the CAFE model assumes that manufacturers will make a series of inefficient choices and waste money.” *Dearborn, pg. 52.* France testified that EDF has been conducting its own modeling using NHTSA’s Volpe model, and that when “these flaws are corrected, we are finding the fuel cost savings for car drivers far exceeds technology costs, which is consistent with every previous EPA and NHTSA analysis.” *Dearborn, pg. 52.*

**Kenneth Kimmel**, President of the **Union of Concerned Scientists** and former Commissioner of the Massachusetts Department of Environmental Protection, declared that “history will not be kind to this abdication of responsibility,” and that the vehicle standards have been an “enormous success.” *Pittsburgh, pg. 45.* Mr. Kimmel noted that the central rationale of the proposal – that “cleaner more efficient cars will mean more fatalities on the road” is “based on a model that has never been peer reviewed, that erroneously assumes that people are going to drive more regardless of their demand for travel or their need for it.” *Pittsburgh, pg. 46.* He described the proposal as headed for “years of litigation,” and would be “bad for the auto industry, bad for consumers, bad for the climate, bad for the globe.” *Pittsburgh, pg. 47.*

**Dr. Dave Cooke**, a senior vehicles analyst with the **Union of Concerned Scientists**, testified against the Trump administration’s proposed rollback, and addressed the shortcomings of the Volpe model used by NHTSA: “Fundamentally, the Volpe model is inadequate to modeling compliance with the greenhouse gas program. It does not accurately reflect the credit expiration of the EPA program. It does not consider the three-year carry-back for compliance. It does not allow for manufacturer-to-manufacturer trading. It uses CAFE fines to evaluate the value of greenhouse gas compliance, in direct conflict with the differences between the agencies’ respective authorities under the EPCA and the Clean Air Act. And it doesn’t even accomplish its most basic task correctly, which is to utilize the most efficient path for a manufacturer to meet the standards.” *Dearborn, pg. 56-57.*

In addition to identifying concerns about NHTSA’s modeling in the proposal, Cooke stated that UCS and other organizations have asked EPA to make its OMEGA model publicly available, to ensure a transparent process. He explained that the Trump administration has rushed this rulemaking, “failing to provide peer review of the most significant aspects of the model underlying the proposal, and ignoring the ALPHA and OMEGA models which were developed explicitly for this question and continue to be updated.” *Dearborn, pg. 58.*

**Heather Kaper** is a parent, a member of **Moms Clean Air Force**, and a pediatric nurse at University of Michigan Mott Children’s Hospital. She testified, “As a pediatric nurse, I see firsthand how air pollution and the effects of the climate change affect the health and wellbeing

of children, elderly, and patients with compromised immune systems. If President Trump's administration is successful in rolling back these standards ... [c]hildren and elderly, whose hearts and lungs are more vulnerable to pollution, will be susceptible to a relapse in their disease." And this, in turn, "will cause an increase in ER, urgent care visits and a prolonged hospital admission." *Dearborn*, pg. 59-60.

**Mike Dellolacono** spoke at the hearing as a member of **Moms Clean Air Force**, "a national organization of more than 1 million moms and dads, united to fight air pollution and climate change for the sake of our children's health." *Dearborn*, pg. 65. Dellolacono shared his personal connection to the Clean Car standards: "This proposal will hurt our health and our wallets. As a dad, I'm strongly opposed. My 14-year-old son Dillon suffers from debilitating asthma. Every day that he plays sports, he must take an inhaler before each game, and an emergency inhaler that he takes if he has an asthma attack. As I've always taught my children, you must always do the right thing. And to see my son suffer like that is heartbreaking. So this proposal is not right. It will have a major impact on all children's lungs and health, significantly children with breathing issues such as asthma." *Dearborn*, pg. 65-66.

**Trisha Sheehan** also testified on behalf of the **Moms Clean Air Force**, about the impact of air pollution and climate change on her family. She explained that:

Strong fuel economy and pollution standards clean the air and save us money. Any rollback to the standards would make it harder to reduce pollution and would force Americans to fork over billions of dollars to oil companies instead of spending money on their families. As moms we want our cars to be efficient and clean. And as Americans we deserve clean air. Now those gains are all threatened by the proposed rollback. *Dearborn*, pg. 162.

**Shakeila James**, also of the **Moms Clean Air Force**, stated, "The proposed rollback to Clean Car Standards will make air pollution worse. They will make climate change worse. That is unacceptable to me as an African-American and a mom. My son and every child everywhere deserves to play outside and without fear of losing his or her breath. We should all -- we should be doing all we can to protect children from the extreme storms, storms surge and massive floods made worse by climate change." *Dearborn*, pg. 183.

**Nathan Murphy**, the director of **Environment Michigan**, read the remarks of **former Michigan Governor Jennifer Granholm**, who "strongly oppose[s] the rollback of fuel economy standards." *Dearborn*, pg. 87-88. As Granholm stated, the "heart of Michigan's economy is and has been the auto industry," but "The state needs diversification. And given our entrepreneurial spirit, sheer grit, and ingenuity, makes all too perfect sense for Michigan to be a leader in renewable energy. Because of that spirit and ingenuity, our auto manufacturers, our suppliers, and our workers have every potential and capability to lead in the creation of the next generation of vehicles." *Dearborn*, pg. 87.

**Madeline Fleischer**, testifying for the **Environmental Law and Policy Center**, urged the agencies to propose "common sense achievable standards that have proven environmental and economic benefits for the entire Midwest region," stating that "EPA's greenhouse gas standards for cars are critical and successful policy to mitigate dangerous climate change impacts in the

Midwest,” and that “the proposed rollback will hurt the Midwest economy,” with its “tens of thousands of jobs associated with making fuel-efficient vehicles.” *Dearborn, pg. 134*. She noted that “The analysis for this rule shows that it is premised on the idea of reducing sales of advanced technology vehicles, slowing technological advancement and would cost the auto industry at least sixty thousand jobs, many of those in the Midwest.” *Dearborn, pg. 134*.

**Erin Murphy**, attorney for the **Environmental Defense Fund**, explained that the existing standards, “were developed through a collaborative, rigorous process” and “with support from auto manufacturers and suppliers, labor, and consumer groups,” followed by “a multi-year evaluation of the appropriateness of the standards [that] concluded that there are even more technologies available than expected and at lower cost to achieve these standards.” *Pittsburgh, pg. 51*. Ms. Murphy testified that:

We should be accelerating these win-win standards but instead, NHTSA and EPA are ignoring the administrative record and rushing to roll back this crucial program. So who wants this extreme rollback? It’s not clear to me. The Trump administration claims that the proposal will improve safety but the safety claims have already been debunked and consumer advocacy and safety groups oppose the rollback. The Trump administration claimed that the industry will benefit but the Auto Alliance and global automakers have stated that automakers support continued improvements in fuel economy. And Ford and Honda have specifically stated that they do not support a rollback. The Trump administration claims that U.S. workers will benefit but the administration acknowledges in the proposal that it will result in tens of thousands of job losses. Finally, the proposal will drastically increase climate pollution as well as criteria and toxic air pollutants. Everyone with lungs should oppose this rollback.

*Pittsburgh, pg. 52*. Ms. Murphy also cited the inadequacy of the public hearing process, including the cancelling of the announced Washington, D.C. area hearing, a decision that denied “over 6 million D.C. metro area residents an opportunity to testify, many of whom do not have the time or resources to travel elsewhere to attend a hearing” -- a decision that was “particularly egregious because D.C. and Maryland have adopted California’s vehicle emission standards, so those residents have a clear stake in EPA’s proposal to deny underlying state authority to adopt these standards.” *Pittsburgh, pg. 53*.

**Carol Lee Rawn**, director of the Transportation Program at **Ceres**, testified in “strong opposition” to agencies’ proposal. *Pittsburgh, pg. 152*. Ms. Rawn described analyses commissioned by Ceres demonstrating the economic benefits of the current standards, which found that:

under the current standards, the Detroit Three will be profitable even under very low fuel prices and that the standards act as an insurance policy for the industry in the event of a fuel price spike. During the last global spike in oil prices, when fuel efficiency standards had essentially stagnated for years, the Detroit Three found themselves overinvested in vehicles with poor fuel efficiency, which they couldn’t sell, and ended up ceding market share to foreign automakers. This contributed to their financial downfall in 2009 and we could very well see this scenario play out again, especially as automakers move away from cars towards

crossovers and trucks. Our analysis also found that suppliers, the largest U.S. manufacturing sector, which employs more than two and a half times more Americans than the auto companies, would be especially hard hit under the preferred alternative. In fact, they stand to lose \$20 billion between 2021 and 2025 in sales of fuel-efficient technologies. In addition, our analyst's note regarding automakers' financial performance found that as disruption from new technologies, new mobility models, and global trends threaten financial prospects for U.S. legacy automakers, the current fuel economy and emission standards would help enhance the global competitiveness of the U.S. auto industry. *Pittsburgh, pg. 153-54.*

Ms. Rawn noted that there is a "global policy shift" with China and European nations requiring total conversions to new energy vehicles within the next two decades, adding that "the U.S. should position itself to compete in this new world by retaining the current standards, which have a proven record of driving innovation." *Pittsburgh, pg. 154.*

**Dave Smith** of the **Clean Air Council** testified that "Cleaner, more efficient cars reduce air pollution and fight climate change, helping to prevent harmful health impacts like asthma attacks" and "save us money at the gas pump," and opposed "any weakening of the greenhouse gas and fuel efficiency standards for cars." *Pittsburgh, pg. 238.*

**Rachel Filippini**, Executive Director of the Pittsburgh-based environmental organization **Group Against Smog and Pollution (GASP)**, testified that the "Pittsburgh region has the most to gain from cleaner cars and the most to lose from weakening fuel economy and greenhouse gas standards," and that the agencies' proposal to freeze standards at 2020 levels "ignores science and halts progress the United States has made on cleaning up vehicle pollution and addressing climate change." *Pittsburgh, pg. 290.*

### **Faith Community:**

**Linda Cox**, Vice President for the Pittsburgh District of **United Methodist Women**, testified in opposition to the proposal, favoring "mandatory reductions in greenhouse gas emissions" and asking that the agencies "do no harm." *Pittsburgh, pg. 255.*

**Christina Krost** testified to oppose the proposed rollback of the Clean Car Standards as a **member of the United Methodist Women and a staff member at Illinois Interfaith Power and Light**. She stated: "Weakened standards that increase air pollution could worsen symptoms for the 24 million Americans, including 6.3 million children, who suffer from asthma. Pollution from the transportation sector is deeply tied to issues of racism and environmental injustice, as low-income communities and communities of color are more likely to be impacted by their proximity to interstates and highways. As a person of faith, I believe it is my moral obligation to oppose policies that endanger the health of these families and communities." *Dearborn, pg. 70-71.*

**Ara Guekguezian**, the interim pastor of **Community United Church of Christ** in Fresno, testified that "My concern is why are we proposing a step back? It seems un-American for our ideals of the nation." *Fresno, pg. 85.*

**Susan Hendershot**, ordained minister and president of **Interfaith Power & Light**, noted that the effects of poor air quality disproportionately impact low income communities. Ms. Hendershot stated that:

Transportation has become the number one emitting source of greenhouse gas emissions in our country, and pollution from this sector is deeply tied to issues of racism and environmental injustice, as low income communities and communities of color are more likely to be impacted from their proximity to major transportation hubs, such as interstates and highways. *Fresno, pg. 197.*

**Leah Wiste**, also of **Interfaith Power & Light**, observed that “Here in metro Detroit we are at the epicenter of Michigan’s asthma burden, and as you may know, this affects children disproportionately based on their race and based on income.” Ms. Wiste noted that “Compared to white children, Latino children are twice as likely to die from asthma” and that “African-American children are seven to ten times more likely to die from asthma.” *Dearborn, pg. 230.*

### **Community Members:**

**Clare Statham**, a Fresno resident and grandmother of three, stated that two of her grandchildren suffer from asthma. She observed that “the San Joaquin Valley, on many days of the year, has air that is harmful to breathe” and that “Something is amiss when we have to check the air quality before going outside, when we must avoid vigorous outdoor activity many days of the year, when we cancel after-school sports activities because of air quality, and when we have some of the highest rates of respiratory and related illnesses in the nation.” *Fresno, pg. 172.* Ms. Statham also noted that “two of my granddaughters’ visits to the emergency room would more than pay for the estimated added cost to more fuel efficient cars.” *Fresno, pg. 172.*

Appealing to American ingenuity, Ms. Statham stated that “We have always been able to figure out how to get the job done” and that “the idea of ceding our leadership and innovation to other countries more willing to take on the challenge is deeply disturbing and humiliating to me as an American.” *Fresno, pg. 173.*

**Samuel Molina**, a veteran and the California director of **Mi Familia Vota**, testified that the proposal is an “unprecedented attack on our health.” *Fresno, pg. 75.* He concluded, “We need to take stronger actions to curb climate change. Climate change, that which our own military has stated is the Number 1 threat to our national security. We need to oppose the administration’s proposal of the SAFE rule.” *Fresno, pg. 76.*

**Ruth Seggerson**, a retired high school teacher who drove to the Pittsburgh hearing from Columbus, Ohio, testified that, “The only argument that I can see for this rollback seems to be to keep the carbon-based fuel industries happy.” *Pittsburgh, pg. 280-81.*

**Fred Miller**, a Michigander and retired attorney who formerly represented auto workers, testified:

For the sake of the auto industry, its workers, as well as for the sake of our planet and future generation, we need to strengthen, not weaken, incentives to research and market cars and

trucks to reduce and eliminate greenhouse gas pollution.... My kids and yours already face a shaky and threatening future due to 200 years of increasing carbon pollution. The Supreme Court has said that your agencies have the power and the responsibility to regulate greenhouse gas emissions that affect the public. We owe the generations, who will inherit the world we leave them, every effort to enforce the Clean Air Act fully and completely with strong greenhouse gas regulations. *Dearborn, pg. 107-108.*

**Kris Olsson**, a watershed ecologist based in Ann Arbor, Michigan, testified that, “If we don't reduce greenhouse emissions, people are going to be suffering from excessive heat, worse air pollution, more frequent storms, droughts, fires, other impacts that have been talked about today.” *Dearborn, pg. 101.* She explained that:

Climate change is one of the greatest threats in Michigan. Rivers, streams, natural land schemes, wildlife, and our Great Lakes. Here in southeast Michigan we're already seeing stronger storms, warmer winters, longer heat waves, and heavier flooding. The future holds further changes to our rivers' ecology.... Already ice coverage on the Great Lakes has decreased by 71 percent since the 70s. That's a huge change. We will see an increase in climate toxic algae blooms, like that one that shut down Toledo's drinking water plant, and the one we just had on just down the road here along the Huron River.... So again, I urge the administration to withdraw this flawed proposal, and implement and enforce the current standards. *Dearborn, pg. 103-04.*

**Raul Garcia**, a community organizer in Tulare county, California, testified that “This roll back is an attack on our communities, on our people, and an attack on our wallets, and more importantly, on our health.” *Fresno, pg. 110.* He continued, “this is something that affects billions of people every day and roll back don't just affect us here in the valley or the United States, but everyone across the world.” *Fresno, pg. 110.* He concluded, “We are just as responsible if not even more responsible with all our technology and power in the world to not only be players in this emerging industry, but to become leaders because we're Americans and that's what we do. We lead the world. We don't follow.” *Fresno, pg. 111.*

**John Langmore**, an emeritus University of Michigan professor of biological sciences, testified that in the proposal the agencies “ignore the most practical method to reduce carbon emissions,” namely electric vehicles, and “ignore the public health consequences of vehicle emissions.” “And unless we do something to encourage electric vehicles, particularly fully electric vehicles, we're going to lose out to the Chinese, we're going to lose out to the Europeans, because they will control the market.” *Dearborn, pg. 114-15.*

**Nick Milam**, a Pittsburgh resident, on behalf of himself and his family, stated that he “opposed the agencies' proposal for the “same reason that everybody else in every single one of these public forums has said, first of all to change the rules will cost us money, it will cost us our health, and it will cause long-term damage to our planet.” *Pittsburgh, pg. 208.*

**Dr. Jesse Dunietz**, a recent recipient of a computer science doctorate from Carnegie-Mellon University, testified that “The administration's proposal would be a huge step backward,” and would “set back future improvements as well.” *Pittsburgh, pg. 170.* Pointing to scientific



studies showing the increasing dangers of climate change, he said that “The only reason for deliberately falling further behind is not taking the threat seriously.” *Pittsburgh*, pg. 170.

**Emma McClain**, a student at Temple University in Philadelphia, came “representing students who could not be here today but trust me to speak on their behalf,” stating that “together we oppose the action to weaken the efforts on the national fuel efficiency standards for cars and see the rollback as a direct threat to our climate, state, and nation.” *Pittsburgh*, pg. 185. “We cannot afford to roll back on cleaner cars when this is the biggest initiative we have to combat climate change.” *Pittsburgh*, pg. 187.

**Shivani Watson**, a high school freshman, testified, “I am here to voice my opposition to rollbacks on the EPA car standards and voice my concerns for my generation because we will be the ones who will have to live with the adverse effects of climate change.” She noted that “Our current policies and decisions with regards to how we interact with the environment have the potential to affect all future generations of humans.” *Pittsburgh*, pg. 74-75.

**Abigail Siegel**, a 15-year-old Pittsburgh high school student testified that EPA “should be doing everything it can to improve air quality for my generation and for future generations, instead of making it worse. Americans and Pittsburghers desperately need healthier air than what we have now.” *Pittsburgh*, pg. 87. “I might not have grown up with clean air in my city, but there is an opportunity to make the air that future generations will breathe healthier. Seventy-three percent of Americans believe the government should be setting higher standards for fuel efficiency. I urge the EPA to join the overwhelming majority of Americans who believe in a better future for us all, allow these vital standards to stay in place.” *Pittsburgh*, pg. 89.

**Luke Chinman**, a Pittsburgh high school student, stated that “We are at a pivotal point in the safety of our health and the safety of our planet,” and that “These groundbreaking emission standards were put in place to fundamentally improve the lives of every American.” *Pittsburgh*, pg. 147. “By stripping them away, the EPA is going against everything that they stand for.” *Pittsburgh*, pg. 147.