



July 1, 2008

Ms. Nicole Nason, Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, SE  
Department of Transportation, West Building  
Washington, DC 20590

**Comments on Average Fuel Economy Standards, Passenger Cars and Light Trucks; Model Years 2011-2015, Notice of Proposed Rulemaking, 73 FR 24352, May 2, 2008, Docket No. NHTSA-2008-0089**

Dear Administrator Nason:

Public Citizen respectfully submits these comments on proposed fuel economy standards for passenger cars and light trucks for model years 2011-2015, pursuant to the Energy Independence and Security Act (EISA).<sup>1</sup> The new energy law marked the first mandated increase in fuel economy standards for cars since 1977, and expands upon the standards set for light trucks in 2003 and 2006.<sup>2</sup>

EISA called for the combined passenger car and light truck fleet to reach a “combined fuel economy average for model year 2020 of *at least* 35 miles per gallon.”<sup>3</sup> Congress gave NHTSA a directive to achieve a minimum level of improvement; however, this in no way constrains the agency from promulgating the strictest practicable standards if economic conditions so suggest. Since EISA was signed into law, the price of a gallon of gas has risen from \$3.07 in December 2007 to \$4.13 in mid-June of 2008, a 35 percent increase in just six months.<sup>4</sup>

This proposal does a great disservice to the auto industry and the American people. The auto industry is in absolute crisis – scrambling to adjust to the market shift that has occurred due to rapidly rising gas prices, with consumers fleeing large, fuel-inefficient light trucks and SUVs and buying smaller, more fuel-efficient and hybrid electric cars.<sup>5</sup> News of the troubled auto industry keeps mounting, with plant stoppages and closures, and the chairs of Ford and GM publicly announcing that the dominance of large SUVs and pickup trucks have crumbled under high gas prices.<sup>6</sup> Ford Chairman Alan Mullaly said in May, “It seemed to us that we reached a tipping point where customers were turning away from these vehicles (SUVs and pickups) at an accelerating rate.”

The current situation is exacerbated by twenty years of no fuel economy regulation for passenger cars and ineffective regulation for light trucks, vans and SUVs. Now the only hope for the auto industry and struggling consumers is for NHTSA to require the maximum feasible fuel economy levels achievable by the industry. Public Citizen believes that the agency’s approach in this rulemaking undercuts the maximum feasible level of fuel economy by design, and that the agency should reconsider the how the modeling is conducted in determining the level of fuel economy for the car and light truck fleets.

We have the following concerns with the proposal:

- the level and year-by-year increases are not the maximum feasible level
- the economic assumptions on which NHTSA bases its proposal are too conservative, including: projected gas prices, valuation of CO<sub>2</sub>, zero valuation of military and strategic value of oil, and rebound effect
- the structure of the Volpe Model fails to set the maximum feasible fuel economy level
- the product plans on which NHTSA based this proposal are now out of date
- the failure to re-evaluate the definitions of passenger cars and light trucks
- assumptions about the relationship between weight and safety
- preemption language on the California greenhouse gas emissions standards for motor vehicles

*Level and Year-by-Year Increases are Not the Maximum Feasible*

NHTSA proposes the following fuel economy standards for the fleet:

<b>Year</b>	<b>Passenger Car</b>	<b>Alternative Minimum (Car)<sup>7</sup></b>	<b>Light Truck</b>	<b>Fleet</b>
2011	31.2	28.7	25.0	27.8
2012	32.8	30.2	26.4	29.2
2013	34.0	31.3	27.8	30.5
2014	34.8	32.0	28.2	31.0
2015	35.7	32.9	28.6	31.6

The agency explains that these levels achieve an average increase of 4.5 percent over the five year period, but that the distribution of increases is uneven because of “uneven distribution of new model introductions . . . and . . . significant technological changes can be most readily made in conjunction with those introductions.”<sup>8</sup>

The agency’s mission under EPCA and EISA is to deliver the “maximum feasible” level of fuel economy in a given model year.<sup>9</sup> It is not the agency’s responsibility to take into account how the industry could most easily comply. Instead, NHTSA is required to set standards based on “technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy”<sup>10</sup>

This country is in crisis because of high gas prices, the attendant rise in the price of food and other goods, and the looming prospect of catastrophic consequences of global warming. Failure by the agency to adequately plan for future predictable fuel price increases has contributed to the current fuel price situation. NHTSA must not exacerbate this condition further by failing to ask for the most aggressive implementation of available technology to give consumers the fuel economy they want and need.<sup>11</sup> In a March 2008 survey, “[s]ixty-one percent of those interviewed said lawmakers should require better fuel efficiency for new cars, trucks and SUVs; 56 percent said the government should increase funding for alternative fuel research.”<sup>12</sup> This came just three months after Congress passed a law to raise fuel economy standards and expand research funding for alternative fuels. This is a strong signal to NHTSA to reconsider the pace and level of these new standards, which will, of course, inform the standards set for model years 2016-2020 and beyond.

NHTSA has a responsibility to respond to these problems in the most expedient possible manner. The agency estimates that if fuel economy standards are set at the level where total costs balance total benefits (the truly “maximum feasible” level) then passenger cars should reach an average of 43.3 mpg and light trucks should reach an average of 33.1 mpg by model year 2015.<sup>13</sup> This gets us to a fleetwide average of 37.3 in model year 2015, assuming NHTSA’s assumptions that the fleet mix between passenger cars and light trucks stays around 50 percent – a dubious assumption given the flight from these vehicles in the face of high gas prices. This exceeds the goal set by EISA in level and speed; however, Congress mandated a *minimum* level of fuel economy. Gas prices have been rising steadily since 2004. However, the price increases in the last six to 12 months have been especially dramatic, rising by over a third in the past six months, and by nearly 170 percent in five years.

The agency appears to have considered 35 mpg by 2020 to be a ceiling, and has not attempted to strive for the maximum feasible level of fuel economy. “While the agency carefully considered alternative stringencies. . .it tentatively concludes that in stopping at the point that maximizes net benefits, it has achieved the best balancing of all of the statutory requirements, including the 35 mpg requirement.”<sup>14</sup> NHTSA’s conservative estimates for future fuel costs, undervaluation of carbon dioxide, zero valuation of military and strategic costs of oil, and high discount rate all push the outcome of the Volpe Model towards inaction.

If NHTSA increased fuel economy by 4.5 percent per year through the entire period over which standards are set, then the fleetwide fuel economy would reach 33.1 mpg by 2015. In addition, NHTSA’s total cost balances total benefit scenario would increase fuel economy by nearly 10 percent per year to reach a fleetwide average above 37 mpg by 2015. This suggests that the technologically feasible pace of increasing fuel economy is much higher than what NHTSA is requiring in this proposal. The agency has given the industry considerable lead time to adjust for higher standards in the later years, yet inexplicably requires a slower pace of increases for these years.

#### *Economic Assumptions Undercut Potential Gains*

NHTSA has assumed retail gas prices of \$2.31 per gallon for model year 2015, with a high estimate of \$3.19. For 2030, the forecast price is \$2.51 per gallon, and the high price is \$3.76.<sup>15</sup> Guy Caruso, administrator of the Energy Information Administration (EIA), recommended in a hearing of the House Select Committee on Energy Independence and Global Warming in June 2008 that NHTSA should use the high price estimate when setting fuel economy standards.<sup>16</sup> Public Citizen strongly urges NHTSA to base its final rulemaking on a more realistic estimate of future fuel price based on the high estimate and an at-the-pump price that pushes the standard in the direction of real-world gas prices.

NHTSA’s sensitivity analysis shows that the level of fuel economy standards is highly sensitive to the price of gasoline. The agency’s estimate for the high price scenario would set the car standard at 37.4 mpg in 2011, almost 20 percent higher than the agency’s “optimized” scenario, and at almost exactly the same level as NHTSA’s total costs balance total benefits (TC=TB) scenario.<sup>17</sup> The light truck standards are less responsive to changes in economic assumptions, which NHTSA attributes to a lack of “cost effective” technologies available to raise fuel economy above the level reached in the optimized scenario.”<sup>18</sup>

NHTSA’s estimate for the value of CO<sub>2</sub> is arbitrary and too low. The agency’s estimate for the price of CO<sub>2</sub> examines a range of values from \$0-14 per metric ton CO<sub>2</sub>, based on a 2005 meta analysis of CO<sub>2</sub> valuation. Emissions allowances have recently been trading on the European Climate Exchange at around €30 per allowance (one metric ton CO<sub>2</sub> equivalent).<sup>19</sup> An analysis done by EPA in March 2008 for the Senate Committee on Environment and Public Works for S. 2191, America’s Climate Security Act, estimated the value of CO<sub>2</sub> in 2015 between \$22 and \$40 per metric ton of CO<sub>2</sub>, and cited two other

analyses with higher estimates of \$48 and \$50 per metric ton CO<sub>2</sub>.<sup>20</sup> The agency should extend the range of CO<sub>2</sub> prices considered at least as high as EPA's estimates, which are more recent than the Tol estimate cited in NHTSA's notice. All of the estimates EPA cited for its analysis of Lieberman-Warner exceed the \$14 ceiling on carbon price.

The agency provides no justification for selecting the midpoint of the range it took from the Tol study. NHTSA should weight the credibility of each estimate. Averaging the results of multiple studies can substantially skew the result, especially if the estimates are not parallel comparisons. Estimating the value of something like CO<sub>2</sub> requires careful selection of factors considered, and requires subjective determination of assumptions. Failure to make "apples to apples" comparisons by looking at studies based on their assumptions can produce a result that does not reflect the actual value.

In discussing monetized value of CO<sub>2</sub>, it is also important to take into consideration the costs of inaction on reducing greenhouse gas emissions and the resultant consequences of global warming. In the EPA notice on the California waiver denial, the agency outlines some of these consequences:

. . . along with exacerbating ozone impacts and increasing wildfires. . . declining snowpack and early snowmelt and resultant impacts on water storage and release, sea level rise, salt water intrusion, and adverse impacts to agriculture (e.g., declining yields, increased pests, etc.), forests, and wildlife. . . In addition, some commenters specifically point to a direct threat to public health (e.g., asthma) since increased temperatures due to increased GHG emissions will lead to increased levels of ozone and other pollutants.<sup>21</sup>

A recent report from the University of Maryland found that economic impacts of global warming will be far-reaching, unevenly distributed, and will put a significant strain on public sector budgets.<sup>22</sup> It is therefore important that when considering any policy relevant to reducing global warming pollution that the costs of inaction be factored into the decision. NHTSA has not made such an estimate in its proposal or the accompanying economic analysis.

Public Citizen also objects to the zero valuation of military security costs associated with oil consumption. NHTSA states "that while costs for U.S. military security may vary over time in response to long-term changes in the actual level of oil imports into the U.S., these costs are unlikely to decline in response to any reduction in U.S. oil imports resulting from raising future CAFE standards for passenger cars and light trucks."<sup>23</sup> NHTSA justifies this claim by stating that there are other national security and foreign policy objectives served by military actions in the Middle East. NHTSA used similar logic to justify assigning zero value to reducing CO<sub>2</sub> emissions in the light truck rule. The Ninth Circuit Court of Appeals rejected this justification in *Center for Biological Diversity v. NHTSA*, finding that uncertainty about how to assign a value was not a justification for setting the value at zero.<sup>24</sup>

NHTSA has assumed a very high rebound effect – 15 percent – for this proposal. The rebound effect assumes that the amount of driving will increase as a result of decreased fuel consumption, which reduces the per mile cost of driving.<sup>25</sup> NHTSA looks at 29 estimates and attempts to reflect the current conditions; however according to the Small and Van Dender study, "most empirical measurements of the rebound effect rely heavily on variations in the fuel price," which raises again the question of whether NHTSA's assumptions about the rebound effect are colored by the estimates of future fuel price.<sup>26</sup>

The model used to set fuel economy standards is heavily influenced by the economic assumptions. NHTSA's failure to make the correct assumptions about potential benefits will put downward pressure on the level and rate of the standards, which robs consumers of considerable value from increased standards, through fuel savings, reduced greenhouse gas emissions, and improved energy security and independence.

## *The Structure of the Volpe Model Fails to Set Standards at the Maximum Feasible Level*

The restructured CAFE scheme was the result of intense back-room meetings between NHTSA and Bush Administration officials, including representatives from the Office of Management and Budget, the Council on Environmental Quality and the Office of the Vice President.<sup>27</sup> John Graham, then administrator of the Office of Information and Regulatory Affairs was heavily involved. Graham co-authored a paper in 1989, which suggested that CAFE standards had encouraged downweighting, which negatively impacted vehicle safety. However, this theory has been extensively disproven, as discussed below.

The logic behind the restructured CAFE standards is to add the minimum amount of fuel saving technology to bring a manufacturer into compliance with the standard for a given year, with significant latitude given to individual manufacturers for compliance based on the specific fleet mix of a given manufacturer. This approach necessarily undercuts the maximum feasible level of fuel economy. In its November 2007 decision in *Center for Biological Diversity v. NHTSA* the Court of Appeals for the Ninth Circuit said: “the agency’s cost-benefit analysis does not set the CAFE standard at the ‘maximum feasible’ level and fails to give due consideration to the need of the nation to conserve energy.”<sup>28</sup>

NHTSA states in this notice on fuel economy standards: “In striking [a] balance [between costs and benefits], the agency was mindful of the growing need of the nation to conserve energy for reasons that include increasing energy independence and security and protecting the environment.”<sup>29</sup> However, analysis of the Volpe Model suggests that the assumptions NHTSA uses to set the standards are not sufficiently mindful of the need to conserve energy or environmental protection.

Public Citizen recognizes that since the Ninth Circuit decision there have been changes to the Volpe Model since the 2006 light truck rule: “the set of technologies represented was updated, the logical sequence for progressing through these technologies was changed, methods to account for ‘synergies’ (*i.e.*, interactions) between technologies and technology cost reductions associated with a manufacturer’s ‘learning’ were added, the effective cost calculation used in the technology application algorithm was modified, and the procedure for calibrating a reformed standard was changed, as was the procedure for estimating the optimal stringency of a reformed standard.”<sup>30</sup> But these changes have not corrected the problems with the model that prevent it from setting standards at the maximum feasible level. Although Congress authorized NHTSA to restructure the CAFE scheme for passenger cars, but it did not mandate the NHTSA use Volpe Model. There are other ways the agency could model fuel economy that would set targets at the maximum feasible level and would improve public participation in the process.

Public Citizen raises the following concerns about the Volpe Model:

- fails to correct the light truck loophole, which is the failure to have one continuous standard for passenger cars and light trucks, and ignores the impact of crossover vehicles
- the claim that the Volpe Model protects safety is based on a misapprehension of the relationship between fuel economy and safety
- potentially erodes the fuel savings when the price of oil drops lower than expected
- allows manufacturers to effectively set their own standards by manipulating product plans
- bases fuel economy increases on industry-biased cost assumptions and underestimates of benefits

In the fuel economy standards for 1981-1984, set in 1977, NHTSA said “[a] cost benefit analysis would be useful in considering [economic practicability] but sole reliance on such an analysis would be contrary to the mandate of th[e Energy Policy and Conservation] Act.”<sup>31</sup> But such reliance is precisely

what the agency has done – it uses a cost benefit analysis to set the standards based on economic practicability as its first criterion.

NHTSA justifies this approach by citing *Public Citizen v. NHTSA* in its 2005 NPRM on light truck fuel economy standards “. . .in determining the maximum feasible level of CAFE, the agency assesses what is technologically feasible for manufacturers to achieve without leading to adverse economic consequences, such as a significant loss of jobs or the unreasonable elimination of consumer choice.”<sup>32</sup> Public Citizen acknowledges that Congress in EPCA named economic practicability as one of the four factors, and that the court in *Public Citizen v. NHTSA* said that consumer choice was part of economic practicability; however, in *Center for Biological Diversity v. NHTSA*, the court states:

Whatever method it uses, NHTSA cannot set fuel economy standards that are contrary to Congress’s purpose in enacting the EPCA—energy conservation. We must still review whether NHTSA’s balancing of the statutory factors is arbitrary and capricious. . . .The need of the nation to conserve energy is even more pressing today than it was at the time of EPCA’s enactment. . . . What was a reasonable balancing of competing statutory priorities twenty years ago may not be a reasonable balancing of those priorities today.<sup>33</sup>

This shift of priorities is exactly relevant to the current situation. Fuel economy has become a significant public concern as gas prices have risen sharply.<sup>34</sup> The auto industry views this as a “permanent” shift away from larger, less fuel efficient light trucks and SUVs.<sup>35</sup> Only NHTSA hasn’t appropriately responded to these trends, and the Volpe Model, with its now outdated economic assumptions, would set fuel economy standards at a level that is less than consumers need based on a balancing of the statutory factors that does not reflect the current priorities.

Another serious problem with the Volpe Model is that it is not transparent, which significantly undermines the ability of public commenters to provide an opinion as to whether NHTSA has set standards at the maximum feasible level that maximizes public good. Automakers provide the inputs for the Volpe Model through product plans, which are closed from public view as confidential business information. This significantly biases the standards in favor of industry by shutting the public out of the process. NHTSA does not establish what is technological feasible and economically practicable based on an independent assessment of the current vehicle fleet and the available technology to improve the fleet, but rather accepts industry inputs, which are run through the black box of the Volpe Model, and a variety of “optimization” factors, which are tied to maximizing industry-wide benefits.<sup>36</sup> In the past, rulemaking NHTSA has done its own research and evaluation of these factors which was more transparent.

Thus, the public is foreclosed from real participation in this system. There is intense public interest in new fuel economy standards. These upgrades are the first for passenger cars in over twenty years, and they will dictate the level of fuel economy new vehicles will get until 2015, which affects the new car market and will skew purchase decisions. High gas prices and concern about global warming contribute to increased consumer interest in fuel economy; however, the agency’s scheme for setting fuel economy standards leaves them largely in the dark. Consumers must essentially trust that NHTSA has set standards in their interest using information provided by industry.

The Volpe Model uses incremental cost and incremental benefit estimates to determine the increase in fuel economy model-by-model. However, incremental costs are difficult to estimate accurately; many companies are unable even to produce a complete list of regulations that apply to them.<sup>37</sup> The GAO concluded that industry often overestimates costs or provided cost estimates that were not incremental.<sup>38</sup> Inaccurate estimates also plague the benefits side. As described above, many of the economic assumptions NHTSA made in estimating benefits were too low and too conservative. Since the

Volpe Model only adds technology until marginal cost balances marginal benefit, the standards will not be set at the maximum feasible level, and consumers will not get the best available technology.<sup>39</sup>

For this rulemaking, NHTSA has added two more factors that impede transparency, and erode consumer confidence in the Volpe Model: technology phase-in caps and manufacturer learning curves. Public Citizen acknowledges that manufacturers cannot deploy all technologies in all vehicles at once, and that lead-time is necessary for manufacturers to make necessary changes. However, the agency's decision to gear technology additions to the redesign and refresh cycle is unnecessarily lenient. The agency has given the industry over two years of lead time before the 2011 model year.<sup>40</sup> EISA only requires only 18 months of lead time. For the 2012 to 2015 model years, the agency will have provided ample lead time for automakers to adjust. The industry is already changing plans, and closing plants or stopping work to adjust to changing consumer demand.<sup>41</sup>

NHTSA claims that it relaxed phase-in caps based on rising fuel prices and rising forecast fuel prices.<sup>42</sup> The agency should re-evaluate the assumptions about phase-in caps, especially with regard to technologies that require a more substantial redesign. NHTSA has given ample lead time for the industry to reconsider its redesign schedule to reflect tumultuous changes in consumer preferences. Public Citizen suggests that NHTSA not constrain the use of technology to achieve the maximum feasible fuel economy level.

The agency has included "learning curves" to attempt to model the reductions in cost of compliance due to economy of scale effects.<sup>43</sup> Public Citizen observes that economy of scale effects should be accounted for; however, we wish to point out that again these effects are often estimated incorrectly. In a survey of emission reduction regulations, the author finds: "In all cases except one, the early estimates [of cost of compliance] were at least double the later ones, and often much greater."<sup>44</sup> Inaction based on inflated estimates of cost of compliance cannot be tolerated in the face of an energy crisis and environmental catastrophe.

Public Citizen requests that NHTSA rethink its position on dealing with "outliers," or vehicles that get vastly better fuel economy. The agency position is that excluding hybrid electric vehicles "yields initial curves of shapes similar to those proposed, but displaced slightly in the direction of lower fuel consumption. The similarity of the shapes of these curves suggests that optimization against the full fleet (with HEVs) would produce standards whose stringency is similar to that of those proposed today."<sup>45</sup> However, automakers will be credited for producing hybrid vehicles which will count for compliance, but not in the stringency of how the curves are set. In an economy-wide standard, the pressure from manufacturers that build more efficient vehicles set the stringency of the economy-wide level of standards. Removing that pressure by excluding highly-efficient vehicles undercuts the maximum feasible level of fuel economy.

The Volpe Model estimates are also skewed by out-of-date and incomplete product plans. If NHTSA is to rely on product plans as their primary source of information for setting fuel economy standards, then those plans should be as up-to-date and complete as possible. However, not all manufacturers provided NHTSA with complete product plans, and in light of recent shifts in the auto industry in response to high gas prices and consumer demand shifts, the product plans that NHTSA used to run the model for this proposal are now out-of-date.<sup>46</sup> These insufficiencies in the information stream potentially undercut the potential for NHTSA to set technology-forcing standards which appropriately serve the need of the U.S. to conserve energy.

The Volpe Model has proven insufficient to deliver the kind of standards the nation needs it to set. The model is too industry-dependent and keyed to the market to be an effective regulatory tool.

## *NHTSA's Conflation of Weight and Safety is Counterproductive*

NHTSA's unfounded position on weight reduction reinforces the common myth that fuel economy standards reduce vehicle safety by promoting downweighting. The agency says directly in its notice "[b]ecause downweighting is a common compliance strategy, and because the agency believes that downweighting of lighter vehicles makes them less safe, our model does not rely on weight reductions to achieve the standards for vehicles under 5,000 pounds GVWR and then only up to 5 percent." Downweighting of lighter vehicles has actually never been a common compliance strategy. When NHTSA implemented its first fuel economy standards in the 1980s, 85 percent of fuel economy gains were made by adding fuel saving technologies, and only 15 percent came from weight reductions, and then weight was only removed from the heaviest vehicles.<sup>47</sup>

NHTSA relies on a 2003 study by Charles Kahane to justify not considering weight reduction as a compliance strategy for vehicles under 5,000 pounds GVWR.<sup>48</sup> Kahane's study oversimplifies the relationship between weight and safety, obfuscates findings which show that reducing weight from only the *heaviest* vehicles actually improves safety, and overlooks the relationship between the *difference* in vehicle weight, rather than simply the weight of the vehicle.<sup>49</sup> NHTSA has taken the position that improving fuel economy by reducing vehicle weight poses an unconscionable threat to highway safety, largely based on the Kahane study and Crandall-Graham analysis cited above.<sup>50</sup> The auto industry opposes a focus on extensive weight reduction because pickup trucks and SUVs have been their cash cows.

One way of thinking about the impact of fuel economy and safety is in terms of compatibility and aggressivity of a given vehicle in a two-vehicle crash. "Compatibility" refers to how well one vehicle matches with another in a crash, and "aggressivity" roughly describes how harmful a vehicle is to occupants of a struck vehicle in a two-vehicle crash.<sup>51</sup> There are several vehicle attributes which describe vehicle compatibility and aggressivity, such as weight, bumper overlap, vehicle geometry, including bumper height and average height of force, and front-end stiffness.<sup>52</sup> NHTSA's position on fuel economy and safety is inconsistent with its own research on incompatibility.

The agency claims that the restructured CAFE scheme will improve safety by "eliminating the regulatory incentive to downsize vehicles."<sup>53</sup> But NHTSA ignores the impact that the light truck loophole has already had on safety through increased incompatibility, and fails to address the problem by providing no regulatory incentive for automakers to build more compatible light trucks, or by amending the regulatory definitions of cars and light trucks to close this dangerous and wasteful loophole. NHTSA says "by raising the light truck standards. . . there is no regulatory incentive from the CAFE program to design small vehicles as light trucks instead of passenger cars." This overlooks the fact that the new standards do not close the light truck loophole. It sets lower standards for larger vehicles, and eliminates the leveling effect of the corporate average (that is, balancing lighter vehicles against heavier ones).<sup>54</sup>

This approach to vehicle weight ignores the role of advanced materials to reduce vehicle weight without compromising safety, it discourages manufacturers from considering more aggressive vehicle redesigns, which could achieve a broad range of fuel economy and safety goals, and it preserves the dangerous incompatibility between the heaviest and lightest vehicles. In setting aggressive new fuel economy standards, the agency should encourage manufacturers to rethink how vehicles are built. New standards should promote innovation that drives safety and fuel economy forward. Instead, with the Volpe Model's approach of merely requiring that the industry do what it was planning to do, there is little to no motivation to make much-needed bold shifts.



## *NHTSA's Failure to Re-evaluate Definitions of Passenger Cars and Light Trucks Is Irresponsible*

In *Center for Biological Diversity v. NHTSA*, the court held that NHTSA was arbitrary and capricious in its failure to revise the distinction between passenger cars and light trucks. The court states that NHTSA had not provided a “reasoned explanation” for why it could not revise the definitions while restructuring the CAFE program, questions the agency’s logic in considering vehicle functionality based on manufacturer’s designations since NHTSA itself admits that many light trucks “are manufactured primarily for transporting passengers,” and challenges that NHTSA’s “new focus on the purpose for which automobiles are manufactured conflicts with [NHTSA’s] earlier assertion that ‘Congress intended that passenger automobiles be defined as those *used primarily* to transport passengers. . . .”<sup>55</sup>

NHTSA has decided not to revise the definitions of passenger cars and light trucks for this rulemaking, arguing that “[w]ith respect to the impact on fuel savings, our tentative conclusion is that moving large numbers of vehicles from the light truck to the passenger car category would not increase fuel savings or stringency of the standards. Under a Reformed attribute-based CAFE system, passenger car and light truck CAFE standards will simply be reoptimized if vehicles are moved from one category to another.”<sup>56</sup> This is directly contrary to the EPCA directive to set standards in consideration of the “need of the United States to conserve energy.”<sup>57</sup> The standard should be set at the level that maximizes fuel savings, and it puts the onus on manufacturers to design vehicles that have functionality desired by consumers that also meet federal standards for fuel economy and safety.

In setting these new standards, NHTSA acknowledges that the new vehicle market it shifting to crossover vehicles, but evades the question of how to classify them, stating: “[Crossover] vehicles can come in any shape or size, they may or may not look like traditional passenger cars, SUVs or minivans, and they may be available in a variety of drive configurations. . . .As more and more [crossover] vehicles become available it will become more difficult to categorize them into one particular vehicle category. The majority of existing crossover vehicles have been categorized by vehicle manufacturers as light trucks under section 523.5(b) if they are off-highway capable, or under section 523.5(a) due to their functional characteristics.”<sup>58</sup>

As the 2002 National Academy of Sciences review of the CAFE program found: “[t]he less stringent CAFE standards for [light] trucks did provide incentives for manufacturers to . . . promote [minivans and SUVs] to consumers in place of large cars and station wagons.”<sup>59</sup> Based on the footprint distributions given in the notice, there is significant overlap between the passenger car and light truck vehicles based on footprint; however, fuel economy requirements for similar-footprint cars and light trucks are not the same.<sup>60</sup> Now that the market is shifting towards vehicles that more closely resemble large cars and station wagons, NHTSA should restore their classification as *cars*, primarily designed for the purpose of transporting passengers.

Congress mandated a *minimum* increase in fuel economy standards for passenger cars and light trucks to 35 mpg; however, Congress entrusts the agency to determine the maximum feasible level of fuel economy for cars and trucks. In *Center for Biological Diversity v. NHTSA*, the court held that NHTSA must set a backstop to prevent the erosion of fuel savings due to upsizing of vehicles and manipulation of the fleet mix.<sup>61</sup> NHTSA says “[a] relatively flat standard for larger vehicles acts as a de facto ‘backstop’ for the standard in the event that future market conditions encourage manufacturers to build very large vehicles. Nothing prevents manufacturers from building larger vehicles. With a logistic curve, however, vehicles upsizing beyond some limit face a flat standard that is increasingly difficult to meet.”<sup>62</sup> Public Citizen is not convinced this approach is sufficient, particularly since NHTSA has chosen not to re-evaluate the regulatory definitions.

NHTSA should smooth the distinctions between passenger cars and light trucks, because in the interest of raising fleet fuel economy, the agency should set technology-forcing standards that encourage manufacturers to design vehicles that maintain functionality while increasing fuel economy. The agency should devise a way to amend the regulatory definitions to resolve potential erosion in fuel economy from the growing crossover sector. NHTSA states that “we determined that Congress intended ‘primarily’ to mean ‘chiefly’ [or firstly, in the first place], not ‘substantially’ [or largely, in large part], for two main reasons. First, if ‘primarily’ meant ‘substantially’ or ‘in large part,’ then almost every automobile would be a passenger automobile, since a substantial function of almost all automobiles is to transport at least two persons.”<sup>63</sup> Many vehicles that are classified as light trucks are used “primarily”, meaning “chiefly,” to transport passengers, because they have been designed “chiefly” for that purpose.<sup>64</sup>

When Congress passed EPCA in 1975, light trucks were less than 20 percent of the new vehicle market, compared to 2007, when they accounted for about 50 percent of the new vehicle market.<sup>65</sup> This significant shift has had two impacts: the fleetwide level of fuel economy has stagnated and declined from its maximum in 1987, and the importance of raising light truck fuel economy has accordingly increased. Public Citizen asserts that NHTSA should adjust the regulatory definitions at this time and smooth the transition between passenger cars and light trucks.

#### *NHTSA Should Not Attempt to Preempt the States from Setting Greenhouse Gas Emissions Standards*

In 2005, California requested a waiver under the Clean Air Act (CAA) Section 209(b) from the Environmental Protection Agency (EPA).<sup>66</sup> The agency’s initial response was that it did not have the authority to regulate carbon dioxide under the CAA. The April 2, 2007 Supreme Court disagreed and held in *Massachusetts v. EPA*<sup>67</sup> held that EPA in fact does have the authority under the CAA to regulate carbon dioxide. The court did not resolve the issue of whether carbon dioxide emissions regulations for motor vehicles were preempted under the current law.<sup>68</sup> This issue was resolved September 12, 2007, when the Vermont Supreme Court decided in *Green Mountain Chrysler v. Crombie* that the greenhouse gas standards were not preempted under EPCA.<sup>69</sup> In December 2007, EPA Administrator Stephen Johnson sent a letter to California Governor Arnold Schwarzenegger informing him that the request for the CAA waiver had been denied. In March 2008, EPA finally published its formal notice denying the waiver.<sup>70</sup>

NHTSA’s proposal states that it “respectfully disagree[s] with the two district court rulings,”<sup>71</sup> and goes on to say that preemption “is not dependent upon a state standard. . .being identical to or equivalent to a CAFE standard.”<sup>72</sup> It is not the agency’s place to disregard the law because it disagrees with the interpretation of the courts. NHTSA is bound to set standards within the legal context as it exists, not under a presumption that the outcome of an appeal will reverse a lower court decision.

NHTSA has included short-sighted and damaging language on preemption in its latest notice. For the 2006 light truck fuel economy rule, NHTSA stated that the standards were expressly preempted under the existing law.<sup>73</sup> However, since the 2006 notice was published, a long analysis of the preemption issues in the decision in *Green Mountain Chrysler v. Crombie* concluded that based on the history of the CAA and EPCA, that “Congress intended California emissions standards for which EPA [could grant] a waiver pursuant to Section 209(b) of the CAA to constitute ‘other motor vehicle standards of the Government,’ under Section 502 of EPCA.”<sup>74</sup>

The decision by EPA to deny California’s waiver request has been the subject of significant ongoing investigation and controversy.<sup>75</sup> NHTSA’s best course of action is to remain neutral on the state greenhouse gas standards. The need to reduce fuel consumption, greenhouse gas emissions, and air pollution emissions is great, and are primary goals of EPCA, CAA and EISA. Should a future EPA

choose to overturn the waiver denial, NHTSA should not attempt to preclude the states from implementing greenhouse gas emissions standards that are more protective than its own standards.

The language NHTSA included in this proposal is more explicit and damaging to the development of zero carbon dioxide emitting vehicles. The proposal suggests including an appendix to the Code of Federal Regulations that states “[a]utomobile fuel economy is directly. . .related to. . .tailpipe emissions of carbon dioxide. . . .Most of the technologically feasible reduction of tailpipe emissions of carbon dioxide is achievable only through improving fuel economy. . . .”<sup>76</sup> It is vital that regulatory flexibility be maintained to encourage innovation and deployment of the best available technology to reduce dependence on oil and cut greenhouse gas emissions. The language in this appendix makes assumptions that may not hold for advanced technology vehicles that rely more heavily on other power sources, for example, electricity.

Fourteen states representing more than half of the new vehicle market have passed legislation to regulate greenhouse gas emissions from motor vehicles. This represents an overwhelming effort by the states to force action by the automakers to reduce greenhouse gas emissions from vehicles. Action by the states was precipitated by NHTSA’s failure to propose increased fuel economy standards for passenger cars since 1985, when the first standards required by EPCA were fully phased-in.<sup>77</sup>

### *Conclusion*

NHTSA has failed to set these new fuel economy standards at the level needed to provide consumer relief from high gas prices, protect from the worst consequences of global warming, and strengthen energy security by reduced dependence on foreign oil for transportation. This proposal is shameful. Its reliance on a modeling scheme that significantly favors the industry is a serious failure on the part of the agency to carry out its obligations under EPCA.

Public Citizen is disappointed that the agency has chosen to bow to industry lobbying over the needs of the American people. The economic assumptions NHTSA makes for this proposal are quite unrealistic, and since the agency has adopted a modeling scheme that is only as good as its economic assumptions, the problems with the assumptions are amplified by the model.

We are particularly troubled that NHTSA has chosen not to re-evaluate the regulatory distinction between cars and light trucks. Historical experience and shifting tastes in vehicles have shown that peak use functionality is not the best way to determine whether a vehicle will be used primarily for the transport of passengers, or whether it will be primarily used to its maximum functionality.

The agency should strongly consider the implications of promulgating weak standards. The consequences for the future are very serious, on all counts. The transportation sector has to face an extremely difficult and complicated shift in the coming decades. Continuing to delay action is not an option.

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- <sup>1</sup> Energy Independence and Security Act (EISA). P.L. 110-140 (Dec. 19, 2007).
- <sup>2</sup> See Energy Policy and Conservation Act (EPCA). P.L. 94-163 (Dec. 22, 1975). & 68 FR 16868, 16900. (April 7, 2003). & 71 FR 17566, 17679. (April 6, 2006).
- <sup>3</sup> EISA at Sec. 102(b)(2). (emphasis added)
- <sup>4</sup> Energy Information Administration (EIA) Weekly Retail Gasoline and Diesel Prices, for week of June 16, 2008.
- <sup>5</sup> See Chris Isidore. "Auto sales plunge in face of \$4 Gas." CNNMoney.com <<http://money.cnn.com/2008/06/03/news/companies/autosales/?postversion=2008060314>> (June 3, 2008). & Tom Krishner. "GM to close 4 plants, focus on small cars." Associated Press (June 3, 2008).
- <sup>6</sup> Craig Trudell and Amy Wilson. "Ford announces sweeping '08 production cuts." *Automotive News*. (May 22, 2008).
- <sup>7</sup> The "alternative minimum" standard is set at 27.5 mpg or 92% of the projected fleetwide fuel economy for the combined domestic and non-domestic passenger car fleets.
- <sup>8</sup> 73 FR 24352, 24487. (May 2, 2008) at 24355.
- <sup>9</sup> See 49 U.S.C. §32902(a).
- <sup>10</sup> *Id.* at §32902(f).
- <sup>11</sup> See Scott Burgess. "Mileage at top of car buying list." *The Detroit News*. (March 24, 2008). & Clifford Krauss. "Driving Less, Americans Finally React to Sting of Gas Prices, a Study Says." *The New York Times*. (June 19, 2008).
- <sup>12</sup> "Mileage at top of car buying list."
- <sup>13</sup> Preliminary Regulatory Impact Analysis (PRIA), Corporate Average Fuel Economy for MY 2011-2015 Passenger Cars and Light Trucks. National Highway Traffic Safety Administration, Office of Regulatory Analysis and Evaluation. (April 2008) at A-2.
- <sup>14</sup> 73 FR 24457.
- <sup>15</sup> PRIA, X-5.
- <sup>16</sup> See letter from Rep. Rahm Emmanuel and Rep. Edward Markey to President Bush. (June 18, 2008) & David Shepardson. "House committee chair urges NHTSA to set tougher fuel economy requirements." *The Detroit News*. (June 26, 2008).
- <sup>17</sup> PRIA A-2.
- <sup>18</sup> *Id.* at IX-10-IX-13.
- <sup>19</sup> See European Climate Exchange Historical Data ECX EUA Futures Contract. Most recent data June 20, 2008 Accessed June 23, 2008. <Available at: [http://www.europeanclimateexchange.com/default\\_flash.asp](http://www.europeanclimateexchange.com/default_flash.asp)>
- <sup>20</sup> See EPA Analysis of the Lieberman-Warner Climate Security Act of 2008, Environmental Protection Agency, Office of Atmospheric Programs. (March 14, 2008) at 24. <available at: [http://www.epa.gov/climatechange/downloads/s2191\\_EPA\\_Analysis.pdf](http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf)>
- <sup>21</sup> 73 FR 12156, 12169. (March 6, 2008). at 12164.
- <sup>22</sup> See University of Maryland, Center for Integrative Environmental Research. *The US Economic Impacts of Climate Change and the Costs of Inaction*. (October 2007).
- <sup>23</sup> See PRIA V-90 & 73 FR 24411.
- <sup>24</sup> *Center for Biological Diversity et al., v. NHTSA*. 508 F. 3d 508. (November 15, 2007).
- <sup>25</sup> PRIA VIII-8.
- <sup>26</sup> Kenneth Small and Kurt Van Dender. "Fuel Efficiency and Motor Vehicle Travel: The Declining Rebound Effect." *Energy Journal*, vol. 28, no. 1 (2007), pp. 25-51.
- <sup>27</sup> Public Citizen has obtained evidence of this influence through documents it received through a 2003 Freedom of Information Act request. These documents have been summarized *Slip Sliding Away: the Cheney Sliding Scale for Fuel Economy*. Public Citizen. (August 2007). <Available at: <http://www.citizen.org/documents/cheneyscale.pdf>>
- <sup>28</sup> *Center for Biological Diversity et al., v. NHTSA*. 508 F. 3d 508. (November 15, 2007).
- <sup>29</sup> 73 FR 24457.
- <sup>30</sup> *Id.* at 24396.
- <sup>31</sup> 42 FR 33537.
- <sup>32</sup> See *Public Citizen v. NHTSA*. 848 F.2d 256, 270. (June 7, 1988). at 264. & 70 FR 51425.
- <sup>33</sup> *Center for Biological Diversity v. NHTSA*, 508 F. 3d 508 at 14869-71.
- <sup>34</sup> See "Mileage at top of car buying list."
- <sup>35</sup> See "Auto sales plunge in face of \$4 Gas." & "Ford announces sweeping '08 production cuts." & "GM to close 4 plants, focus on small cars."

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<sup>36</sup> 73 FR 24416.

<sup>37</sup> See U.S. General Accounting Office, *Regulatory Burden: Measurement Challenges and Concerns Raised by Selected Companies*, GAO/GGD-97-2, (November 1996), at 43.

<sup>38</sup> *Id.* at 49-52.

<sup>39</sup> 73 FR 24416.

<sup>40</sup> Public Citizen here makes the assumption that NHTSA will issue a final rule for these fuel economy standards before the end of 2008. See Cindy Skrzycki. "Bush Wants Sun to Set on Midnight Regulations." *Washington Post*. (June 3, 2008) at D03.

<sup>41</sup> See "GM to close 4 plants, focus on small cars." And Tom Krisher. "Low sales force Ford to idle SUV plant for 9 weeks." Associated Press. (June 16, 2008).

<sup>42</sup> PRIA V-50.

<sup>43</sup> *Id.* at V-71.

<sup>44</sup> Hart Hodges. "Falling Prices: Cost of Complying With Environmental Regulations Almost Always Less Than Advertised." Briefing Paper, Economic Policy Institute, #199711. (November 1997), at 1.

<sup>45</sup> 73 FR 24440.

<sup>46</sup> *Id.* at 24402-3.

<sup>47</sup> Donald Friedman and Keith Friedman. "The Relationship Between Safety and Fuel Economy." SAE Technical Paper Series 921055 (April-May 1992).

<sup>48</sup> 73 FR 24456.

<sup>49</sup> See Kahane, Charles J., PhD, DOT HS 809 662, "Vehicle Weight, Fatality Risk and Crash Compatibility of Model Year 1991-99 Passenger Cars and Light Trucks," October 2003. Available at <http://www.nhtsa.dot.gov/cars/rules/regrev/Evaluate/809662.html> & "Dissent on Safety Issues: Fuel Economy and Highway Safety," in *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, National Academy of Sciences, 2002. & Van Auken, R.M. and J.W. Zellner. "A Review of the Results in the 1997 Kahane, 2002 DRI, 2003 DRI and 2003 Kahane Reports on the Effects of Passenger Car and Light Truck Weight and Size on Fatality Risk." Dynamic Research Inc., DRI-04-02, 2004.

<sup>50</sup> Robert Crandall and John Graham. "The Effect of Fuel Economy Standards on Automobile Safety," *Journal of Law and Economics*, April 1989, 97-111. John Graham's deep involvement in restructuring the CAFE program is outlined in *Slip Sliding Away: the Cheney Sliding Scale for Fuel Economy*.

<sup>51</sup> Summers, Stephen, Alope Prasad and William Hollowell, "NHTSA's Research Program for Vehicle Aggressivity and Fleet Compatibility," Proceedings of the Seventeenth Annual International Conference on Enhanced Safety of Vehicles, Paper No. 249. June 2001.

<sup>52</sup> S. 357 of the 110<sup>th</sup> Congress, the "Ten in Ten Fuel Economy Act," introduced by Sen. Dianne Feinstein on January 22, 2007 included a provision which would have required NHTSA to establish a compatibility and aggressivity reduction safety standard to promote improved vehicle compatibility. While this language was not included in the Energy Independence and Security Act, Public Citizen recommends that NHTSA develop a compatibility and aggressivity standard.

<sup>53</sup> 71 FR 17568.

<sup>54</sup> *Id.*

<sup>55</sup> *Center for Biological Diversity v. NHTSA*,. at 14892. (Emphasis in original, citations omitted.)

<sup>56</sup> 73 FR 24460.

<sup>57</sup> 49 U.S.C. §32902(f).

<sup>58</sup> 73 FR 24460.

<sup>59</sup> National Academy of Sciences. *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*. National Academy of Sciences Press. (2002) at 18.

<sup>60</sup> See 73 FR 24419-20, 24422-23. The passenger car footprint distribution is graphed from <35 sf to 60 sf, and the light truck footprint distribution is graphed from 42.5 sf to 76 sf. The fuel economy requirement for a passenger car with a footprint of 55 sf is greater than 25 mpg, but a light truck of the same footprint has a fuel economy target less than 25 mpg for model year 2011.

<sup>61</sup> *Center for Biological Diversity v. NHTSA*. at 14841.

<sup>62</sup> 73 FR 24418.

<sup>63</sup> *Id.* at 24458.

<sup>64</sup> See Kathleen Kerwin, "You Call This the Family Car? Pickups with Roomy Cabs Become a Status Accessory," *Business Week*, (Apr. 26, 1999).

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<sup>65</sup> Environmental Protection Agency, Office of Transportation and Air Quality, *Light-Duty Automotive Technology and Fuel Economy Trends: 1995 through 2007*. EPA420-R-07-008. (September 2007). at 9.

<sup>66</sup> 42 U.S.C. §7543(b).

<sup>67</sup> *Massachusetts v. EPA*. 127 S. Ct. 1438. (April 2, 2007).

<sup>68</sup> See 49 U.S.C. §32919.

<sup>69</sup> *Green Mountain Chrysler v. Crombie*. 508 F. Supp. 2d 295. (September 12, 2007).

<sup>70</sup> 73 FR 12156, 12169.

<sup>71</sup> See *Green Mountain Chrysler v. Crombie. & Central Valley Chrysler Jeep v. Goldstene*. 529 F. Supp. 2d 1151 (December 11, 2007).

<sup>72</sup> 73 FR 24478.

<sup>73</sup> 71 FR 17654.

<sup>74</sup> *Green Mountain Chrysler v. Crombie* at 237.

<sup>75</sup> See Majority Report of House of Representatives Committee on Oversight and Government Reform on EPA's Denial of the California Waiver. The Report outlines the result of the Committee's investigation into the waiver denial including the opinion of EPA staff to grant the waiver, the legal analysis provided by EPA staff which stated EPA would likely lose in court on a challenge of the waiver denial, testimony relating to Administrator Johnson's disposition to grant the waiver, and White House influence in the decision.

<sup>76</sup> 73 FR 24479.

<sup>77</sup> Public Citizen acknowledges the light truck fuel economy standards for model year 2005-2007 (68 FR 16868, 16900 (April 7, 2003)) and the light truck fuel economy standards for model year 2008-2011 (71 FR 17566, 17679), as well as lowering the passenger car fuel economy to 26.0 mpg in 1986 and raising it 26.5 mpg in 1989, and 27.5 mpg in 1990.