

**Before the  
ENVIRONMENTAL PROTECTION AGENCY  
Washington, DC 20004  
February 3rd, 2012**

In the Matter of

2017 and Later Model Year Light-Duty  
Vehicle Greenhouse Gas Emissions and  
Corporate Average Fuel Economy Standards

Docket ID No. EPA-HQ-OAR-2010-0799

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**COMMENTS OF SAM BATKINS AND CATRINA RORKE**

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**Introduction**

We appreciate the opportunity to comment on the Environmental Protection Agency's (EPA) proposed regulation, titled "2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards." Our comment addresses three aspects of EPA's proposed rule.

First, we have concerns about EPA's cost-benefit analysis and data in the Regulatory Impact Analysis (RIA). When EPA conducted its "probabilistic uncertainty analysis," it estimated a possible net cost of \$141.4 billion, although later in the document the figure is listed as \$140.6 billion. In addition, we question counting aggregate costs between 2017 and 2025, but aggregate benefits up to two hundred years in the future. Inclusion of generations of benefits, and the social cost of carbon, which will result in an incalculable reduction to the effects of climate change, magnifies benefits relative to calculated costs.

Second, EPA conceded that feasibility and cost concerns are "valid" for light-duty trucks. With annual efficiency increases exceeding 4.5 percent in the last five years of the program, we are concerned that the "potentially severe economic consequences" described in the RIA could reasonably result. The Agency's previous CAFE standards required only 2.8 percent increases in vehicle efficiency during the final years of the program. We suggest that EPA revisit the burden on light-duty manufacturers given the possibility of "potentially severe economic consequences."

Third, despite overwhelming economic evidence that higher vehicle prices reduce commercial sales, EPA concludes that new fuel economy labels may increase sales. We believe it is arbitrary and capricious to disregard several studies indicating that demand elasticity for vehicles is -1.0, in favor of a qualitative discussion that lacks any empirical or academic support.

## **I. Cost-Benefit Projections**

EPA's probabilistic uncertainty analysis projects a possible net cost of \$141.4 billion in the executive summary, but later estimates \$140.6 billion for a net cost, without any explanation for the \$800 million difference. We recommend that the Agency reevaluate these numbers.

Further, in the Agency's computations for costs and benefits, it appears that benefits are extended hundreds of years into the future, but costs are limited to the regulated period only, ending in 2025. For example, beyond the obvious fuel savings of higher CAFE standards, "inter-generational benefits" appear to be included in benefit calculations. These include "reductions in the expected future economic damages caused by increased global temperatures, a rise in sea levels, and other projected impacts of climate change ... anticipated to extend over a period from approximately fifty to two hundred or more years in the future, and will thus be experienced primarily by generations that are not now living."

These "inter-generational" benefits presume at least a somewhat significant reduction in the harmful effects of "increased global temperatures." However, this analysis uses the Social Cost of Carbon (SCC), a consideration which presumes the new standard will have a meaningful – and measurable – impact on both the global atmospheric concentration of carbon dioxide and resulting climate change.

We assume new standards will have a measurable impact on the output of CO<sub>2</sub> in the United States. In the absence of a global carbon policy, however, we have no reasonable way to measure the impact of this diminished domestic output of CO<sub>2</sub> on either total global emissions or atmospheric concentrations. Without an understanding of these impacts – or evidence of any averted emissions – SCC is not a reasonable measurement in relation to this proposed policy. We are concerned that EPA is taking too many liberties by including SCC as a measurable benefit in this analysis.

Another problem related to counting benefits into the distant future: it does not appear that costs are projected out further than 2025. Beyond the \$293 billion in increased model year prices and \$132 billion in "technology costs," there are intergenerational external costs associated with the rule which are not similarly calculated. In Table 13, the Agency projects \$132.1 billion in technology costs during the regulated period; indeed manufacturers may be increasing R&D spending presently to comply with these proposed requirements and consumers will assuredly pay more in vehicle prices after 2025. Yet, technology, congestion, accident, noise, and fatality costs are included solely during the regulated CAFE period.

EPA also attributes \$45.6 billion in CO<sub>2</sub> benefits during the nine-year period, including \$1.6 billion in benefits by 2018. As we discussed, what effect (if any) this CAFE rule will have on global CO<sub>2</sub> concentrations in 2018 is uncertain, but it is unlikely that the marginal emissions reductions will produce \$1.6 billion in direct benefits, as Table 13 suggests. There is indeed a likelihood that future generations will benefit from a comprehensive global strategy to mitigate the effects of climate change over the decades, but attributing \$45.6 billion in benefits for Americans during the regulated period appears specious at best.

We understand the complexity of regulating America's entire automotive fleet, but fulfilling the requirements of OMB's Circular A-4 guidance demands that the public has a chance "to learn if the benefits of an action are likely to justify the costs." The Circular guidance does permit cost-benefit analyses to span "several generations," but this should logically pertain to both benefits and costs.

The A-4 Circular continues: "Your analysis should also present information on the streams of benefits and costs over time in order to provide a basis for assessing intertemporal distributional consequences, particularly where intergenerational effects are concerned."

It should be noted that EPA never calculated "inter-generational benefits" in any 2011 RIAs. Instead, the Agency concluded, "no consensus exists on the appropriate rate to use in an intergenerational context." (When EPA proposed a regulation for methane emissions from fracking in 2011 it also excluded "inter-generational" benefits.) Now, EPA employs an inter-generational rate for the SCC to determine benefits and declines to similarly extend costs beyond the 2017-2025 window.

In sum, we are concerned with the manner in which EPA calculated benefits and that EPA projected "the streams of benefits" in an intergenerational context but avoided commensurate cost projections. This, we believe, ensured that the proposed rule artificially yielded net total benefits.

## **II. Light-Duty Impact**

EPA concedes that cost and engineering challenges are greater for light-duty trucks than for smaller passenger cars. The utility of light-duty trucks presents certain challenges for drastic increases in fuel economy. The Agency acknowledged these cost and utility concerns, but continued to push for annual improvements that "could create potentially severe economic consequences."

EPA received "confidential business information" that "fuel economy improvements at the 4% annual rate" could be devastating for the industry; redesign and engineering challenges "may be valid" according to the RIA. Yet, despite these "potentially severe economic consequences," EPA proposed a 6.4 percent efficiency increase for light-duty trucks in 2021.

The proposed efficiency increases average 4.62 percent during the 2021-2025 period and the average annual efficiency mandate for light-duty trucks during 2018-2025 period is still 3.8 percent. In light of these "valid" concerns, EPA rationalizes, "[t]he first phase of light truck standards ... acts as kind of a bridge to the second phase, in which industry should be able to realize considerable additional improvements in fuel economy."

Averaging roughly 5 percent in efficiency gains during the last five years of the proposed requirements may be unduly damaging given the claims that a mere 4 percent efficiency increase could prove economically severe. The annual increase jump between 2020 and 2021, 340 percent (from 2 percent to 6.4 percent), is perhaps too ambitious a target.

In EPA's last CAFE standards rule from 2014-2017 the Agency required annual efficiency increases of 2.8 percent. By comparison, the last three years of the new proposed standards require a 4.6 percent increase. Based on this data, we recommend revisiting the CAFE increases for light-duty trucks to avoid "potentially severe economic consequences."

### **III. Impact on Sales and Employment**

In EPA's RIA, the Agency concedes that there is a "broad consensus in the economic literature that the price elasticity for demand for automobiles is approximately -1.0." Therefore, a one percent increase in vehicle price reduces sales by one percent. Despite this "broad" economic consensus, EPA failed to quantify the costs of lower sales and excluded any potential employment effects of higher prices.

The probabilistic uncertainty analysis produced a net increase in vehicle prices of \$109 billion to \$293.6 billion during the regulated period. The high end of this estimate is equal to 70.4 percent of the expected pretax fuel savings for consumers. Despite the potential for a dramatic increase in vehicle costs, EPA ignored the established demand elasticity for vehicles in quantifying costs and benefits, undermining the integrity of their costs estimate.

Given this clear economic evidence, the Agency nevertheless determined that consumers would "place some value in improved fuel economy." Without citing any empirical evidence or studies, EPA concludes that "easier-to-understand labels ... may increase sales above baseline levels by hastening this very type of consumer learning." We believe it is arbitrary and capricious to conclude that sales may increase without any supportive data, and overwhelming economic evidence indicating that sales – and related employment – will decline with billions of dollars in higher vehicle prices.

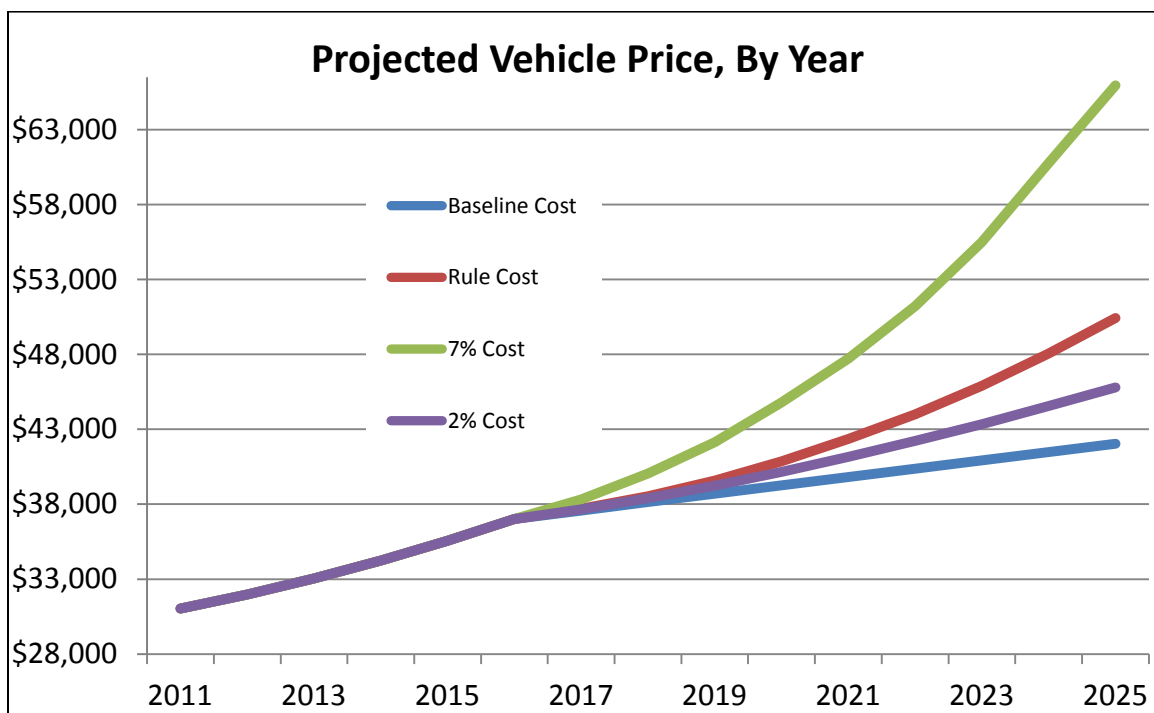
Furthermore, in response to EPA's call for more data on sales and employment, we have provided a few basic calculations to illustrate the impact of the proposed rule.

To estimate the potential impact on sales, we used a baseline of available sales data from 2000 to 2007. This data yields an average annual vehicle price increase of \$557.14. Projecting this average price increase to 2025 in current dollars, we established an average vehicle baseline price of \$38,828.57 at the end of the regulated period. Including cost considerations from the current CAFE rules (2012-2016), the average vehicle baseline cost increases to \$42,037.57.

To calculate the impact of the proposed CAFE rules on vehicle prices, we used the Regulatory Impact Analysis (RIA) "Table 5c: Average Incremental Technology Costs or Fines Per Vehicle, Combined." The preferred alternative described in the RIA will raise vehicle prices \$8,394 above baseline over the compliance window, or 19.9 percent.

This is an alarming figure, if we presume the "broad consensus" on demand elasticity as -1.0 is correct. A demand elasticity even half that would still yield a 9.9 percent decrease in sales. A 19.9 percent decrease in sales as a result of the proposed rule would cost billions of dollars, and countless jobs.

However, given the complexity of accurately projecting employment and economic impacts to 2025, we also assessed two alternative figures for CAFE-related efficiency increases taken from the RIA to illustrate a range of scenarios that the auto industry might face under such a policy (see figure, below). For example, the 2 percent alternative would still increase prices – and depress vehicle sales – during the compliance period by 8.9 percent. Likewise, the 7 percent alternative could hike vehicle prices by an impressive 56.9 percent.



A 19.9 percent increase in vehicle prices associated with the proposed CAFE rule, with a commensurate drop in sales, would obviously impact employment in the industry. It would also impose huge costs. Using available Department of Commerce data from 1998, excluding the abnormal downturn during 2008 and 2009, aggregate new car sales have increased \$16.1 million annually, on average.

Thus, without any CAFE rules between 2012 and 2025, gross new vehicle sales would eclipse \$1.05 trillion by 2025. Incorporating the 2012-2016 CAFE rule into the baseline yields a lower projection of \$978 billion in sales by 2025; in other words, existing CAFE rules are projected to cost the industry \$74.6 billion in lost sales. We compared this baseline to the impact of the three CAFE alternatives: 2 percent efficiency increase, preferred alternative, and 7 percent efficiency increase.

As established, the preferred alternative could reduce sales by 19.9 percent, costing the industry \$195.3 billion in lost sales. The two percent alternative would cost the industry \$87.1 billion, and the 7 percent alternative more than half a trillion dollars in decreased sales.

Obviously, based on the sheer size of these sales losses, we believe the proposal would have a profound impact on employment. EPA omitted lost vehicle sales in the formal cost-benefit

analysis, but as we show, even the modest 2 percent alternative described in the RIA would cost \$87.1 billion over the life of the rule. Counting the nearly \$200 billion in lost sales from EPA's preferred alternative would yield a far less favorable cost-benefit analysis.

We urge EPA and NHTSA to consider these sales results and related economic impacts before promulgation of the final rule.

Thank you for the opportunity to express our views to EPA on this important issue. If you have any questions about our comment, please do not hesitate to contact us via phone or email.

Sincerely,

Sam Batkins

Catrina Rorke