Good morning and thank you for the opportunity to comment on the proposed rule. My name is Alexandra Speers, and I represent a vehicle working group consisting of students and faculty from the Bren School of Environmental Science and Management and the Economics Department at the University of California at Santa Barbara. I am assisted here today by Prof. Charles Kolstad, who served on an earlier National Academy of Science Committee to review possible changes to the CAFE regulations. Of course, our opinions are not necessarily those of the University of California.

This proposed rule presents an opportunity for the United States to stand as a global leader in combating climate change. But just as importantly, this provides a real opportunity to strengthen our domestic economy in many dimensions, including reducing dependence on foreign oil. We have reviewed the proposed rule in depth and would like to comment on the following five topics: the Social Cost of Carbon, target stringency, standards for greenhouse-gas emissions other than carbon dioxide, additions to current emissions testing protocols, and vehicle classification. Our comments today are preliminary. We will be finalizing our opinions in written comments which will be submitted prior to the expiration of the 60-day comment period.

We would first like to address the Social Cost of Carbon. The discussion associated with the proposed rule argues that the social cost of carbon for US rulemaking should appropriately be the monetization of the damage from carbon wherever it may occur – within the US or elsewhere. We firmly believe this is the correct way to view this problem. These are global problems and must be viewed and treated with a global lens.

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Key to the determination that the social cost of carbon is in the neighborhood of $20 per ton is the assumption that there is a 50:50 chance that the true discount rate is 3% vs. 5%. We are concerned with this assumption. Our review of the literature suggests that the prevalent discount rate in peer reviewed literature is approximately 3% with outliers as frequently below 3% as above. This can make a big difference. Assuming 3% as the central tendancy results in a social cost of carbon of $34 per ton, using data provided by EPA and NHTSA. At minimum, we recommend a more nuanced treatment of a wider set of possible discount rates, including those below 3%.

An additional issue concerns the specific values for the social cost of carbon taken from the literature. In many cases, the literature does not report one number for the social cost of carbon. In fact, one of the central references in this literature (by Anthoff et al, 2009)\textsuperscript{2} reports a wide range of values. It is difficult for us to reproduce the results presented by the EPA and NHTSA. At minimum, we urge a much more clearly articulated rationale for the figures chosen.

Our second set of comments relates to the stringency of the proposed emission/efficiency targets. These comments related both to the level of the targets in different years between now and 2016 but also the shape of the functional relationship between vehicle footprint and targeted fuel efficiency.

Before moving to our specific comments, we have a general comment that there is insufficient description of the methodology NHTSA and EPA used to translate data on individual vehicle emission levels into the functional relationship. We attempted to redo the regression analysis to generate the proposed rule and could not replicate the reported results. This is probably because the government’s procedure is inadequately documented; there may also be an error. We urge more complete documentation of this work.

With regard to stringency of the target, based on the 2011 vehicle sales projections from NHTSA, our analysis found that the passenger car fleet fuel economy target for 2011 is 2-3% lower than what current vehicles are expected to achieve. Since we cannot reproduce the base curve, as just discussed, we question whether the targets for subsequent years 2012-2016 also fail to raise the bar above what is comfortably achievable.

A subtler point concerns the shape of the footprint-target relationship for out years. One of the main reasons for switching from a simple fleet efficiency target to one that depends on the footprint of the vehicles in the fleet is to discourage downsizing as a way of meeting the fuel efficiency target. Discouraging downsizing is a way of moderating the changes in our vehicle fleet. But downsizing our largest vehicles is a legitimate way of reducing energy use and greenhouse gas emissions. In our view, the difference between the efficiency targets for large vehicles and small vehicles should be gradually reduced as time goes by. Thus rather than have the 2016 curve simply be a vertically shifted version of the 2011 curve, the curve should get gradually flatter.

Our third point concerns standards for non-CO₂ GHGs. We support the EPA's proposition to cap methane and nitrogen dioxide at current levels due to their respective multiplicative global warming potential of 21 and 310 times greater than CO₂, according to the IPCC. We agree that the cap on methane and nitrogen dioxide is more effective than using CO₂ equivalency measures as such measures dilute the primary goal of reducing CO₂.

However, we ask that the EPA remain flexible with regard to possible future technologies that might reduce the level of carbon dioxide while increasing methane and nitrogen dioxide, or vice versa, but result in a net reduction to Global Warming Potential. However, total CO₂ emissions must remain below the approved CAFÉ standards for the proposed year.

Given the potency of methane and nitrogen dioxide in contributing to climate change, we also request the inclusion of incentives, such as a credit system, for reducing nitrogen dioxide and methane emissions below the proposed cap as a means to motivate innovation in clean technologies.

Our fourth point concerns current emissions testing protocols. We appreciate the EPA’s efforts in developing tests to provide a more accurate method for anticipating fuel economy achieved in real world driving. We ask the EPA to go a step further to require that vehicles continue to perform within a reasonable margin of the CAFÉ standards that they originally had to meet. Testing conducted after vehicles have been driven under real world conditions provides feedback in two
critical areas: 1) are testing procedures adequate; and 2) do implemented technologies continue to perform as they age?

It would be easy to stipulate procedures manufacturers should follow to assure continued vehicle performance, including adapting the “In Use Vehicle Program” currently in place. Sampling the on-road fleet would probably also work. We urge the EPA and NHTSA to require manufacturers to provide statistical or other evidence that the fuel efficiency of their fleet of vehicles has not declined more than 10% after 3 years from when originally tested. If the efficiency declines more than 10%, manufacturers shall pay the same penalty that would have been incurred if the original fleet had not met the standard.

Our fifth comment concerns vehicle classification. Vehicles categorized as light trucks only by the fact of their having 3 rows of seating that can be removed or flattened should be reclassified as cars. They do not provide the utility of “trucks”, and they are not off-road capable except in their 4WD versions. At the very least, as in the 2011 final rule, the NHTSA should compare the resulting fleet fuel economy targets by re-categorizing these vehicles.

We hope that these comments will be useful in generating a more effective rule for regulating greenhouse-gas emissions to move toward creating a sustainable economy and to combat climate change. As I indicated, we plan to also submit written comments.

I am happy to answer any questions you may have.

Thank you very much.