

1                   **Testimony on Proposed Fuel Economy/Greenhouse Gas Emissions**

2                                   **Regulation for Cars and Light Trucks**

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

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

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

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

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

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43 Our second set of comments relates to the stringency of the proposed emission/efficiency targets.  
44 These comments related both to the level of the targets in different years between now and 2016 but  
45 also the shape of the functional relationship between vehicle footprint and targeted fuel efficiency.  
46 Before moving to our specific comments, we have a general comment that there is insufficient  
47 description of the methodology NHTSA and EPA used to translate data on individual vehicle  
48 emission levels into the functional relationship. We attempted to redo the regression analysis to  
49 generate the proposed rule and could not replicate the reported results. This is probably because the  
50 government's procedure is inadequately documented; there may also be an error. We urge more  
51 complete documentation of this work.

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

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<sup>2</sup> David Anthoff, Richard S.J. Tol, and Gary W. Yohe, "Risk Aversion, Time Preference and the Social Cost of Carbon,"  
Env. Res. Ltrs, vol 4 (2009).

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

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68 Our third point concerns standards for non-CO<sub>2</sub> GHGs. We support the EPA's proposition to cap  
69 methane and nitrogen dioxide at current levels due to their respective multiplicative global warming  
70 potential of 21 and 310 times greater than CO<sub>2</sub>, according to the IPCC. We agree that the cap on  
71 methane and nitrogen dioxide is more effective than using CO<sub>2</sub> equivalency measures as such  
72 measures dilute the primary goal of reducing CO<sub>2</sub>.

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74 However, we ask that the EPA remain flexible with regard to possible future technologies that might  
75 reduce the level of carbon dioxide while increasing methane and nitrogen dioxide, or vice versa, but  
76 result in a net reduction to Global Warming Potential. However, total CO<sub>2</sub> emissions must remain  
77 below the approved CAFÉ standards for the proposed year.

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

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83 Our fourth point concerns current emissions testing protocols. We appreciate the EPA's efforts in  
84 developing tests to provide a more accurate method for anticipating fuel economy achieved in real  
85 world driving. We ask the EPA to go a step further to require that vehicles continue to perform  
86 within a reasonable margin of the CAFÉ standards that they originally had to meet. Testing  
87 conducted after vehicles have been driven under real world conditions provides feedback in two

88 critical areas: 1) are testing procedures adequate; and 2) do implemented technologies continue to  
89 perform as they age?

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

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

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

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109 I am happy to answer any questions you may have.

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111 Thank you very much.