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3 40 CRF Parts 86 and 600

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5 DEPARTMENT OF TRANSPORTATION

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7 National Highway Traffic Safety Administration

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12 NHTSA-2009-0059)

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14 Hearing for the Proposed Rulemaking To Establish

15 Light-Duty Vehicle Greenhouse Gas Emission Standards

16 and Corporate Average Fuel Economy Standards.

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18 Taken at 30559 Flynn Drive,

19 Romulus, Michigan,

20 Commencing at 9:00 a.m.,

21 Wednesday, October 21, 2009,

22 Before Laurel A. Frogner, RMR, CRR, CSR-2495

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1 APPEARANCES :

2 MS. MARGO OGE

3 MR. RONALD MEDFORD

4 MR. STEPHEN WOOD

5 MR. STEPHEN KRATZKE

6 MR. CHET FRANCE

7 MR. BILL CHARMLEY

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1 Romulus, Michigan

2 October 21, 2009

3 About 9:00 a.m.

4 MS. OGE: Good morning. I would  
5 like to welcome you to today's public hearing. My name  
6 is Margo Oge. I am the director of the Office of  
7 Transportation and Air Quality with the Environmental  
8 Protection Agency, and myself and my colleague from  
9 NHTSA, Ron Medford, will be the presiding officers for  
10 the hearing today.

11 This morning we are going to be  
12 hearing testimony on the joint proposed rulemaking to  
13 establish greenhouse gas emissions standards and  
14 standards for light-duty vehicles. This proposal was  
15 announced by Administrator Jackson and Secretary LaHood  
16 last September, and it was published in the Federal  
17 Register September 28. Our two agencies are proposing  
18 these provisions under respective statutes.

19 I will briefly go over the elements  
20 of the Clean Air Act that we use to propose the  
21 standards, and my colleague, Ron Medford, is going to  
22 do the same for the CAFE standards.

23 On May 19 of this year the President  
24 announced the development of a National Program for  
25 improving fuel efficiency and reducing greenhouse gas

1 emissions for light-duty vehicles.

2                   On that same day Secretary LaHood  
3 and Administrator Jackson signed a joint notice of  
4 intent to propose a coordinated National Program to  
5 exceed the objectives of the National Program that the  
6 President announced. The proposal that we're taking  
7 comments on today is the result of the joint effort,  
8 and our agencies have been working very hard together  
9 to develop this joint proposal.

10                   When this program is implemented, we  
11 expect to see significant reductions in reducing  
12 greenhouse gas emissions and significant improvements  
13 in fuel economy.

14                   Also, what I want to note is that  
15 this program will allow automakers to build one single  
16 national fleet that will satisfy the requirements under  
17 the Clean Air Act and will satisfy the requirements  
18 under the CAFE standards. Also, what I want to note is  
19 that the program that we proposed last September would  
20 also address the greenhouse gas emissions goals of the  
21 State of California and the states that have adopted  
22 the California program for vehicles built model years  
23 2012 to 2016.

24                   Very briefly, under Title II of the  
25 Clean Air Act, EPA is proposing to reduce greenhouse

1 gas emissions starting 2012 through 2016. By 2016 EPA  
2 projects that the average for cars and light trucks  
3 would be 250 grams per miles. In addition to today's  
4 hearing, there is also going to be an opportunity for  
5 written comments. The written comment period ends  
6 November 27, and we are committed to have a final  
7 action by the end of March of 2010.

8                   Very briefly, let me introduce the  
9 staff representing EPA. On my left is Chet France.  
10 He's the director of the Assessment Standards Division  
11 of our office. And next to him is Bill Charmley. He  
12 is deputy director of the Assessment Standards  
13 Division.

14                   Also, let me give you an outline of  
15 the legal elements under which we're calling this  
16 hearing today. Today's hearing will meet the  
17 requirements of Sections 307(D)(5) of the Clean Air Act  
18 which requires EPA to provide interested persons an  
19 opportunity for oral presentation in addition to  
20 written submissions. The official record for this  
21 hearing will be kept open for 30 days to provide for  
22 submission of supplemental testimony.

23                   Now, we're going to conduct this  
24 hearing formally, but formal Rules of Evidence will not  
25 apply. However, we, you know, the two presiding

1 officers may strike statements from the record which  
2 are deemed to be irrelevant or needlessly repetitious,  
3 and we're going to try to enforce a reasonable duration  
4 of the statement given the fact that we have a number  
5 of people testifying today. So we will request for the  
6 people that are testifying to please keep your verbal  
7 testimony to no more than 10 minutes. To expedite the  
8 testimony process, we are asking people to testify in  
9 panels. We have provided the list of preregistered  
10 testifiers, the panels, and the order of the testimony  
11 with the agenda at the reception table. Ron and I will  
12 ask that the witness state their name and affiliation  
13 prior to making the statement. When the witness or the  
14 panel have finished their presentation, our government  
15 panel will have an opportunity to ask questions related  
16 to the testimony.

17                                 Also, witnesses are reminded that  
18 any false statements or false response to questions may  
19 be a violation of law.

20                                 We are making use of a court  
21 reporter today, so it's very important that you speak  
22 slowly and clearly so that the court reporter makes  
23 sure that these proceedings are recorded accurately.  
24 Also, to allow, then, some rest from typing, we will  
25 take one or two brief breaks. Otherwise, what we are

1 planning to do is to go straight through the day until  
2 we are done with all the panels.

3                   Now, if any member of the audience  
4 is wishing to testify and have not already signed up, I  
5 would ask you to please sign your name at the reception  
6 table, and we will be here as long as it takes to allow  
7 everyone to testify. Also, I would ask everyone who is  
8 attending regardless if you are testifying or not, to  
9 please do sign the paper with the reception.

10                   At this time I'd like to introduce  
11 my colleague from NHTSA, Mr. Ron Medford.

12                   MR. MEDFORD: Thank you, Margo.  
13 Good morning, everyone. I'm Ron Medford. I'm the  
14 acting deputy administrator at NHTSA, and I want to  
15 thank everyone for coming today and joining Margo and I  
16 for a hearing.

17                   I want to add a little to what Margo  
18 was explaining about our two agencies. We are issuing  
19 separate proposals because each agency has its own  
20 separate statutory obligations. NHTSA is required to  
21 establish fuel economy standards by the Energy Policy  
22 and Conservation Act as Amended by the Energy  
23 Independence and Security Act of 2007, or EISA. If EPA  
24 makes the appropriate engagement and calls for  
25 contribution findings and the Clean Air Act authorizes

1 EPA to issue standard of greenhouse gas emissions. The  
2 proposals are similar in many respects. There are,  
3 however, some important differences that reflect  
4 differences in the two statutes. This is particularly  
5 reflected in some of the flexibilities proposed by EPA.  
6 I also want to note that in carrying out this  
7 rulemaking, we are committed to complete transparency  
8 and utilizing the best science. All of our  
9 methodologies, analyses, and modeling work, including  
10 complete source codes, input files, and information in  
11 assessing and using fully operational versions of the  
12 model themselves are fully available in the public  
13 docket. We look forward to hearing from you on your  
14 input as we update our analysis.

15                   As Margo also indicated, we will  
16 take final actions on proposal next spring. NHTSA is  
17 statutorily required to issue its model year 2012  
18 standards 18 months in advance of the model year, which  
19 means by April 1st or end of March of the coming year.

20                   With me this morning is Steve  
21 Kratzke to my immediate right, who is the assistant  
22 administrator for rulemaking at NHTSA, and to his right  
23 is Steve Wood, assistant chief counsel for rulemaking.

24                   I think with that, we'd like to call  
25 the first panel to the table, please. So I think

1 everybody is here; GM, Ford, NRDC, Sierra Club, and  
2 Walter McManus.

3 MR. MEDFORD: Good morning. Mike  
4 Robinson from GM, you're the first presenter this  
5 morning.

6 MR. ROBINSON: Good morning. Put my  
7 name card right here first. Good morning. I'm Michael  
8 Robinson, Vice-President for Environmental Energy and  
9 Safety Policy at General Motors, and at first I want to  
10 thank the presiders for the opportunity to participate  
11 on this panel and present testimony this morning.

12 On May 19th President Obama  
13 announced the administration's intentions to adopt a  
14 National Program to address vehicle greenhouse gas  
15 emissions and fuel economy. GM President and CEO Fritz  
16 Henderson proudly joined the President and others in  
17 the Rose Garden that day because we recognized the  
18 significance of the moment. The administration,  
19 various Governors, environmental groups, and automakers  
20 all came together because we agreed a new approach was  
21 needed. Our working together in a common direction on  
22 a single national approach could accomplish much more,  
23 consistent with the energy needs and the environmental  
24 priorities of the country. We knew then only about the  
25 framework for the proposed regulations. But we made

1 clear that we were prepared to work with EPA and NHTSA,  
2 and in that regard, I appreciate this opportunity to  
3 testify today to reaffirm GM's commitment from last May  
4 and to comment briefly on the proposed rules of the two  
5 agencies.

6                   First, let me underscore that GM  
7 supports the joint proposal from EPA and NHTSA to  
8 address 2012 to 2016 model year vehicles. We commend  
9 the technical staffs of both agencies with working  
10 together on this highly complex issue to produce what  
11 appears to us to be a very harmonized approach with the  
12 two Federal programs that will regulate fuel economy  
13 and greenhouse gas emissions. We also want to thank  
14 the agencies for leadership that the Federal Government  
15 is showing in trying to minimize the disruptive impacts  
16 of having multiple programs at State and Federal  
17 levels. We are especially pleased that we are able to  
18 testify today in support of this approach that is being  
19 proposed rather than saying no to a patchwork of state  
20 programs.

21                   On this note, we also want to  
22 commend the State of California and the California Air  
23 Resources Board for their role and their collaboration  
24 and their leadership in working toward this national  
25 standard. We also welcome the opportunity to work with

1 the agencies as they finalize the proposed regulations.  
2 This is a big step forward for all of us.

3                   Among the highlights of the proposal  
4 are, one, that the coordinated attribute-based approach  
5 of the two programs, and, two, the recognition of the  
6 need for mechanisms to provide for compliance  
7 flexibility in the face of great uncertainty over  
8 future technology, developments and costs, customer  
9 acceptance of these technologies, and the price of  
10 fuels that consumers may see in the market place. All  
11 of these factors make it critical that automakers have  
12 some ability to cope with changes or unexpected  
13 outcomes, and we believe the proposed rule provides  
14 such flexibility.

15                   The proposed standards are not easy,  
16 nor will they be inexpensive, but we are up to the  
17 challenge. The success of our current offerings in the  
18 marketplace like the Chevy Malibu and the Equinox and  
19 the enthusiasm over soon-to-be released products like  
20 the Chevy Cruze convince us that we will be able to do  
21 our part, and even before this rule becomes effective,  
22 we will have introduced the Chevy Volt, which is  
23 scheduled to start production in late 2010 as a 2011  
24 model year vehicle, and it will be GM's first extended  
25 range electric vehicle.

1                   It is our view that this rule  
2 represents a dramatic opportunity to advance our mutual  
3 goals of CO2 reduction and increased energy diversity  
4 while respecting customer choice. But even after this  
5 rule is finalized, more work will remain on the policy  
6 front. This rule only gets us to 2016.

7                   We do urge both EPA and NHTSA to  
8 keep all stakeholders at the table and immediately  
9 begin work on the next phase of what we would call an  
10 ongoing national strong program. And I will tell you  
11 right now from a GM perspective, we are prepared to  
12 engage in that process today.

13                   All voices, as reflected in May's  
14 Rose Garden event, are essential to this panel, the  
15 States, the automakers, the environmental  
16 organizations, and the energy providers themselves need  
17 to be at the table. Ultimately we will need strong  
18 leadership at the Federal level with an integrated  
19 approach that addresses infrastructure, vehicles,  
20 fuels, and consumer behavior as well as other sectors  
21 of the economy. This proposed rule is a very positive  
22 first step and a good foundation on which we can all  
23 build. We intend to provide detailed technical written  
24 comments to enhance the clarity and harmonization of  
25 the jointly coordinated program, and as we have from

1 the start, we commit to work with the agencies, the  
2 states, and other interested parties to make this a  
3 success. I'm glad to answer any questions you may  
4 have.

5 MR. MEDFORD: Let's move on.

6 Sue, you want to introduce yourself?

7 MS. CISCHKE: Good morning. I am  
8 Sue Cischke, Group Vice-President of Sustainability,  
9 Environmental and Safety Engineering for Ford Motor  
10 Company. It is a pleasure to be here today to provide  
11 our perspective on this very important rulemaking. We  
12 commend the efforts of both agencies in this difficult  
13 task to develop harmonized greenhouse gas emissions and  
14 CAFE standards for passenger cars and light-duty trucks  
15 and we are committed to working with you to finalize  
16 these regulations.

17 Before I talk about the proposed  
18 rulemaking, I would like to spend a moment telling you  
19 about the progress that Ford is making in executing our  
20 long-term sustainability plan. All of the investment  
21 that we are putting into our plan is contributing to  
22 improving the fuel economy and reducing the greenhouse  
23 gas emissions of our fleet. This includes converting  
24 three truck and SUV plants to build small cars,  
25 re-tooling our powertrain facilities to manufacture

1 EcoBoost engines and more advanced six-speed  
2 transmissions, leveraging our global platforms,  
3 increasing our hybrid offerings and moving forward with  
4 an aggressive electrification strategy. While there  
5 are significant costs in making this transformation, it  
6 is the right thing to do for our customers, and you  
7 will continue to see us offer more great products with  
8 advanced, innovative technologies to improve the fuel  
9 efficiency of our vehicles and to deliver outstanding  
10 quality and features that our customers desire.

11                   Turning now to the proposed  
12 rulemaking, Ford supports the manner in which the  
13 agencies have proposed to harmonize the greenhouse gas  
14 emissions and CAFE regulations, which is a broader  
15 program compared to what was outlined in the 2007  
16 Energy Independence and Security Act. It brings  
17 together a range of compliance mechanisms such as  
18 improvements to fuel economy, improvements in air-  
19 conditioning systems designed to minimize refrigerant  
20 leakage (another potential source of greenhouse gases)  
21 and advanced technology vehicles that can run on  
22 bio-fuels and electricity. Taken together, the broader  
23 elements of this one National Program provide a more  
24 efficient compliance framework compared to individual  
25 state programs or potentially overlapping Federal and

1 state programs.

2                   As we continue to move towards an  
3 integrated approach that considers the vehicle, the  
4 fuel, and the consumer; it is worth highlighting other  
5 policies that could do more to reduce greenhouse gas  
6 emissions from actual in-use operation of motor  
7 vehicles compared to some of the additional  
8 requirements that EPA is proposing under this  
9 rulemaking. For example, EPA is proposing useful life  
10 standards for CH<sub>4</sub> (methane) and N<sub>2</sub>O (nitrous oxide) in  
11 addition to the fleet-average CO<sub>2</sub> requirements. The  
12 relative contribution of methane and nitrous oxide to a  
13 vehicle's overall greenhouse gas emissions is small  
14 compared to CO<sub>2</sub> - on the order of 1-3% and 0.3-0.4%  
15 respectively. So the benefit of expanding the existing  
16 criteria pollutant emissions durability requirements to  
17 include these greenhouse gases is negligible, relative  
18 to other potential measures that could have a much more  
19 significant impact on actual in-use greenhouse gas  
20 emissions. Such measures would go beyond the vehicle's  
21 design. For example, significant additional greenhouse  
22 gas emissions reductions could be achieved by reducing  
23 the carbon intensity of the nation's overall fuel  
24 supply (through the introduction of alternative, low-  
25 carbon fuels). In addition, further reductions could

1 also be achieved through more efficient transportation  
2 control measures designed to manage increased travel  
3 demand. And these could include congestion mitigation  
4 initiatives, eco-driving education and awareness  
5 programs, and other incentives to encourage customers  
6 to drive more efficiently.

7                               We do not believe EPA is compelled  
8 to establish full useful life standards for N2O and  
9 CH4, and our written comments will address this in more  
10 detail. To the extent that EPA desires to pursue this  
11 issue nonetheless, the regulations could continue to  
12 allow manufacturers to make an "engineering judgment"  
13 attestation -- in lieu of formal compliance testing --  
14 beyond just the first couple of years as proposed. And  
15 alternatively, EPA could establish generic emissions  
16 factors for N2O and CH4 and roll these into the  
17 proposed CO2 standard.

18                               That being said, we really want to  
19 say that Ford strongly believes that measures need to  
20 be put in place to ensure that the National Program  
21 approach outlined in this rulemaking continues beyond  
22 2016. We were pleased when the President brought us  
23 all together to agree on a roadmap for harmonizing  
24 greenhouse gas emissions and CAFE standards. And the  
25 EPA and NHTSA proposal gives us greater clarity,

1 certainty and flexibility to achieve the aggressive  
2 greenhouse gas emissions reduction goals that we all  
3 share. Most importantly, it avoids the patchwork and  
4 overlapping requirements that we would have faced under  
5 the status quo. Nonetheless, it is only a first step  
6 and we look forward to working with the same  
7 stakeholders as we move beyond 2016.

8                                 Once again, we appreciate the  
9 opportunity to provide our testimony on this very  
10 important rulemaking, and we are continuing to review  
11 all of the different aspects of the proposal, and we  
12 plan to provide detailed written comments aimed at  
13 achieving and finalizing regulations consistent with  
14 the commitment that all parties have made to this  
15 National Program.

16                                 Thank you very much.

17                                 MR. MEDFORD: Thanks, Sue. We're  
18 going to wait. We'll ask our questions at the end.  
19 So, Luke, you're next.

20                                 MR. TONACHEL: Good morning, and  
21 thank you for the opportunity to testify today on the  
22 joint proposal rule. My name is Luke Tonachel. I am a  
23 vehicles analyst with the Natural Resources Defense  
24 Council, our Air and Energy Program. I represent NRDC  
25 and its 1.2 million members and activists and support

1 efforts under the National Program to set standards for  
2 global warming pollution for new cars and light trucks  
3 beginning in model year 2012.

4                   NRDC applauds the creation of the  
5 National Program. The program is a historic step  
6 forward for protecting the environment and helping  
7 consumers save money at the pump. It secures the  
8 benefit of the California Vehicle Emissions Program  
9 while also giving consumers more clean vehicle choices.  
10 The program represents a path forward on new vehicle  
11 standards that is clearly a win for automakers, their  
12 workers, and the States. It's good for automakers  
13 because it gives them certainty and lays the foundation  
14 for them to be more sustainable businesses in a future  
15 world of volatile fuel prices and intensifying global  
16 warming. It is good for auto workers because a  
17 stronger industry means more better paying jobs. The  
18 program is also good for the states because it  
19 preserves their right to act to protect their local  
20 interests and citizens and it upholds their tremendous  
21 value as laboratories for clean vehicle policy.

22                   The joint proposal establishes an  
23 important policy partnership by aligning the fuel  
24 conservation directive of the Energy Policy and  
25 Conservation Act with the pollution and health

1 protections of the Clean Air Act. The Supreme Court  
2 ruled in Massachusetts v EPA that the Clean Air Act is  
3 the appropriate law for controlling carbon pollution  
4 and the Clean Air Act authority brings new important  
5 perspectives to standards that reduce vehicle carbon  
6 emissions.

7                   In addition to having health and  
8 welfare as primary drivers of the standards, the Clean  
9 Air Act provides technology enforcing standards, and it  
10 includes the flexibility to set standards over longer  
11 time frames. Unlike EPCA, which limits NHTSA to  
12 setting standards just five years into the future, the  
13 Clean Air Act allows EPA to set longer term standards  
14 based on advanced, not just incremental technologies.  
15 This approach increases regulatory certainty for  
16 automakers and enables them to more effectively plan  
17 new technology in this strategic manner.

18                   While this proposal shows real  
19 progress to fulfill the goals of the National Program,  
20 there are some aspects of the proposal that need  
21 strengthening in order to deliver on the promised  
22 greenhouse gas reduction and oil savings benefits.  
23 Specifically, there are three top priority structural  
24 issues that need to be addressed. First, a backstop to  
25 prevent significant shifts towards larger more

1 polluting vehicles; second, full fuel cycle emissions  
2 accounting for electric and hydrogen fuel vehicles;  
3 and, third, adjustments to avoid windfalls from early  
4 credits.

5                   NRDC is also concerned with some of  
6 the proposed cost assumptions such as the social cost  
7 of carbon, which we believe is systematically biased to  
8 an inappropriately low value. I will be working with  
9 NRDC's climate center chief economist to provide  
10 extensive remarks on these critical cost assumptions in  
11 our written comments.

12                   In my remaining comments today I  
13 will briefly describe the three structural issues in  
14 greater detail.

15                   Number one, backstop standards are  
16 necessary to ensure that environmental objectives are  
17 met. A key missing piece of the program design is what  
18 is known as a backstop to ensure that the state of  
19 environmental benefits of the program are actually  
20 achieved. In the proposal the agencies recognized that  
21 the attribute-based standards do not guarantee that a  
22 specific fleet-wide fuel economy and greenhouse gas  
23 emissions level will be achieved. The achieved levels  
24 predicted by the agencies is a function of the sales  
25 forecast applied to each manufacturer. For model year

1 2016 to reach a fleet-wide average of 250 grams per  
2 mile, the individual car and truck standards are set  
3 assuming a specific car or truck sales split. However,  
4 this split may not occur if automakers shift their  
5 product mix to more light trucks or if they  
6 intentionally change the design of their vehicles to  
7 prevent classification as a car. This is of particular  
8 concern since starting in model year 2011,  
9 2-wheel-drive SUVs will be reclassified as cars, and  
10 this could potentially increase the car portion to 60  
11 percent. While production of 2-wheel-drive SUVs is far  
12 from certain, to avoid the reclassification automakers  
13 could severely cut back their 2-wheel-drive SUV  
14 offerings.

15                                   To prevent intentional and  
16 unintentional market shifts from undermining the  
17 environmental and oil savings benefits of the program,  
18 we recommend EPA and NHTSA adopt backstop standards  
19 specific to each manufacturer that will prevent  
20 manufacturers from deviating too far from their  
21 expected reduction trajectories. Separate backstop  
22 standards should be set for each manufacturer so they  
23 are accountable for their own actions. If a  
24 manufacturer exceeds its backstop, the manufacturer  
25 should incur a credit deficit expressed in mega grams

1 or tons and be required to eliminate that deficit  
2 within three years.

3                   Number two, treating advanced  
4 technology vehicles as zero emissions undermines  
5 pollution and technology benefits of the program. EPA  
6 should reconsider the emissions rates and credit  
7 multipliers proposed for vehicles operating on grid  
8 electricity. EPA's proposal to -- that electric drive  
9 vehicles be treated as zero emissions and giving credit  
10 multipliers of up to 2.0 will undermine the emissions  
11 benefits of the program and will slow the deployment of  
12 conventional vehicle emission reduction technologies  
13 into the fleet.

14                   To illustrate our concerns, we have  
15 estimated the impact of the EPA's proposal on Nissan's  
16 compliance strategy. Nissan has indicated that they  
17 can produce at least 100,000 electric cars annually by  
18 model year 2016, which is about 10 percent of their  
19 expected car sales. If the EV's are assigned a 0 grams  
20 per mile emission rate at a 2.0 multiplier, we estimate  
21 that the Nissan's gasoline car fleet would average  
22 about 8 mpg lower fuel economy than if the Nissan did  
23 not produce any EV's above 31.5 versus 39.5 mpg. That  
24 is, Nissan would have to do very little, if anything,  
25 to improve the performance of their car fleet.

1                   NRDC believes that the emissions  
2 scoring for all vehicles should be based on their true  
3 full fuel cycle emissions impact. Electric vehicles  
4 such as plug-in hybrid electric vehicles, battery  
5 electric vehicles, and hydrogen fuel cell vehicles have  
6 in reality non-zero emissions rate due to the upstream  
7 production and transmission of their fuel source  
8 electricity or hydrogen.

9                   For electric, we would recommend  
10 that the emissions scoring should be based on the  
11 vehicle's specific efficiency test results in kilowatt  
12 hours per mile multiplied by a national grid emissions  
13 factor in grams of CO2 per kilowatt.

14                   For plug-in hybrid electric vehicles  
15 which use a combination of electricity and gasoline  
16 fuel, the emissions rate should be a weighted average  
17 of the electric miles emissions rate and the gasoline  
18 miles emissions rate using an electric drive utility  
19 factor.

20                   A similar approach should be applied  
21 to hydrogen fuel cell vehicles and hydrogen internal  
22 combustion engine vehicles with a grams of CO2 per  
23 kilogram hydrogen factor applied to the propulsion  
24 efficiency.

25                   Three, early credits should only be



1 a historic step forward, but some aspects need  
2 strengthening in order to deliver the promised  
3 greenhouse gas and oil savings benefits. In our  
4 written comments to the proposal we will expand on the  
5 backstop, alternative fuel vehicle, greenhouse gas  
6 accounting, and early credits. The written comments  
7 will also address important economic assumptions such  
8 as the social cost of carbon and methodologies used to  
9 determine its value. Thank you.

10 MR. MEDFORD: Thank you.

11 Jesse, next.

12 MS. PRENTICE-DUNN: Good morning,  
13 and thank you for the opportunity to testify today. I  
14 am Jesse Prentice-Dunn, Associate Washington  
15 Representative with Sierra Club's Green Transportation  
16 Campaign. On behalf of the Sierra Club's 1.3 million  
17 members and supporters, I applaud EPA and NHTSA for  
18 taking the biggest single step to reduce greenhouse gas  
19 emissions by accelerating fuel economy standards and  
20 proposing new greenhouses gas standards for motor  
21 vehicles.

22 This Administration is taking  
23 critical steps to reduce U.S. global warming pollution  
24 through this and other rules, including the  
25 endangerment finding and granting the California

1 waiver. Sierra Club is tracking all of these rules as  
2 part of the Big Picture that will move our country  
3 towards a clean energy future and demonstrate to the  
4 world that the U.S. is acting now to tackle global  
5 warming pollution.

6                   The proposed standards deliver on  
7 the goals laid out by President Obama in his May 19  
8 announcement. They will reduce greenhouse gas  
9 emissions by 950 million metric tons -- the equivalent  
10 of shutting 205 coal power plants for a year, or  
11 keeping nearly 5 million railcars worth of coal in the  
12 ground. At the same time, more efficient vehicles will  
13 save 1.8 billion barrels of oil and save the average  
14 consumer \$3,000 over the life of a 2016 model year  
15 vehicle.

16                   And perhaps most importantly for  
17 today, as we're in Detroit, these standards will  
18 provide automakers with the direction they need to  
19 become leaders in efficient vehicles and make Detroit  
20 the epicenter of a green industry. These standards  
21 acknowledge that our automakers have technologies on  
22 the shelf to safely improve fuel economy. Technology  
23 such as Ford's EcoBoost engine, continuously variable  
24 transmissions, and high strength, lightweight materials  
25 will provide consumers with the safe, clean vehicles

1 they deserve. The proposed standards will ensure that  
2 these technologies are put to work now and lead to the  
3 development and deployment of even more advanced  
4 technologies.

5                   There are several key issues that  
6 EPA and NHTSA must address, both to deliver on the  
7 President's goals and to establish a strong foundation  
8 for improvements beyond 2016. I will address several  
9 points here and we will be submitting more detailed  
10 written comments for the record.

11                   First, EPA and NHTSA should include  
12 an automaker-specific automatic ratchet backstop in the  
13 final standards to ensure that 2016 targets are hit.  
14 The substantial amount of available credits, the  
15 potential for backsliding along the attribute curves,  
16 and assumptions about future fleet mix create the need  
17 for a mechanism that ensures we will achieve the  
18 emissions reductions and oil savings goals laid out in  
19 the proposed standards and the President's  
20 announcement. There are several ways such a backstop  
21 can be structured and we urge EPA, in particular, to  
22 use its authority under the Clean Air Act to develop a  
23 mechanism that will fairly keep automakers on track.

24                   Second, the emissions associated  
25 with plug-in electric vehicles cannot be ignored.

1 Although electric vehicles emit no global warming  
2 pollution while driving, producing the electricity to  
3 power them certainly does. Battery electric and plug-  
4 hybrid electric vehicles can provide significant  
5 reductions in emissions with a cleaner electrical grid  
6 and we should be encouraging the development and  
7 deployment of battery technologies. However, we should  
8 consider whether there are better ways to incentivize  
9 electric vehicles than ignoring the upstream emissions  
10 from electricity generation in a program designed to  
11 reduce greenhouse gas emissions. As electric vehicle  
12 production and use are expanded, and in future rounds  
13 of standards, it is critical that EPA and NHTSA treat  
14 electric vehicles in an accurate manner.

15                   In this rulemaking EPA should  
16 measure the average emissions from the national grid  
17 and combine that value with vehicle efficiency to  
18 obtain a more accurate measure of each electric  
19 vehicle's performance. While Sierra Club is not  
20 proposing a certain value for grid emissions, a recent  
21 report by American Solar Energy Society, sponsored by  
22 Sierra Club, estimated that on average, electric  
23 vehicles emit 42 percent less greenhouse gases per mile  
24 than conventional vehicles.

25                   Additionally, we urge EPA to limit

1 advanced technology vehicle credits. When combined  
2 with a compliance value of 0 grams/mile, advanced  
3 technology vehicle credits could allow automakers that  
4 produce a moderate number of electric vehicles to meet  
5 a significant portion of their compliance obligation in  
6 2016 with advanced technology vehicle credits. These  
7 credits could enable manufacturers to produce less  
8 efficient (and more polluting) models in their fleets  
9 and slow the deployment of conventional technologies  
10 that can boost fuel economy and lower emissions now,  
11 when emissions reductions are most needed. EPA must  
12 ensure that all credits amount to real reductions -  
13 creating an unreal 0 emission value could undermine the  
14 program. If EPA is going to apply a multiplier, we  
15 urge that it start no higher than 1.2 in model year  
16 2012 and phase out by 2016. EPA should be very clear  
17 that this multiplier will not be continued in the next  
18 round of standards and be clear on how it plans to  
19 measure emissions from these vehicles.

20 Third, early action credits should  
21 be limited. These credits for vehicles sold between  
22 model years 2009 and 2011 will be awarded to vehicles  
23 that were designed prior to the proposed standards. We  
24 support the EPA in wanting to avoid windfall credits.  
25 And if early credits are to be allowed, automakers

1 should be required to declare which pathway they will  
2 use before accruing credits, not at the end of 2011.  
3 Further, early credits should be based on the most  
4 stringent standard for the purposes of earning credits.  
5 In several years, California's Pavley standards are  
6 lower than Federal CAFE standards. Automakers should  
7 be held to the most stringent standard that applies.

8                   Fourth, EPA and NHTSA should clarify  
9 the approach to setting standards. As we know, the  
10 proposed standards of 250 g/mi and 34.1 mpg are the  
11 result of an agreement; however, future rounds of  
12 standards will likely not be bound by a similar  
13 agreement and, in fact, both agencies should ensure  
14 that future standards maximize the application of  
15 cost-effective technologies to vehicles and consumer  
16 savings at the pump. The Clean Air Act is a technology  
17 forcing statute, and we urge EPA to clearly note the  
18 transitional aspect of these standards in the final  
19 rule.

20                   These standards will move us from  
21 one standard aimed at reducing oil consumption, to a  
22 broader National Program that also guarantees  
23 greenhouse gas emissions reductions. The proposed  
24 National Program sets the table for future standards  
25 that can finally break our dependence on oil and create

1 substantially cleaner vehicles.

2                   We applaud NHTSA and EPA for its  
3 efforts to make compliance with the National Program  
4 more transparent. The public should be able to track  
5 and fully understand how automakers are complying with  
6 the standards. In the past the CAFE system has made it  
7 virtually impossible to track how automakers are  
8 accruing and using credits. And in the new program,  
9 EPA creates an array of credits that will, as with  
10 CAFE, roll over a 9 year time frame. We urge EPA and  
11 NHTSA to take every step possible to make compliance  
12 transparent.

13                   Finally, I would like to comment on  
14 the social cost of carbon. We will be submitting more  
15 detailed written comments. For the record, however, we  
16 would like to underscore the importance of getting this  
17 value right in the final rule, as the decisions made  
18 here will have far reaching impacts for other rules and  
19 policies.

20                   When Sierra Club testified at the  
21 Renewable Fuel Standard hearing on June 9th, we urged  
22 the administration to take a look at the big picture of  
23 emissions from the transportation sector -- getting  
24 standards for vehicles and fuels right as well as  
25 reducing how much we drive. And I'm glad to hear both

1 GM and Ford support aspects to reduce emissions from  
2 the entire sector, not just vehicles. And as the fuel  
3 mix in the U.S. diversifies with more biofuels and  
4 unfortunately more Canadian tar sands and other dirty  
5 fuels, the impact of emissions from nonconventional  
6 fuels on the transportation sector, on a lifecycle  
7 basis, must be accounted for to ensure we do not erode  
8 the reductions promised from these standards.

9                   In conclusion, Sierra Club applauds  
10 EPA and NHTSA for proposing standards that will  
11 significantly reduce global warming emissions, cut our  
12 dependence on oil, and save consumers money. These  
13 standards will provide a path for automakers to become  
14 leaders in efficient vehicle technology and can help  
15 Detroit become the center of a free energy economy.  
16 Again, on behalf of our members and supporters around  
17 the country, we applaud you for strong standards and  
18 all of your hard work. Thank you.

19                   MR. MEDFORD: Thank you. Doctor  
20 McManus.

21                   DR. McMANUS: I am a research  
22 scientist at University of Michigan Transportation  
23 Research Institute for UMTRI. The views I express  
24 today and any written submission reflect my own  
25 personal approval views and don't necessarily reflect

1 those of UMTRI or the University.

2 I thank you for the opportunity to  
3 address you today on the proposed rulemaking to  
4 establish greenhouse gas emission standards and  
5 corporate average fuel economy standards for light  
6 vehicles.

7 The National Program is supposed to  
8 establish strong and coordinated Federal greenhouse gas  
9 and fuel economy standards for passenger cars, light-  
10 duty trucks, and medium-duty and heavy-duty trucks.  
11 For the National Program to be successful, stakeholders  
12 who have diverse views need to cooperate. EPA, NHTSA,  
13 California Air Resources Board, and the automakers are  
14 to be commended for establishing the joint rulemaking  
15 process for managing CAFE and GHG emissions standards.

16 In my comments today I first  
17 summarize findings from two recent research studies on  
18 the impacts of the National Program and then address  
19 concerns about three elements of the nascent joint  
20 rulemaking process - the transparency of the process,  
21 the use of multipliers to estimate indirect cost  
22 impacts, and the measurement of welfare impacts.

23 First, the recent research  
24 findings:

25 The first study, recently released

1 by Citi Investment Research & Analysis, is called "CAFE  
2 and the U.S. Auto Industry Revisited." It was written  
3 in partnership with Ceres, the Investor Network on  
4 Climate Risk, the Planning Edge, and Meszler  
5 Engineering Services.

6                   In it we analyzed two regulatory  
7 scenarios: CAFE 2020, an industry-wide target of 35  
8 mpg in 2020; and what we called then National Pavley,  
9 but is now equivalent to the National Program, of  
10 roughly industry-wide target of 35 mpg in 2016. In  
11 each scenario we estimated impacts on sales, costs, and  
12 profits relative to a baseline forecast.

13                   Our analysis found that the proposed  
14 National Standard is likely to benefit both the Detroit  
15 3 and the Japan 3 by boosting profits, based on the  
16 relative value consumers put on fuel costs compared to  
17 vehicle price, the future price of fuel, and the level  
18 of direct compared to indirect costs to compared to  
19 improved fuel economy. The study found that by  
20 producing more competitive and fuel-efficient fleets in  
21 the coming years, the Detroit 3 would be able to slow  
22 or reverse the market share erosion that has  
23 accelerated in recent years.

24                   Consumers will benefit as well since  
25 fuel savings from more fuel efficient cars -- even at

1 the present price of gasoline at \$2.50 a gallon, it's a  
2 little bit higher today -- it will more than offset  
3 slightly higher prices for vehicles incorporating the  
4 new fuel-saving technologies. Under the National  
5 Program, the present value of the fuel saved will be  
6 greater than the increase in purchase price associated  
7 with the new fuel saving technology.

8                   The second study, "Fixing Detroit:  
9 How Far, How Fast, How Fuel Efficient," (which my  
10 colleague, Rob Kleinbaum co-authored) was completed in  
11 June of this year.

12                   This report modeled the impact of  
13 three different fuel economy standard increases -- 30  
14 percent increase, which is 35 mpg, roughly equivalent  
15 to the National Program, also looked at 40 percent and  
16 50 percent increases, and we looked at the impact on  
17 the profitability and sales of the auto industry.

18                   Results of this study indicated that  
19 the Detroit 3 would have increased profit (over the  
20 baseline) in all three scenarios, and their profit  
21 gains would be larger the more aggressively they pursue  
22 improvements in fuel economy. The Japan 3, (Toyota,  
23 Nissan, and Honda) would also gain profit from pursuing  
24 higher fuel economy, but their gains would be smaller  
25 than those of the Detroit 3. These profit gains would

1 result because higher fuel economy is worth more to  
2 consumers than it costs the automakers.

3 Both studies find that the National  
4 Program will benefit consumers through fuel savings and  
5 automakers through opportunities to increased profit.

6 Secondly, I want to comment on the  
7 proposed transparency in the rulemaking.

8 EPA and NHTSA have proposed a new  
9 methodology for analyzing potential CAFE and greenhouse  
10 gas emissions standards that is more transparent,  
11 replicable, and accurate than the prior methodology.

12 Among other objectives, Congress  
13 wants fuel economy standards that balance the benefits  
14 from reducing negative external effects of fuel  
15 consumption with the costs of improving vehicle fuel  
16 economy. The benefits can generally be estimated with  
17 public data, but to estimate the costs, it would be  
18 helpful to use private information on costs known only  
19 to the automakers. This information asymmetry has the  
20 potential to introduce "gaming" into the process.

21 NHTSA has historically based its  
22 analysis of potential new CAFE standards heavily on  
23 private information -- extensive and detailed product  
24 plans for vehicles, engines, and transmissions. This  
25 private information is obtained voluntarily, and NHTSA

1 is obligated to prevent its public disclosure.

2                   The new approach is more  
3 transparent. The information sources (with only a few  
4 exceptions) are all either in the public domain,  
5 available to the public upon request, or available  
6 commercially. This is arguably the most profound  
7 change in the methodology. In the past, the process  
8 was essentially immune from or closed from rigorous  
9 review. In the new process, anyone can repeat and  
10 review the analyses done by the agencies.

11                   Transparency produces some very  
12 tangible benefits as well. The new approach reduces  
13 the potential for errors (whether of omission and/or  
14 commission) that have been observed in past responses  
15 to NHTSA's requests for information. The new approach  
16 more accurately, therefore, measures the incremental  
17 costs and benefits of the proposed standards. To the  
18 extent that improvements have been planned in  
19 anticipation of future increases in CAFE standards,  
20 they should not be in the baseline cost. They would be  
21 in the old process.

22                   Third, I wanted to comment on  
23 estimating impacts on indirect costs and retail prices  
24 in Section III.H.2 "Costs Associated with the Vehicle  
25 Program."

1                   My comments are in support of the  
2 indirect cost multipliers (ICM) used by EPA to account  
3 for indirect costs. As a subcontractor to RTI, I  
4 assisted EPA in developing the methodology used to  
5 estimate these multipliers and, also, retail price  
6 equivalent multipliers.

7                   The costs of complying with the  
8 proposed regulations should be defined to include only  
9 those costs that change due to the regulations. When  
10 compliance necessitates adding equipment to the  
11 vehicle, the compliance costs include direct  
12 manufacturing costs associated with new technology,  
13 (materials and direct production labor) plus the change  
14 in those indirect cost items that are affected, (for  
15 example, engineering development cost).

16                   In most cases direct costs can be  
17 estimated without difficulty and controversy. However,  
18 indirect costs are more difficult to estimate and have  
19 been the subject of considerable controversy. The  
20 methodology guides EPA analysts in identifying indirect  
21 costs that are likely to be affected by regulations.  
22 The methodology is supported by estimates of RPE,  
23 retail price equivalent, and indirect cost multipliers  
24 for several automakers that we derived from recent  
25 annual financial reports and other public data.

1                   The EPA uses a range of indirect  
2 cost multipliers, depending on the timing of the  
3 application of the regulation and the complexity of the  
4 technology that is anticipated to be necessary.  
5 Multipliers that they are proposing range from 1.11 to  
6 1.64 in the short term and 1.07 to 1.39 in the long  
7 term. In the ICM, the numerator is direct plus  
8 indirect cost, and the denominator is direct cost. The  
9 RPE adds profit to the numerator, so the RPE is greater  
10 than the ICM. It has been argued that regulatory  
11 agencies should use a Retail Price Equivalent  
12 multiplier that's greater than 2.0, and so I wanted to  
13 comment on that, that would imply an indirect cost  
14 multiplier of about 1.9 or higher.

15                   To answer the question of whether an  
16 RPE of 2.00 is reasonable, consider GM's financial  
17 results for 2004-08. GM is a simple case to study,  
18 because it provides information beyond what the other  
19 automakers do on contribution costs in addition to the  
20 standard information on cost of sales. And  
21 contribution costs are much closer to direct costs than  
22 are cost of sales.

23                   Using this approach, GM's Retail  
24 Price Equivalent multipliers for 2004-08 range from  
25 1.44 to 1.50 using reported sales and costs. If GM had

1 earned profits of 5 percent in these years, instead of  
2 the actual losses it incurred, the multipliers would  
3 range from 1.5 to 1.58. In either case, GM's RPE  
4 multipliers are substantially lower than 2.00.

5                   The indirect cost multipliers that  
6 EPA uses in the preliminary rule give sensible and  
7 fact-based guidance on how indirect costs ought to be  
8 estimated.

9                   Finally, with regard to measuring  
10 private and public welfare impacts, I will address  
11 interagency comments that are in the document received  
12 prior to the publication of the NPRM in the Federal  
13 Register, in the form of a suggested rewrite of  
14 Section III.H, and more details are in my written  
15 submission.

16                   In evaluating the proposed  
17 regulations, the benefits and costs of the regulation  
18 must be measured against the baseline. The rewrite  
19 suggests that the baseline should be "perfectly  
20 competitive markets and perfect consumer foresight."  
21 However, according to the OMB's guidelines for economic  
22 analysis of regulations, the baseline should be the  
23 "best assessment of the way the world would look absent  
24 the proposed regulation."

25                   Perfectly competitive markets and

1 perfect consumer foresight do not describe the way the  
2 world looks today and are highly unlikely to describe  
3 the way the world would look in the future -- with or  
4 without the proposed GHG and CAFE standards.

5                   Market failure can arise from  
6 externalities, market power, and inadequate or  
7 asymmetric information. And, like any market, the  
8 "market" for clean fuel-efficient motor vehicles has  
9 many conditions necessary for market failure.

10                   The most significant are inadequate  
11 information about the future and limitations in human  
12 rationality. Neither consumers nor automakers possess  
13 perfect foresight and perfect rationality in making  
14 decisions. Calculations of welfare loss that are based  
15 on subjective consumer valuation are always  
16 problematic -- they are difficult to estimate and  
17 difficult to justify. Using the perfect market  
18 populated by perfect producers and perfect consumers as  
19 the baseline against which gains and losses are  
20 assessed assumes that the status quo is the perfect  
21 market.

22                   The rewrite states: "This intuition  
23 behind this conclusion is best captured by the  
24 recognition that automobile companies currently sell  
25 vehicles that already comply with the standards set

1 forth in this rule -- yet many consumers choose not to  
2 purchase these vehicles."

3                   First, while some companies may make  
4 some meet some of the targets, it's targets, not  
5 standards that are set vehicle by vehicle, that  
6 consumers are not buying some of these vehicles does  
7 not mean they are doing so because they do not care  
8 about fuel economy. There are a host of other factors  
9 involved.

10                   Second, setting the baseline as the  
11 perfectly competitive market populated by consumers and  
12 firms with perfect foresight, and then "concluding"  
13 that GHG emission regulations result in private welfare  
14 loss is an example of rhetorical tautology. The  
15 conclusion is already present in the assumption.

16                   I appreciate the opportunity to  
17 provide testify today and would be happy to take  
18 questions. Thank you.

19                   MR. MEDFORD: Thank you, Dr.  
20 McManus. I'll ask my colleagues whether they have any  
21 questions they want to --

22                   MS. OGE: Mr. Robinson, given the  
23 importance of advance the technologies such as the Volt  
24 that the company is investing in the preamble of this  
25 proposed rule, we have outlined a set of questions,

1 associated with labeling advanced technology  
2 specifically hybrids and electric vehicles, and I think  
3 it will be very important for GM as well as other  
4 companies to provide us with your views and technical  
5 comments on that segment of the preamble because that  
6 will be very critical for the agencies as we're moving  
7 forward with a new regulatory efforts to address issues  
8 related to the fuel economy label.

9                   MR. ROBINSON: We appreciate that,  
10 and I can assure you you're going to get a lot of  
11 technical suggestions from us on how to look at that.  
12 I know how important an issue it is for the agency, for  
13 the American public really to understand how these  
14 things are being calculated and to make them relevant  
15 to purchase decisions in addition to complying with  
16 regulatory requirements that we're worried about.

17                   MS. OGE: Thank you.

18                   Ms Cischke, thank you for your  
19 testimony. You did mention a number of additional  
20 strategies that we potentially could evaluate under the  
21 Clean Air Act, and we appreciate your comments. As you  
22 are giving supplemental comments on this, it would be  
23 very important to help us understand two factors for  
24 this additional strategy. The two questions that we  
25 would like to be able to address, a minimal is one is

1 how do we go under the Clean Air Act legally justify  
2 the strategies, and, second and very important, how do  
3 we verify that indeed this standard is would provide  
4 ongoing greenhouse gas reductions that can be  
5 verifiable and enforceable, so would appreciate if you  
6 can help us out.

7 MS. CISCHKE: Thank you very much.  
8 I'd be happy to give further comments by November 27th.  
9 Just like to mention that what we are trying to  
10 quantify is that these facts especially for N2O and CH4  
11 are so minor, and yet the investment to putting in the  
12 facilities to do the long-term testing, that maybe  
13 there are ways like engineering attestation and just  
14 validating that we were controlling those without  
15 having to go through all the proof, but we'll go  
16 through all that with you. But it was just a minor  
17 aspect of it but it was one we felt we needed to  
18 comment on as well.

19 MS. OGE: Thank you.

20 Mr. Tonachel, I just had a  
21 clarification. I believe in one of your remarks we had  
22 three areas -- and under the windfall did you say that  
23 the CAFE standard is less stringent in 2010, 2009-2010  
24 than the California program or the other way around?

25 MR. TONACHEL: I mentioned that in

1 2009 the California program is less stringent.

2 MS. OGE: California.

3 MR. TONACHEL: Than the CAFE program  
4 and possibly for 2011. I think the NPRM also speaks to  
5 that issue.

6 MS. OGE: Thank you. No more  
7 questions.

8 MR. MEDFORD: We're all done. You  
9 have something, John?

10 MS. OGE: Thank you very much.

11 Now the second panel.

12 MS. OGE: Good morning. We'll start  
13 with Mr. Bartoli.

14 MR. BARTOLI: I'm Steve Bartoli,  
15 Chrysler Group, LLC, Vice-President of Regulatory  
16 Affairs and Engineering Planning. I'm very glad to be  
17 here this morning and appreciate the opportunity to  
18 comment today on the Environmental Protection Agency  
19 and the National Highway Traffic Safety  
20 Administration's proposal, national greenhouse gas and  
21 fuel economy rules. The proposed rules would increase  
22 energy security, reduce greenhouse gas emissions, and  
23 offer certainty for vehicle manufacturers.

24 We strongly believe at Chrysler  
25 Group that a single national fuel economy/greenhouse

1 gas program will place more clean and efficient  
2 vehicles on the road more quickly and at lower cost.  
3 Our resources are best utilized when applied to one  
4 single national standard versus differing state level  
5 fuel economy and greenhouse gas requirements. We  
6 support this form of regulation versus regulations that  
7 mandate specific technologies without regard to  
8 marketplace realities. Fleet average performance  
9 standards allow manufacturers to choose how they apply  
10 technologies to their product for maximum environmental  
11 benefit. While allowing the technology to evolve, the  
12 market forces it to work properly. We look forward to  
13 continuing these efforts beyond 2016 model year through  
14 a collaborative approach.

15                   We believe it's important to observe  
16 that the 2016 model year standard of 250 g/mi carbon  
17 dioxide or 35.5 mpg represent an historic and  
18 unprecedented challenge for our industry. Translating  
19 this into more easily understood terms, this is a 10  
20 mpg or 40 percent increase in the entire fleet's fuel  
21 economy from today's level within six years.

22                   Chrysler confirmed support for this  
23 historic program in the May 19th, 2009 White House  
24 ceremony with President Obama. Our current CEO, Sergio  
25 Marchionne is also the CEO of Fiat, the fuel economy

1 leader in Europe. He understands and endorses these  
2 commitments and is determined to implement the product  
3 actions necessary for Chrysler to meet those 2016  
4 standards. In fact, Chrysler and Fiat continue to  
5 progress towards those product actions, and work is  
6 already underway on developing new environmentally  
7 friendly, fuel-efficient, high quality vehicles that we  
8 intend to become the hallmark of Chrysler's product  
9 line.

10                               We have significantly revised our  
11 five-year plan to meet these new standards. Chrysler's  
12 compliance requires successful application of a broad  
13 range of technologies from advanced technology ICE all  
14 the way through electrification in an unprecedented  
15 time. This means that Chrysler's vehicles will adopt  
16 Fiat's world-class technology, platforms and  
17 powertrains for small and medium sized vehicles,  
18 allowing us to offer an expanded product lineup  
19 including environmentally friendly vehicles with these  
20 rules and, also, by increasing demand to consumers.

21                               One type of technology is multi-air  
22 technology, an electrohydraulic variable valve lift  
23 system for internal combustion engines. It controls  
24 air flow and combustion cylinder by cylinder, stroke by  
25 stroke, improving both fuel efficiency and performance

1 in our engines.

2 Chrysler is also working with the  
3 Department of Energy to improve the commercial  
4 viability of our plug-in hybrid programs through the  
5 electrification grant that we received earlier this  
6 year.

7 In addition to these steps that are  
8 primarily powertrain efficiency actions, Chrysler will  
9 also continue to lessen the vehicle energy demands  
10 through actions such as improved aerodynamics, reduced  
11 loading resistance, and also material substitution,  
12 lightweighting while maintaining overall strength and  
13 safety of our products.

14 Chrysler believes that reducing  
15 vehicle mass without reducing the size of the vehicle  
16 or the structural integrity is technically feasible in  
17 the rulemaking time frame on these products.

18 So far I've talked about the level  
19 of standards we've committed to achieve and how  
20 Chrysler plans to reduce them. However, we also  
21 believe that there are some opportunities in the  
22 proposed rules. I believe that improvements can be  
23 made consistent with the Clean Air Act and the Energy  
24 Policy Conservation Act as amended in 2007. Just a few  
25 examples this morning, the proposed rule increases the

1 standard between 2011 and 2012 very steeply. We've had  
2 some suggestions on how to smooth or ramp up to the  
3 2016 standard while maintaining the absolute level of  
4 2016 can be achieved.

5                   In addition, the proposed rule would  
6 apply in-use testing requirements to these standards.  
7 We would propose that EPA gather data on specific test  
8 plans and we're willing to work with EPA on those  
9 matters.

10                   As a final example of proposed rule  
11 temporary lead time allowance for small --  
12 manufacturers have some competitive impacts that we  
13 believe can be mitigated. On all these rules and other  
14 details, we will be submitting our comments in a timely  
15 fashion to the EPA and NHTSA, and Chrysler will  
16 continue to work cooperatively with the agencies and  
17 will provide written comments.

18                   In closing, like I said, we will  
19 continue to work with the administration, EPA and  
20 NHTSA, to ensure the success of this historic rule. We  
21 support the collaborative process and are very  
22 encouraged by it, led by the Federal Government, and we  
23 look forward to working together as we begin to set our  
24 sights beyond 2016, 2017, and beyond, as it continues  
25 its collaborative efforts. Thank you very much for

1 your time.

2 MS. OGE: Thank you very much.

3 Ms. Cooper, good morning.

4 MS. COOPER: Good morning. Thank  
5 you for the opportunity to be here. I'm Jo Cooper, and  
6 I am Group Vice-President of Public Policy and  
7 Government and Industry Affairs for Toyota Motor North  
8 America. It's a wonderful opportunity for us to be  
9 here with you in this hearing on the proposed language  
10 to establish Light-Duty Vehicle Greenhouse Gas  
11 Emissions Standards and Corporate Average Fuel Economy  
12 Standards, a very long name.

13 Last May Toyota Motor Sales'  
14 President, Jim Lentz, joined President Obama, Cabinet  
15 members, governors, and other CEOs and environmental  
16 leaders to support a commitment to establish one  
17 national program for fuel economy standards and  
18 greenhouse gas reductions from passenger cars and light  
19 trucks.

20 Toyota is committed to addressing  
21 climate change by increasing the fuel efficiency of our  
22 products, developing new markets for advanced vehicle  
23 technology, and reducing the greenhouse gas footprint  
24 from our manufacturing and distribution operations.

25 We welcome the development of a

1 single coordinated fuel economy and greenhouse gas  
2 standard. This agreement is something we have  
3 encouraged and sought for a very long time, and it is a  
4 landmark achievement for all of us. Without it, we  
5 would be subject to overlapping and in places  
6 conflicting regulations from two separate Federal  
7 agencies and over a dozen states. In exchange for  
8 eliminating the patchwork, we agreed to pull forward  
9 the ambitious fuel economy targets set by Congress for  
10 2020 to 2016.

11                   We applaud the efforts NHTSA and EPA  
12 have made to unify two programs under two quite  
13 different statutes, and to establish a completely new  
14 EPA program for motors vehicles. The proposed  
15 regulations appear to capture the key elements of our  
16 historic agreement, including the various compliance  
17 flexibilities that were integral to reaching a  
18 consensus. We therefore believe the proposal sets the  
19 stage for a successful final joint rulemaking that will  
20 provide certainty for our product planners and  
21 significant environmental and energy benefits for our  
22 nation and the world. We are now examining the details  
23 of this complex proposal, and to the extent that issues  
24 need to be clarified we will be submitting written  
25 comments.

1                   Make no mistake, meeting the overall  
2 fleet average of 35.5 mpg by 2016 will be a challenge  
3 for our engineers and product planners. It will  
4 require every ounce of their ingenuity and creativity.  
5 In the end, consumers will be the true beneficiaries of  
6 this program. A unified national program ensures  
7 American consumers will have the choice of vehicles  
8 they need and want, as well as the fuel efficiency and  
9 low emissions they expect, without the confusion of  
10 multiple standards. That's why the process of  
11 collaboration must continue beyond 2016 and we must  
12 continue to seek additional areas of harmonization  
13 between the two programs.

14                   Now I would like to step back and  
15 comment from a broader perspective just a moment. The  
16 fact that diverse groups could find common ground on  
17 these challenges is a notable example of how government  
18 and industry can -- and should -- work. It illustrates  
19 one of the cornerstones of how Toyota approaches public  
20 policy, by fostering partnerships, with government,  
21 universities, non-profits, and other companies. The  
22 other cornerstone is a long-range planning for and  
23 investing in the future. At Toyota, we don't stop at  
24 regulatory compliance nor do we wait for government  
25 regulation to address the challenges of tomorrow's

1 transportation.

2                   Our top public policy priority is  
3 sustainable mobility. That means building vehicles  
4 that meet customer needs and expectations, while also  
5 being safe, durable, and better for the environment.  
6 To minimize our environmental footprint, we are  
7 accelerating the roll-out of conventional hybrids  
8 across our entire vehicle lineup. In addition, we are  
9 pursuing hydrogen fuel cells, plug-in hybrids, pure  
10 electrics, and advanced batteries beyond lithium ion --  
11 all with the goal of overcoming the barriers that  
12 currently prevent their mass deployment.

13                   Sustainability mobility defines  
14 where we are today and where we plan to be in the  
15 future: We are the leader in fuel-efficient vehicles  
16 in the U.S. We are the leader in hybrid technology,  
17 having launched our first hybrid a dozen years ago and  
18 put more than 2 million in the worldwide market to  
19 date. We are bringing a plug-in, a pure EV, and other  
20 advanced technologies to market in the near future to  
21 complement our hybrid dominance. And we've already cut  
22 CO2 emissions and energy use from our manufacturing  
23 plants on a per vehicle produced basis by 19 percent  
24 since the year 2000. Just yesterday Toyota became the  
25 first car manufacturer to join the SmartGridCity in

1 Boulder, Colorado. 10 plug-in Prius hybrid electric  
2 vehicles will help teach us how to reduce carbon  
3 emissions and our dependence on foreign oil, while at  
4 the same time, not just meet, but exceed customer  
5 expectations.

6                   We believe it is important to keep  
7 in mind that the road to sustainable mobility is a long  
8 one, and it is not one, but actually two separate and  
9 distinct roads traveling in the same direction. One  
10 road is the path to compliance. The other is the path  
11 to market preparedness. One is constructed to meet the  
12 priorities of government regulation. The other is  
13 constructed to search out and respond to the specific  
14 needs and desires of the consumer.

15                   I believe we need both of these  
16 roads to arrive together in the same place to realize  
17 the goal of sustainable mobility.

18                   We look forward to working with EPA  
19 and with NHTSA as this momentous joint rulemaking is  
20 finalized.

21                   Thank you for this opportunity to  
22 express our views.

23                   MS. OGE: Thank you.

24                   Dr. Ross, good morning.

25                   DR. ROSS: I'm Mark Ross. I'm a

1 professor of physics at the University of Michigan. I  
2 am merely an individual. My focus is vehicle structure  
3 and driving safety. And I have three points. First,  
4 we need to be concerned with combined risk, the risk to  
5 the driver which is associated with a number of --  
6 historical number of driver deaths and any vehicle  
7 model under consideration, plus the number of deaths in  
8 vehicles that crash with vehicles of that model. And  
9 I'm saying that combined risk is a better variable to  
10 safety analysis than risk to the driver alone, because  
11 some vehicles are particularly aggressive.

12                   The second point are some general  
13 structural results. Truck-based vehicles tend to be  
14 aggressive, and car-based vehicles tend to be  
15 nonaggressive. I think that's not controversial.  
16 Inexpensive vehicles have tended not to be self-  
17 protected. Indeed, a few inexpensive vehicles have  
18 historically been very risky and had a strong influence  
19 on the overall appearance of risk.

20                   And, finally, even a little bit more  
21 controversial, there's a paradigm which I call the  
22 Kahane paradigm, that vehicle mass is the most  
23 important explanatory variable for crash safety.  
24 Vehicle mass, of course, is a convenient variable for  
25 statistical analysis of crash safety, but it is not the

1 most important explanatory variable.

2                   What we've been learning, those of  
3 us who study crash physics and the behavior of crashes  
4 and vehicle structure, is that intrusion is probably  
5 the most important safety variable, where intrusion  
6 means the change of vehicle shape which may occur in a  
7 crash.

8                   Now, it's a real difficulty, this is  
9 not obvious result, it's a difficult conclusion, it's  
10 obtained from detailed analysis of injuries, you have  
11 to study the injuries, and what we have, for example,  
12 at the University of Michigan and several other places,  
13 is CIREN Program, C-I-R-E-N, and it's one of several  
14 ways that one can learn about the patterns of injury,  
15 but it's a difficult subject, it doesn't have easy  
16 conclusions, but the result is, I want to repeat the  
17 result -- is that vehicle mass is not the most  
18 important variable to explain injuries. A much better  
19 variable, for example, more research is needed, but,  
20 for example, a much better variable is intrusion which  
21 occurs in a crash. So I hope that -- I simply hope  
22 that we can discuss these issues and not come to sort  
23 of trivial conclusions about the role of mass in  
24 vehicle safety. Thank you.

25                   MS. OGE: Thank you.

1                   Mr. German, good morning.

2                   MR. GERMAN: Morning. John German.

3 I'm a senior fellow and program director at the  
4 International Council on Clean Transportation. I'm  
5 happy to be here to present comments on behalf of ICCT.

6                   At the risk of sounding pompous,  
7 ICCT is the preeminent worldwide organization on  
8 transportation emissions and efficiency. We have broad  
9 expertise in all transportation areas, and we exist to  
10 help regulatory agencies worldwide reduce air quality  
11 pollutants and greenhouse gas emissions. So from our  
12 international perspective, U.S. policies on  
13 transportation have been rather embarrassing. Our fuel  
14 taxes are amongst the lowest in the world, we have  
15 greatly lagged Europe and Japan in establishing  
16 efficiency standards. This proposed rule takes a giant  
17 step towards catching up and will enhance U.S.  
18 credibility worldwide.

19                   We applaud EPA and NHTSA along with  
20 California, the administration, and vehicle  
21 manufacturers for taking the first steps along the road  
22 to a sustainable transportation system. Of course, it  
23 is essential to continue this process in the future.  
24 Long-term goals need to be set so that manufacturers  
25 have consistent long-term signals to help them develop

1 future technologies and product plans. This is  
2 especially important in the context of the recession  
3 with companies reorganizing and investment dollars in  
4 short supply.

5 I offer several comments here on the  
6 proposed program structure, vehicle safety, and  
7 suggested program improvements.

8 The technical analyses conducted by  
9 EPA and NHTSA are sound and demonstrate that proposed  
10 standards are feasible and the benefits of the rule far  
11 outweigh the costs. The analytical perimeter also  
12 provides a good base for further reductions in fuel  
13 consumption and greenhouse gas emissions beyond 2016.

14 We commend EPA and NHTSA for  
15 proposing a footprint based adjustment to the CAFE  
16 standards instead of weight based adjustments.  
17 Footprint based adjustments fully encourage  
18 manufacturers to introduce lightweight materials, which  
19 can improve vehicle efficiency by 20 percent or more in  
20 the long run. Lightweight materials also extend the  
21 electric drive range of electric and plug-in vehicles  
22 by a similar amount.

23 This is one area where the U.S. is  
24 ahead of the rest of the world. Japan, Europe, and  
25 China have all adopted standards with weight-based

1 adjustments that discourage the use of lightweight  
2 materials. NHTSA pioneered the footprint concept with  
3 the 2011 Light Truck Rule, and we urge EPA and NHTSA to  
4 continue its use in the future.

5                   We also support the proposed change  
6 to the shape of the footprint adjustments. Target  
7 standards versus the vehicle footprint provide  
8 consistent signals to improve efficiency for most  
9 vehicles while preserving incentives to make the  
10 largest vehicles smaller.

11                   ICCT is concerned that the safety  
12 impacts of lighter materials are not being properly  
13 analyzed in the rulemaking. The 2003 Kahane study  
14 relied upon by NHTSA for safety analysis was an  
15 excellent study. However, it explicitly assumed that  
16 size and weight are inseparable. Thus, it did not  
17 analyze weight effects but, rather, the effect of  
18 weight and all correlated size effects. The footprint  
19 basis for this regulation encourages lighter vehicle  
20 construction but not smaller vehicles. The Kahane  
21 study is a great tool for evaluating the safety impacts  
22 of downsized vehicles, but it does not even attempt to  
23 analyze the safety impact of lighter vehicles of the  
24 same size. It is simply the wrong tool for assessing  
25 the safety impact of lightweight materials.

1 Fortunately there are existing studies that address the  
2 independent effects of size and weight on fatalities.  
3 Dynamic Research, Incorporated has done three major  
4 state-of-the-art reports on the separate effects of  
5 size and weight. The reports cover multiple scenarios  
6 using different vehicle model years, different vehicle  
7 types, and different statistical formulations. While  
8 the magnitude of the size and weight effects varied, in  
9 every single case DRI found that reducing vehicle  
10 weight while holding the footprint constant reduced  
11 fatalities. Let me say that again. It's not that it  
12 somehow mitigated some of the fatality increases, but  
13 reducing weight while holding the footprint concept  
14 actually reduced fatalities. These results are  
15 supported by theory as the use of light-weight  
16 materials reduces crash forces while maintaining crush  
17 space and interior room. Lighter vehicles also brake  
18 and handle slightly better, possibly reducing the  
19 number and severity of crashes.

20                   Assessing the independent effects of  
21 size and weight is not easy as both size and weight  
22 actually have minor effects on fatalities compared to  
23 driver behavior, road conditions, vehicle safety,  
24 design, and vehicle compatibility. Thus, it is  
25 appropriate to critique the DRI's work and to suggest

1 ways to improve their analysis. At least DRI applied  
2 the proper analytical structure. We need to focus on  
3 doing the best analysis possible to the safety impacts  
4 of light-weight materials and a footprint basis. This  
5 means dismissing models that do not separate size and  
6 weight effects, addressing any possible shortcomings in  
7 the DRI work and conducting new analyses of the  
8 independent size and weight.

9                   Of course, like all great unfinished  
10 works, improvements can always be made. ICCT has three  
11 suggestions for ways to improve the effectiveness of  
12 the rules.

13                   First, the proposed rule maintains  
14 separate footprint curves for cars and light trucks.  
15 This subjects light trucks with the same footprint to  
16 much less stringent standards and gives manufacturers a  
17 tremendous incentive to reclassify cars as light  
18 trucks. In the past this has brought us such notable  
19 trucks as the Subaru Outback, Chrysler P.T. Cruiser,  
20 Dodge Magnum, Mazda 5, Porsche and BMW X6, BMW  
21 describes as a sports activity coupe.

22                   In the future it is likely to cause  
23 manufacturers to drop many 2-wheel drive versions of  
24 their small sport utilities and make less efficient  
25 4-wheel drive versions standard so that they can be

1 classified as light trucks instead of cars. Each car  
2 to light truck sales shift results in easier compliance  
3 for manufacturers but higher in use fuel consumption  
4 and greenhouse gas emissions in use.

5                   EPA recognized the importance of  
6 this issue when it established a single tier 2  
7 emissions standard that applied to all cars and light  
8 trucks. It is time to do the same for fuel efficiency  
9 and greenhouse gas emissions and end this artificial  
10 distinction. A single footprint function will still  
11 give larger trucks a less stringent target while  
12 avoiding vehicle classification games.

13                   Second, the proposed provision to  
14 assign zero carbon emissions to electric only  
15 operations distorts the compliance system. ICCT was  
16 founded around the Bellagio Principles which are set  
17 forth by principal regulators around the world in 2001.  
18 This was a consensus document on preferred government  
19 policies for shaping the future of motor vehicle  
20 technology and transportation fuels worldwide.

21                   The second Bellagio Principle states  
22 base policy solely on performance compared to societal  
23 objectives and not give special consideration to  
24 specific fuels, technologies, or vehicle types.

25                   In keeping with this principle, we

1 request that the best estimate of national average  
2 carbon emissions for power plant be used for  
3 calculation of carbon emissions for vehicle  
4 electrification.

5                   Our final suggestion is for the rule  
6 to include all greenhouse gas emissions from vehicles,  
7 specifically the greenhouse gas standards should also  
8 include non CO2 climate forcing agents such as black  
9 carbon. Black carbon is a powerful radiative forcer  
10 and reducing its emissions can provide fast climate  
11 response due to a short lifetime of days to weeks.  
12 Response of CO2 reduction while essential is much more  
13 sluggish due to its long atmospheric life.

14                   In closing, the ultimate goal is to  
15 create a sustainable transportation system, both for  
16 energy and global warming. Although this will take  
17 decades to accomplish, NHTSA and EPA have taken a major  
18 first step. ICCT looks forward to working with  
19 everyone involved, including Federal and State agencies  
20 and vehicle manufacturers to help shape the best  
21 policies and programs to meet our energy security  
22 climate change and -- Thank you.

23                   MS. OGE: Thank you.

24                   Ms. Vinyard, good morning.

25                   MS. VINYARD: Morning. My name is

1 Shelley Vinyard, and I am the Environmental Associate  
2 at Environment Michigan. Environment Michigan is a  
3 citizen-based, nonprofit environmental advocacy group.  
4 We are part of Environment America, a federation of  
5 state environmental advocacy groups that has been very  
6 active in advancing clean cars policies in the states  
7 and at the Federal level.

8 I appreciate the opportunity to  
9 testify today. The administration deserves great  
10 credit for taking this historic step to cut global  
11 warming pollution, make America more energy  
12 independent, and help make Detroit a leader in clean  
13 vehicle technology. We applaud the administration's  
14 overall effort and your individual contributions.

15 I'll make three main points in my  
16 testimony. First, oil dependence and global warming  
17 are urgent and interrelated problems that demand bold  
18 policy solutions. Second, this proposal is a good  
19 first step but must be strengthened to meet President  
20 Obama's goals for reducing pollution and saving oil.  
21 And, third, the proposal is evidence that the Clean Air  
22 Act works in addressing global warming pollution.

23 America is at an energy crossroad.  
24 As a nation, we are heavily reliant on oil and other  
25 fossil fuels at a time of growing demand and dwindling

1 supply. Our dependence on fossil fuels continues to  
2 impose massive environmental, economic, and security  
3 costs. Now our country must choose between paying to  
4 continue the status quo and investing in a clean energy  
5 future.

6                   America spends nearly \$1 billion  
7 each day importing oil. Those funds are a direct  
8 transfer of wealth from America's pocketbooks to oil  
9 companies and foreign governments. These figures do not  
10 include the untold damages to our environment, health,  
11 and security resulting from the production and use of  
12 oil. A report released this week by the National  
13 Academies of Sciences quantifies just a portion of  
14 these damages; it estimated that energy use in motor  
15 vehicles produced \$56 billion in health and other  
16 nonclimate-related damages in 2005 alone.

17                   Light-duty vehicles alone account  
18 for about 40 percent of all U.S. oil consumption.

19                   At the same time, pollution from the  
20 production and use of oil is a leading source of air  
21 pollution, water pollution from spills, and global  
22 warming pollution.

23                   With respect to global warming, the  
24 impacts on human and natural systems are now being  
25 observed nearly everywhere. In 2007, the Nobel Prize-

1 winning U.N. Intergovernmental Panel on Climate Change  
2 predicted serious risks and damages to livelihoods,  
3 human infrastructure, societies, species, and  
4 ecosystems unless future warming is substantially  
5 reduced. So far this decade emissions, warming, and  
6 impacts, such as ice melt and sea level rise, have all  
7 been at the upper end of IPCC projections.

8                   To meet the challenge of global  
9 warming, we must transform the ways America and the  
10 rest of the world produce and use energy, achieving  
11 dramatic improvements in the efficiency with which we  
12 use energy in our vehicles, homes, and businesses and  
13 moving to clean, renewable energy, such as wind solar  
14 power.

15                   This challenge also brings enormous  
16 opportunity. Vastly improving the efficiency of our  
17 economy and moving to renewable energy will reduce our  
18 dependence on oil, help revive our economy, and create  
19 millions of green-collar jobs in many fields, including  
20 in the auto industry.

21                   Mobile sources emitted more than 30  
22 percent of all U.S. global warming emissions in 2006  
23 and have been the fastest-growing source of U.S. global  
24 warming emissions since 1990. Light-duty vehicles are  
25 responsible for nearly 60 percent of all global warming

1 emissions from mobile sources.

2                   As a first step to address America's  
3 oil dependence and global warming, these proposed  
4 vehicles standards are a good beginning. The proposal  
5 will raise the fuel economy of the passenger vehicle  
6 fleet to an average of 34.1 by 2016, accelerating the  
7 goals in the 2007 energy bill by four years. In  
8 addition, the proposal sets the first-ever Federal  
9 standards to reduce global warming emissions from new  
10 passenger vehicles -- requiring a fleet average of  
11 250 grams carbon dioxide equivalent per mile in 2016.  
12 Importantly, these standards establish a foundation for  
13 more stringent standards in the future that will do  
14 even more to curb global warming and to wean the  
15 country from its dependence on oil.

16                   The proposal makes clear that auto  
17 manufacturers can meet these proposed standards by  
18 utilizing technologies that are already available  
19 today. Requiring the more widespread adoption of clean  
20 technologies will help spark the technology innovation  
21 necessary for automakers to successfully compete in the  
22 global economy and thereby contribute to a strong local  
23 and domestic economy.

24                   Yet we remain concerned about some  
25 of the details of the proposal. In his Rose Garden

1 speech announcing the new standards in May, President  
2 Obama said the rule will cut global warming pollution  
3 by 950 million metric tons and save 1.8 billion barrels  
4 of over the lifetime of vehicles sold from 2012 to  
5 2016. But the proposed standards include excessive  
6 credits and unnecessary flexibilities that make it  
7 unlikely that the President's goals will be achieved.

8 Credits for air conditioning have  
9 already allowed the Department of Transportation to set  
10 a fuel economy standard of 34.1 mpg, lower than the  
11 President's goal of 35.5 miles per gallon. The  
12 administration should not further weaken the program by  
13 allowing automakers to rack up unnecessary credits and  
14 comply with the standards without building more  
15 efficient vehicles.

16 Specifically, we're concerned that  
17 the proposed standards allow automakers to rack up  
18 credits for new vehicles sold from 2009-2011 that  
19 exceed existing standards. These are vehicles that had  
20 been planned years before these new standards were  
21 announced. Automakers should not be given windfall  
22 credits for cars that were already in the pipeline.

23 Second, we're concerned that  
24 electric vehicles will be given lavish credits that  
25 will undercut the actions automakers must take to

1 reduce emissions from the rest of their fleet. The  
2 proposal ignores the very real emissions that result  
3 when electric vehicles are charged with electricity  
4 that is often generated from coal and natural gas.

5                   In addition to addressing these  
6 specific issues, we urge you to include a backstop in  
7 the program that will ensure that the program meets the  
8 President's goals for reducing pollution and saving  
9 oil.

10                   Finally, I want to point out that  
11 this proposal is strong evidence that the Clean Air Act  
12 is effective in addressing global warming pollution  
13 from vehicles.

14                   The Clean Air Act allows California  
15 to set auto emission standards that are stronger than  
16 Federal standards and other states to adopt  
17 California's auto emission standards. Over the last 40  
18 years, California has consistently demonstrated  
19 leadership in developing and implementing standards to  
20 curb pollution from motor vehicles, as is the case with  
21 the state's first-of-their-kind standards to reduce  
22 global warming emissions from new vehicles.

23                   Thirteen other states and the  
24 District of Columbia adopted these California standards  
25 representing about 40 percent of the light-duty market.

1 And the states' program gave rise to the proposal that  
2 is before us today.

3                   We applaud the states that  
4 spearheaded the drive for cleaner cars. We wouldn't be  
5 here today if it weren't for their trailblazing efforts  
6 to reduce our oil dependence and curb global warming.

7                   This process worked for conventional  
8 pollutants, and it works for the pollutants that are  
9 fueling global warming.

10                   In closing, we commend the  
11 administration for proposing these historic standards  
12 to reduce global warming pollution, make America more  
13 energy independent, and help our country regain its  
14 edge as a technology leader. We urge you to strengthen  
15 and finalize the rule.

16                   Thank you for the opportunity to  
17 participate in these proceedings.

18                   MS. OGE: Thank you.

19                   Mr. Krupitzer, good morning.

20                   MR. KRUPITZER: My name is Ron  
21 Krupitzer. I'm vice-president of the automotive  
22 applications for American Iron and Steel Institute.  
23 Our office is in Southfield, Michigan. Our  
24 headquarters in Washington D.C. I would like to thank  
25 the EPA and NHTSA for holding this hearing today and

1 for allowing me to testify in this public forum. On  
2 behalf of the AISI, I am pleased to offer comments to  
3 this committee on the significant and relevant work  
4 underway between domestic steel and automotive  
5 companies to improve vehicle emissions performance.

6                   Steel is the basis for modern  
7 vehicles in the U.S. and around the world. Recent  
8 studies over the last three years have found that the  
9 average light vehicle in North America contains about  
10 60 percent steel. Our goal, of course, in the steel  
11 industry is to keep steel in the vehicle, to preserve  
12 and grow this vital market. Let me explain why this  
13 steel industry objective supports the goals of EPA and  
14 NHTSA; that is, why steel technology helps to reduce  
15 emissions associated with vehicles.

16                   I would like to make three points  
17 today. One on reinventing steel, one on the importance  
18 of collaboration, and the third on steel's greenness  
19 as measured by lifecycle analysis.

20                   Now, first, the steel industry has  
21 reinvented its automotive steel products in the past  
22 and must continue to do so in the future if it is to  
23 continue to provide safe, practical and affordable  
24 means of reducing vehicle mass, which leads to  
25 emissions reductions. For example, in my experience

1 working in programs with GM, Ford, and Chrysler as well  
2 as the new North American domestics including Toyota,  
3 Honda, Nissan, Hyundai, BMW, Mercedes and others, I can  
4 tell you that all of these companies, which do  
5 manufacture vehicles in North America, make use of  
6 state-of-the-art high-strength steel grades  
7 manufactured by domestic steel mills. Now, this  
8 proposed rule on light-duty vehicle emissions clearly  
9 reports the consensus by EPA and NHTSA that reducing  
10 vehicle weight is an effective part of the overall  
11 strategy for meeting the proposed emissions and fuel  
12 economy standards. EPA further has asked for comment  
13 on its conclusion that it is "technically feasible to  
14 reduce vehicle weight without reducing vehicle size or  
15 footprint or structural strength." I would like to say  
16 that AISI does agree with this statement since that is  
17 exactly what is accomplished by the effective use of  
18 advanced high-strength steels or "AHSS." And I will  
19 explain this a little further.

20                   These new steels have helped  
21 carmakers to achieve 5-star crash ratings in their  
22 latest models without increasing vehicle mass. This is  
23 consistent with EPA comments written in the Weight  
24 Reduction and Vehicle Safety Draft on the Regulatory  
25 Impact Analysis, talking mainly by reducing vehicle

1 mass and including comments like the substitution of  
2 lower density and/or higher strength materials -- going  
3 on to explain that including high-strength steels,  
4 aluminum, magnesium, or composite materials for  
5 components currently fabricated from mild steels. In  
6 fact, it is these AHSS grades in today's cars and  
7 trucks, and their growth over the last 10 years, that  
8 have made steel bodies and chassis components  
9 considerably stronger and lighter, and more crashworthy  
10 than ever before. Such grades include "dual phase" and  
11 "TRIP" steels, grades that are new to these -- these  
12 new grades now add up to about 15 percent of the  
13 average vehicle, new vehicle now made in the U.S., and  
14 are the fastest growing materials, by the way, in  
15 today's vehicles. These materials have already proven  
16 to reduce the mass of body structures by up to 25  
17 percent or even more in some cases, and can do this  
18 more affordably than any other materials considered for  
19 mass reduction. AISI believes there is more weight  
20 savings to be gained by further using these materials  
21 in future vehicles.

22 My second point has to do with  
23 collaboration. AISI believes collaboration is  
24 essential for both the steel and automotive industries  
25 to move forward and implement the technologies that

1 drive down emissions. Our partnering together is well  
2 known for achieving productive results. In 1987, the  
3 Auto/Steel Partnership was formed with Chrysler, Ford,  
4 and General Motors, and the major domestic steel mills  
5 and still operates today. In the 1990s the domestic  
6 steel companies organized with a global consortium to  
7 form the ULSAB-ARV and Ultra-Light Steel Auto Body,  
8 consortium of those groups, that released a study that  
9 showed the power of advanced computer-aided design or  
10 CAE analysis coupled with advanced high strength steels  
11 could lead to weight reduction, mass reduction, and  
12 safe and fuel efficient vehicles.

13                   One case study done by the Auto/  
14 Steel Partnership examined mass reduction and safety  
15 together and did this with folks on the vehicle front  
16 rails, an important load path in determining vehicle  
17 crash performance. Before ULSAB -- these rails were  
18 mainly made of mild steel. After that study on ultra  
19 light vehicles was released with the help of the  
20 Auto/Steel Partnership project re-engineering the front  
21 rails, almost all front rails today in vehicles have  
22 been converted to advanced high strength steel, AHSS.  
23 The project, in fact, demonstrated that front rails can  
24 be built 25 percent lighter with AHSS and absorb the  
25 same crash energy. This was engineered on the

1 computer, of course, and validated, though, with actual  
2 frontal crash tests.

3                   My third point is that steel is a  
4 green material, in fact, greener than most people  
5 think, particularly with respect to the emissions  
6 associated with every phase of a vehicle's life. For  
7 example, did you know that steel has a much lower  
8 energy content per ton and energy intensity and less  
9 CO2 emissions, therefore, than most other automotive  
10 structural materials? This is particularly important  
11 in containing emissions in the manufacture of vehicles.

12                   For example: If you compared steel  
13 to aluminum, you'd find that aluminum has over 8 times  
14 the energy intensive, magnesium 7 to 14 times, and  
15 carbon fiber over 10 times the energy intensity of  
16 steel. Additionally, our domestic steel mills have the  
17 lowest energy intensity per ton produced of any steel  
18 sector in the world and the domestic industry has  
19 reduced its energy intensity by 33 percent by  
20 improvements in steel making from 1990 to 2007.

21                   Finally, steel is really the most  
22 recycled material in the world and averages 97 percent  
23 recycling rate, and that's the tons of automotive steel  
24 recycled divided by the tons used to make new cars and  
25 trucks each year, and has done that for the last 20

1 years. This is really why steel has such extremely low  
2 emissions when the full life cycle of the automotive  
3 products are considered.

4                   Therefore, let's consider really how  
5 steel contributes to emissions in three ways. In fact,  
6 through the manufacturing phase because of its low  
7 energy emissions, in use phase because of its ability  
8 to reduce mass, and at the end-of-life because of its  
9 high recycling rate.

10                   So in conclusion, the steel industry  
11 has a rich and productive history of working with its  
12 automotive customers over the years towards objectives  
13 like mass reduction and safety -- objectives which I  
14 believe are fully consistent with those of EPA and  
15 NHTSA. Even in these very difficult times, I can  
16 report to you that our collaborative work is going  
17 strong, mainly because we are working on important  
18 issues for future vehicles which will lead to vehicle  
19 emissions reductions. AISI recommends that there be  
20 serious consideration given to the LCA or life cycle  
21 performance of materials in the manufacturing of light  
22 vehicles in the future, mainly I mean beyond 2016. We  
23 should evaluate possible credits or allowances for  
24 those materials which provide bona fide reduction s in  
25 emissions over a vehicle's full life. In this way all

1 factors will be considered towards the goal of  
2 continuous reduction of vehicle emissions. Thank you.

3 MS. OGE: Thank you. I want to  
4 thank the panel. Do we have any questions?

5 MR. MEDFORD: I'd like to thank the  
6 panel, too. Thank you for your testimony today.

7 Dr. Ross, I just have one quick  
8 request. Thank you for your testimony today. It's  
9 very interesting and important to us regarding the  
10 intrusion versus mass discussion that you had. We  
11 would ask that you submit whatever analyses you've done  
12 to support your position to the docket. Thanks for  
13 your comments.

14 MS. OGE: And I have one question  
15 for Mr. German. Again, thank you for your testimony.  
16 You made a reference of the concerns that ICCT has for  
17 the existing analysis that we have in the joint  
18 proposal for safety. Also, you mentioned the DRI  
19 standard. I wasn't certain if you are suggesting that  
20 we should consider the DRI standard, ICC doing  
21 something different, or are you suggesting that the  
22 agencies take a look at this history by evaluating some  
23 kind beyond the work that you have referenced in your  
24 testimony. All of the above?

25 MR. GERMAN: I wasn't clear about

1 that. We're certainly suggesting that more work needs  
2 to be done on safety analyses and needs to be done  
3 specifically looking at the separate effects of size  
4 and weight, and an easy first step would be to update  
5 the DRI analyses with more recent safety data, respond  
6 to some criticisms from NHTSA, make sure that they're  
7 doing things properly, but we would also like to see  
8 NHTSA itself embark on a new model that would try to  
9 look at separate facts. And I think we'd be supportive  
10 of any and all efforts in this area, just to try to  
11 figure out the best way to --

12 MS. OGE: Great. Thank you. Again,  
13 thank you for testifying.

14 Start with the next panel.

15 MR. MEDFORD: We'll take a 10-  
16 minute break at this time.

17 (A short recess was taken)

18 MR. MEDFORD: We'd like to welcome  
19 the third panel.

20 MR. KRAFCIK: Good morning. I'm  
21 John Krafcik. I am the President and CEO of Hyundai  
22 Motor America. Improvement in economy and control of  
23 greenhouse gases are very important issues to Hyundai.  
24 On behalf of Hyundai, we're delighted to come here and  
25 happy to participate in the process.

1                   So in 2008 our company recognized  
2 California for beginning a critical national debate on  
3 fuel economy and greenhouses gas policy. Moreover, we  
4 supported early implementation of NHTSA's then 2020  
5 fleet fuel economy target under the 2007 Energy  
6 Independence and Security Act. That same year we  
7 became the first automaker to pledge to achieve 35 mpg  
8 by 2015. Our goal is now to become the industry's fuel  
9 economy leader propelled by what we call our "blue  
10 drive" initiative. We will accomplish this with  
11 hundreds of incremental fuel economy improvements.  
12 Hyundai will be introducing our very first hybrid next  
13 year with the industry's first application of a third  
14 generation lithium polymer battery technology.  
15 However, while we're really proud of this hybrid  
16 technology, at least for now hybrids won't be a  
17 significant part of our lineup because of the reality  
18 of the cost challenges associated.

19                   Hyundai applauds the joint NHTSA/EPA  
20 ruling. It represents unprecedented regulatory  
21 cooperation between the Federal and State agencies. It  
22 seeks a national solution for reducing greenhouse gas  
23 emissions, and it works for a global solution in  
24 addressing climate change.

25                   The unified program allows

1 manufacturers to develop a concerted cost effective  
2 approach, and the employment of advanced technologies.  
3 We believe that a single National Program is the most  
4 efficient and practical approach now and in the future.  
5 We strongly encourage dialogue between EPA, NHTSA, and  
6 California on the creation of post 2016 model year  
7 national standards, and we look forward to  
8 participating in those discussions.

9                   Now, moving on to some of the  
10 specifics in this proposal, let me address the subject  
11 of intermediate environmental factors. Now, as many  
12 are aware, Hyundai would not be subject to the  
13 California GHG regulations through the 2016 model year.  
14 The EPA proposal does not provide us with this same  
15 relief, but, nonetheless, we support EPA's proposal as  
16 it is consistent with our blue drive initiative and our  
17 overall corporate responsibilities to address fuel  
18 efficiency, energy security, and environment.

19                   Hyundai is pleased that EPA had the  
20 foresight to include mechanisms for various forms of  
21 compliance flexibility outlined in the joint proposal,  
22 including trade transfers and trading and credits for  
23 advanced technology. These are critical to provide a  
24 cost-effective means of achieving the standards. More  
25 specifically, we support the proposed credit carry-

1 forward and carry-back time periods under both the EPA  
2 and NHTSA programs.

3                   In addition, we would support  
4 expanding the carry-over provisions under the GHG  
5 program to include a phase-out or discounting of  
6 credits after the five-year period. This practice was  
7 permitted under the California regulations and would  
8 have provided further compliance flexibility.

9                   Now, we support EPA's regulatory  
10 plan to begin verification of an actual use of  
11 alternative fuels such as E85 starting with model year  
12 2016. We believe there should be a correlation between  
13 real world alternate fuel use and available credits.  
14 We also believe that the CAFE flexible fuel credit  
15 calculation currently overstates real world use of  
16 alternative fuels. However, we understand that this is  
17 a statutorily prescribed calculation right now.

18                   Finally, Hyundai supports a  
19 pragmatic government role in accelerated market demand  
20 for fuel efficient vehicles. Consumer incentives can  
21 have the ability to stimulate advanced technologies  
22 even beyond what the CAFE GHG regulations would  
23 require. Under the purview of EPA or NHTSA, Hyundai  
24 supports incentives such as tax credits or rebates for  
25 the purchase of fuel efficient vehicles.

1 Alternatively, a flexible gasoline tax that maintains a  
2 more stable pricing structure has the potential to ease  
3 uncertainty about fuel prices and would stimulate sales  
4 of fuel efficient vehicles. Of course, in addition to  
5 these verbal comments, we will submit written comments  
6 addressing details addressed in the NHTSA/EPA proposal.  
7 And, again, we really appreciate the opportunity to  
8 address the panel. And we look forward to being a part  
9 of the dialogue in the future.

10 MR. MEDFORD: Thank you.

11 And Ms. Becker.

12 MS. BECKER: My name is Julie  
13 Becker. I'm Vice President, Environmental Affairs for  
14 the Alliance of Automobile Manufacturers. The Alliance  
15 is an association of 11 vehicle manufacturers including  
16 BMW Group, Chrysler Group LLC, Ford Motor Company,  
17 General Motors, Jaguar, Land Rover, Mazda,  
18 Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota,  
19 and Volkswagen.

20 The Alliance and its members are  
21 committed to developing and implementing policies that  
22 enable the introduction of new technologies needed to  
23 support sustainable mobility and to doing our part to  
24 help address climate change. We believe the best way  
25 to achieve this is to initiate and leverage consensus-

1 oriented dialogue with industry, Federal and state  
2 governments, and other stakeholders to address shared  
3 objectives, both domestically and internationally.  
4 Today's hearing is the result of one such dialogue.

5                   We want to thank EPA and NHTSA for  
6 the opportunity to comment today, and for the  
7 dedication and teamwork that it took to put this  
8 complex joint rulemaking together. While this proposal  
9 covers model years 2012-2016, we agree with EPA and  
10 NHTSA that it is important to create a strong  
11 coordinated National Program that continues to provide  
12 a national standard for light-duty vehicles in model  
13 years beyond 2016. This is a key to reducing the  
14 impact of vehicle greenhouse gases on our global  
15 climate.

16                   The proposal provides manufacturers  
17 with a roadmap for meeting significant increases for  
18 model years 2012-2016. It calls for an increase in the  
19 average fuel economy in new vehicles by 40 percent to a  
20 combined 35.5 miles per gallon. As EPA and NHTSA have  
21 stated, final rulemaking prior to April 2010 is  
22 essential to providing manufacturers with the certainty  
23 and lead time necessary to plan for the future and to  
24 cost effectively add new technology.

25                   The Alliance members are committed

1 to continuously improving fuel economy and thereby  
2 reducing our greenhouse gas emissions. In fact, the  
3 motor vehicle industry has committed to reduce  
4 greenhouse emissions more than any other sector of the  
5 U.S. economy. By the Agencies' own estimates, these  
6 new standards would lead to reductions of 62 billion  
7 gallons of fuel, or CO2 emissions totaling 656 million  
8 metric tons, during the useful lives of vehicles 2012 -  
9 2016 vehicles. The elements of the proposal before  
10 us -- a harmonized and coordinated National Program,  
11 attribute-based approach, the available compliance  
12 mechanisms and general implementation elements provide  
13 this industry with certainty and flexibility necessary  
14 for achieving ambitious reductions in greenhouse gases  
15 and significant savings in oil consumption proposed by  
16 the rule.

17                   In going forward to 2017 and beyond,  
18 this joint coordinated effort by EPA and NHTSA on a  
19 national plan is a process we endorse for the future  
20 well-being of the industry. It is important to include  
21 all key stakeholders including California and states  
22 adopting the California standards into this process. A  
23 goal for going beyond 2017 would be to achieve even  
24 greater harmonization between the EPA and NHTSA  
25 program. Already the auto industry is transforming

1 itself and reinventing the automobile. Automakers have  
2 made major investments into developing new fuel  
3 efficient technologies, and the results are continuing  
4 to show in the marketplace. More than 50 technologies  
5 offered in vehicles for sale today reduce emissions,  
6 increase mileage, and allow these vehicles to run on  
7 cleaner fuels. Today consumers can buy more than 130  
8 models that achieve 30 mpg or more on the highway, and  
9 they can choose from more than 27 models of hybrids and  
10 8 models of clean diesels.

11                   As we stated in our May 18th letter  
12 of commitment, the Alliance fully supports the adoption  
13 of a National Program to address both greenhouse gases  
14 and fuel economy, and further we commend the Federal  
15 Government for taking a leadership role. By  
16 eliminating unnecessary complexity and providing  
17 flexibility for the development of individual  
18 manufacturers compliance plans, the proposed rule will  
19 allow manufacturers to develop products that consumers  
20 will want to buy and only enhance vehicle performance  
21 with respect to greenhouse gas reductions and oil  
22 savings.

23                   In closing, the time has come to  
24 move all stakeholders forward. The Alliance believes  
25 that any effective, efficient program to address

1 climate change must be built on a single strong  
2 national framework administered by the Federal  
3 Government. This framework should acknowledge the  
4 specific product and sales structure of individual  
5 manufacturers' fleets, and be designed in a way that  
6 challenges all manufacturers fairly by including  
7 appropriate implementation and compliance flexibilities  
8 without negatively affecting overall greenhouse gas  
9 reductions.

10                   To this end, we encourage EPA and  
11 NHTSA to work closely with all stakeholders, to refine  
12 the technical framework of the program. The Alliance  
13 and its member companies stand ready to work with EPA  
14 and NHTSA, and we will be submitting our detailed  
15 technical comments in November.

16                   Thank you for the opportunity to  
17 testify today, and I will be glad to answer your  
18 questions.

19                   MR. MEDFORD: Thank you for your  
20 testimony.

21                   Next, Mr. Kleinbaum.

22                   MR. KLEINBAUM: Thank you. My name  
23 is Rob Kleinbaum. Let me give a brief introduction. I  
24 am a management consultant. General Motors has been a  
25 major client for the last 15 years. Wide number of

1 other industries and have been an executive level, I  
2 worked for GM for nine years before going into  
3 consulting, and for what it's worth, I have a Ph.D. in  
4 economics.

5 I think the reason I'm here is that  
6 in the last year I've authored two papers. Last  
7 January I authored a paper entitled "Retooling GM's  
8 Culture." It was fairly widely distributed amongst  
9 interested parties in which I basically said that GM  
10 would not be a viable company unless it changed its  
11 culture. Then last August I co-authored a paper with  
12 Dr. Walter McManus, who was here a little earlier,  
13 entitled "Fixing Detroit: How Far, How Fast, How Fuel  
14 Efficient." That basically described how the Detroit 3  
15 and especially GM had ignored its own research for many  
16 years on the importance of fuel economy. And the  
17 critical finding of that paper was that increasing fuel  
18 economy standards would increase the share and  
19 profitability of the Detroit 3 basically by eliminating  
20 one of its major competitive disadvantages with respect  
21 to imports and the increase in sales and pricing power  
22 would outweigh the cost increases.

23 So in my mind the fuel economy,  
24 increase in fuel economy does not impede turnaround  
25 efforts but needs to be viewed in the context of

1 long-term viability of the Detroit 3. And based on my  
2 experience and my analysis in the auto industry, I not  
3 only support the rulemaking under consideration today  
4 but view it as critical to that long-term viability.

5                   There are those, some of those who  
6 might still argue, although we haven't heard that  
7 today, regulations impede profitability. And if  
8 everybody believed that the company's in a profit  
9 maximizing efficiently all these years, that might be  
10 true, but I don't think anybody really believes that  
11 anymore unfortunately as recent events have shown and  
12 everyone now clearly agrees on the importance of change  
13 in the culture and world view of General Motors, and I  
14 will confine my remarks mostly to GM, the company I  
15 know the best.

16                   I would like to believe the New GM  
17 is indeed a New GM, and I absolutely grant the  
18 sincerity of many within the company who are trying to  
19 achieve that goal, including especially the CEO, Fritz  
20 Henderson, who really does have a general desire to  
21 change the culture. However it still could be thwarted  
22 by the fact that the company is still being run by the  
23 people who put it into the mess in the first place and  
24 who basically drove the culture of Old GM. While there  
25 is a new board and many have departed, there has been

1 no influx of new people. My chief concern that it's  
2 people who are actively ignored the research on the  
3 importance of fuel economy and believe in their hearts  
4 that greenhouse gas emissions is fundamentally a  
5 "crock" are still in senior positions and spread  
6 throughout the company. The net result is a deep  
7 concern that while all the right words will be said,  
8 there will still be substantial under-investment in  
9 fuel efficient vehicles relative to what the market  
10 wants, and the company would continue to lose share and  
11 have its viability threatened.

12                   Note that this under-investment  
13 could take many different forms. It is more likely to  
14 be seen in the investment in the particular entry so  
15 that the vehicles are uncompetitive in terms of quality  
16 and features, when home runs are what GM desperately  
17 needs.

18                   So as Ronald Reagan used to say, we  
19 need to trust but verify. And that, it seems, is  
20 exactly what the new rule does.

21                   Central to the success of both the  
22 rule and the automakers is transparency. We've already  
23 heard some discussions this morning on it. Much of the  
24 debate on the impact of fuel economy has been clouded  
25 by the old regime in which data and assumptions were

1 not fully disclosed. This new rule, the new rule's  
2 proposed approach is much more transparent, with more  
3 sources in the public domain and readily available. To  
4 me, this is a critically important change in the  
5 methodology since in the new process anyone can  
6 understand what's going on and can repeat the analysis.

7                   Another safeguard is regulatory  
8 support that is independent and vigilant. The  
9 regulating institutions need to have the interests of  
10 both the company and the public at heart but cannot be  
11 "owned" by either. I believe the previous public  
12 policy has enabled many of the Old GM's worst features.  
13 GM's lobbyists were effective in many subtle ways, and  
14 the net effect in my opinion is they and their allies  
15 helped drive GM to bankruptcy while those who were  
16 considered hostile to the company were trying to push  
17 the company in a direction that could have saved it.  
18 These are hard words for me. I am basically a free  
19 market libertarian, not a big fan of big government,  
20 but I believe in all my heart, based on what I've seen,  
21 and based on my affection and concern for the company.

22                   Finally, there's another way to  
23 "trust but verify," and that is to include an important  
24 analytic tool that can help focus debate on the right  
25 issues -- that is, a properly conducted sensitivity

1 analysis. And I don't believe that the rule --  
2 currently rule includes this kind of analysis. Now,  
3 there's a lot of debate about this parameter and that  
4 parameter, a lot gets written, and it's mostly used for  
5 the sense of gotcha, so all your conclusions are wrong.

6                   In the paper that Walter McManus and  
7 I wrote on fixing Detroit, we rather than add to all  
8 that noise and nonsense published decided to use the  
9 full range of opinion in all the key parameters that  
10 would lead to the conclusion and published them openly,  
11 and we tried to use a wide range, it's on the table for  
12 you to see, and then we looked, well, does it matter?  
13 I mean I have this little chart. I don't know if you  
14 have my paper in front of you, but this little thing  
15 called the tornado chart. That would be apparent upon  
16 looking at it, and what it tells you is analytical,  
17 which parameters, what brands of uncertainty would  
18 change the decision. When this is done, well, it will  
19 focus the debate on what matters, and this is one of  
20 our scenarios, and you'll see a vertical line, and  
21 basically that if that bar crosses that line, it means  
22 that within the range, within our range of uncertainty  
23 over that parameter decision would change. So what it  
24 gives you is a very easy analytical tool for senior  
25 decision makers and participants to understand what's

1 going on and what's really driving the debate. So if  
2 this method became common, debate would be much more  
3 fruitful. So let's argue about the stuff that really  
4 matters and do so with publicly available data and  
5 explicit methods. Thank you very much.

6 MR. MEDFORD: Thank you.

7 Mr. Griffith?

8 MR. GRIFFITH: Thank you for having  
9 me here today. My name is Charles Griffith. I'm the  
10 Clean Vehicles and Fuels Director for the Ecology  
11 Center. We're based just west of here in Ann Arbor,  
12 Michigan. On behalf of the Ecology Center, I'm pleased  
13 to be here today to provide our support for the  
14 proposed rulemaking for light-duty vehicle. The  
15 Ecology Center has for many years been an advocate for  
16 strong fuel economy standards for cars and light  
17 trucks, but we have also advocated that such standards  
18 be developed in a way that helps advance new  
19 investments in U.S. manufacturing, protects jobs, and  
20 fairly distributes the costs across the industry. We  
21 believe this approach is the best way to achieve a  
22 sustainable policy that can build public support,  
23 minimize negative impacts, and also protects the  
24 environment and improves energy security.

25 The Ecology Center committed itself

1 to these ideals when it created a special project a few  
2 years ago we call the Green Machines Tour, which was  
3 aimed at building public awareness about the many  
4 positive benefits of new investments in advanced fuel  
5 economy technologies. And we focused on the auto  
6 producing region here in the Midwest and spent many  
7 hours on the road talking with community members, union  
8 leaders, elected officials, et cetera, about the fuel  
9 efficient technologies that were either already being  
10 used in the vehicles that were being produced or that  
11 were on the drawing boards and how those technologies  
12 were helping to stimulate new economic activity in  
13 their communities. We identified billions of dollars  
14 in new or planned investments, and the creation or  
15 retention of many thousands of auto sector jobs. We  
16 also discussed with people that we met with how new  
17 policies to require improved fuel economy could help  
18 ensure even greater opportunities for new jobs and  
19 economic development in this critical auto sector.

20                   Without exception, the people we  
21 talked with were in support of advancing new fuel  
22 economy policies. They did, however, want assurances  
23 that the new rules would be developed in a way that was  
24 fair for their community and for their industry, and  
25 that best protected existing jobs in their communities.

1                   The Ecology Center believes that the  
2 EPA and NHTSA proposed rules meet these expectations in  
3 their unified proposed rulemaking. One key aspect of  
4 these rules was the attribute-based system for  
5 determining fuel economy standards. This approach  
6 ensures that fuel economy progress will be made across  
7 the broad spectrum of vehicle types and sizes, rather  
8 than just through downsizing or through the efforts of  
9 certain manufacturers. In the past, the fleet average  
10 approach has tended to put full-line manufacturers with  
11 market share in the larger vehicle segments at a  
12 significant disadvantage. Now all manufacturers will  
13 share the burden of improving the fuel economy of their  
14 vehicles. The Ecology Center also believes that using  
15 the vehicle footprint attribute is the most preferable  
16 from an environmental and safety perspective compared,  
17 for example, to a weight-based approach. Another key  
18 aspect of the new rules is the anti-backsliding fuel  
19 economy provisions in the NHTSA rule for domestically-  
20 manufactured vehicles. This provision ensures that  
21 both domestic and foreign made vehicles by a particular  
22 manufacturer meet minimum fuel economy targets, thus  
23 helping to protect domestic jobs, auto jobs. A policy  
24 that inadvertently resulted in greater imports of  
25 foreign made vehicles to achieve the standard would

1 certainly not achieve the goal of encouraging greater  
2 production of fuel-efficient vehicles here in the U.S.  
3 and would result in unnecessary job losses for American  
4 workers.

5                   While not the subject of this  
6 rulemaking, the Ecology Center also supported the  
7 financial assistance provided by this administration,  
8 and the Congress for that matter, for the production of  
9 advanced technology vehicles. This assistance will be  
10 critical in securing the significant capital financing  
11 that will be required for the new technology  
12 investments needed to meet the new standards. This  
13 support is even more critical given the current  
14 economic crisis.

15                   The Ecology Center would like to  
16 comment today on the Advanced Technology Vehicle  
17 Credits Provision in the proposed rule, aimed at  
18 incentivizing early commercialization of electric  
19 vehicle technologies. And while we are supportive of  
20 the general intent of the proposed credits, like  
21 several of my colleagues here this morning, we are  
22 concerned that the combination of both a multiplier and  
23 a zero grams/mile CO2 value for electric propulsion may  
24 be overly generous and could unfairly skew a  
25 manufacturer's compliance obligations. We also

1 understand that the intent is for use of these  
2 provisions only in the 2012 to 2016 time frame, but are  
3 also concerned that these credits could become  
4 increasingly part of a firm's compliance obligations  
5 toward the end of the compliance period when the  
6 credits would be scheduled to end. It would seem to  
7 make more sense to phase-down these credits if they're  
8 provided in a manner similar to the dual-fuel vehicle  
9 credits. In general, however, we believe that more  
10 work is needed to study both the potential effect of  
11 this proposed provision on compliance and achieved  
12 emission levels, as well as the way the credits are  
13 structured, including their timing.

14                   We hope to address other specific  
15 issues at a later date in our written testimony.

16                   But in summary, we'd like to say  
17 that the Ecology Center supports the proposed rules and  
18 believes that they achieve the desired balancing of  
19 interests for fairness and cost-effectiveness, while  
20 also requiring significant and meaningful reductions of  
21 CO2 emissions and petroleum use. We do support  
22 additional policy efforts in the future for the  
23 transportation sector overall such as policies to  
24 reduce the carbon content of fuels and to reduce the  
25 travel demand for passenger vehicles. It is our hope,

1 however, that these new rules can help to set the U.S.  
2 automobile industry on a new course for success at  
3 least in terms of improved fuel economy. Thank you.

4 MR. MEDFORD: Thank you for your  
5 testimony.

6 Mr. Shaw?

7 MR. SHAW: Thank you for allowing me  
8 to testify today. I am Jody Shaw, manager of Technical  
9 Marketing and Product Research for U.S. Steel, the  
10 largest U.S.-based integrated steel maker and a  
11 significant supplier to the major North American  
12 vehicle makers. Our objective is to grow and preserve  
13 the vital market and maintain steel participation in  
14 the vehicle. I want to make a case why this objective  
15 is also good for the goals of the EPA and NHTSA, and  
16 how steel technology can help to reduce emissions  
17 associated with vehicles.

18 The core of my message today is that  
19 steel can play an important role in reducing the energy  
20 consumption and CO2 emissions in all phases of a  
21 vehicle's life, the manufacturing phase, driving phase,  
22 and end-of-life recovery. Over the past few decades  
23 working with our automotive customers I have seen a  
24 remarkable evolution of both the materials we supply  
25 and their application that have positively impacted the

1 vehicle and meeting the NHTSA and EPA regulations.  
2 Historically the focus of CAFE regulations has been the  
3 use of the driving phase of the automobile. Fuel has  
4 been and will remain important to automakers' efforts  
5 to improve fuel economy. Steel's role is to enable  
6 mass production while maintaining safety and  
7 affordability. Today steel is the dominant material in  
8 the vehicle in the United States and around the world  
9 representing 60 percent of the vehicle material  
10 content. We have maintained that dominance for the  
11 last 100 years of the vehicle. However, it's not been  
12 the same steel. In the 60s and 70s we replaced cold  
13 walled steels that rust with zinc coated steels, in the  
14 80s and 90s, replaced mild steels with high-strength  
15 steels. This decade we are replacing the high-strength  
16 steels with lightweighting advanced high- strength  
17 steels, and a decade from now we will be replacing  
18 those steels with new advanced lightweighting products.  
19 Today the advanced high-strength steels are the fastest  
20 growing material in vehicle designs -- whereas in 1999  
21 there were nearly no applications of advanced  
22 high-strength steels, today they represent 15 percent  
23 of the vehicle steel content. Each and every new  
24 vehicle launch increases the content of these grades  
25 with the vehicle makers expected to reach 50 percent

1 within the next decade. Our customers' demand for  
2 these products is a result of their lightweighting  
3 capability that enable affordable designs within their  
4 existing manufacturing facilities.

5                   The need for these materials has  
6 come to result in the increase in crash requirements  
7 which have changed the vehicle structure from a  
8 stiffness-dominated design to a strength-dominated  
9 design. Strength is where steel performs better than  
10 any other automotive material. Advanced high-strength  
11 steels are four, five, and six times stronger than the  
12 steels that they are replacing. What has this meant to  
13 lightweighting of the vehicle? Material lightweighting  
14 is a function of design flexibility, strength, and  
15 density. What steel lacks in low density relative to  
16 competing materials, it more than compensates for with  
17 strength and design flexibility. To demonstrate that  
18 capability, the steel industry has invested in many  
19 projects demonstrating 25 to 30 percent mass reduction.  
20 We have worked with our customers to incorporate that  
21 technology in each and every new vehicle being launched  
22 today. These new vehicle structures are twice as  
23 strong as previous designs with mass reductions in  
24 excess of 20 percent while meeting the increased crash  
25 requirements and maintaining affordability.

1                   And, remember, this technology is  
2 not yet fully integrated. Advanced high-strength steel  
3 content will increase from 15 percent today to 50  
4 percent in the next decade, enabling additional mass  
5 savings on future vehicles.

6                   Clearly steel is and will continue  
7 to play a role in reducing the energy used in CO2  
8 emissions of the vehicle in its driving phase.

9                   However, as I mentioned at the  
10 outset, steel can also play an important role in  
11 reducing the energy use in CO2 emissions in the other  
12 phases of a vehicle's life, in particular, the  
13 manufacturing phase, and end-of-life recovery.

14                  EPA and NHTSA have an important  
15 opportunity to use this rulemaking to formulate policy  
16 guidance that best encompasses the entire environmental  
17 impact associated with the vehicle, and, consequently,  
18 encourages vehicle manufacturers to choose the  
19 materials that result in the lowest environmental  
20 impact over the entire vehicle life. The advanced  
21 high-strength steels energy, and CO2 intensity is the  
22 same as conventional steels. So in the manufacturing  
23 phase, a 25 to 30 percent mass reduction enabled by  
24 these materials means we produce 25, 30 percent less  
25 steel for each vehicle, with the accompanying reduction

1 in raw material use, energy use, and CO2 emissions.  
2 This mass reduction then improves fuel economy reducing  
3 energy use and CO2 emissions in the driving phase.  
4 Then at the end of a vehicle's life, 100 percent of the  
5 vehicle is recycled back in the very same steel  
6 products or future steel products for the next  
7 generation of vehicles.

8                                 In contrast, the low-density  
9 competing metals such as aluminum or magnesium have a  
10 much different story. On a per-pound basis, the energy  
11 and CO2 intensities of these materials are 7 to 18  
12 times more than steel, resulting in a corresponding  
13 increase in the vehicle's manufacturing energy and CO2  
14 intensity. These materials may provide a mass  
15 advantage. Unfortunately, what is gained in fuel  
16 economy in the driving phase through the weight  
17 reduction can be easily overcome by the selection of  
18 high-energy, CO2-intensive, low-density materials. And  
19 this concept goes beyond material selection. It  
20 applies to many technology options that may perform  
21 well within the envelope of regulated tailpipe  
22 emissions, but perform poorly when that boundary is  
23 expanded to address the total life cycle. To address  
24 these unintended consequences, a life cycle assessment  
25 approach is needed that considers all the phases of a

1 vehicle's life.

2                   The methodology for a life cycle  
3 approach as well as establish an ISO standard 1440,  
4 many vehicle manufacturers are already implementing  
5 this methodology in vehicle designs. The concern is  
6 vehicle makers may select technologies that increase  
7 the full life cycle energy and CO2 footprint of the  
8 vehicle in order to comply with the tailpipe-only  
9 regulations.

10                   We will continue to invest in steel  
11 technologies that reduce the full life cycle energy and  
12 the CO2 footprint of the vehicle. Since the 1990s the  
13 North American Steel Industry has reduced the energy  
14 and carbon intensity of steel by 33 percent, more than  
15 doubling the target set by the protocol. Looking to  
16 the future, the steel industry is exploring over 100  
17 independent CO technologies to reduce or eliminate  
18 carbon emissions associated with steel making. We  
19 continue to develop new grades of steel both  
20 independently and in partnership with the National  
21 Science Foundation and universities that will enable  
22 additional lightweighting. And at the end-of-life  
23 steel will continue to be the most recycled material on  
24 the planet, more than all other materials combined.

25                   The combinations of these



1 Good morning and thank you. My name is Dr. Mark  
2 Cooper. I'm the director of research of Consumer  
3 Federation of America, one of the nation's oldest and  
4 largest consumer advocacy groups. We appreciate the  
5 opportunity to testify today on this very important  
6 issue. In many ways the proposed rule is the most  
7 important change in automotive regulation in the United  
8 States since the inception of the CAFE program of three  
9 and a half decades ago, and it comes at a key moment  
10 for the transformation of the auto industry. This rule  
11 unifies the regulation of energy and environmental  
12 impacts of automobiles in the U.S. It embodies the  
13 largest full year of increase in fuel economy in over a  
14 quarter of a century. It resolves a major dispute over  
15 Federal and State shared authority to order  
16 improvements in the environmental impact of  
17 automobiles, preserving the most dynamic  
18 characteristics of federalism. And it is based on a  
19 consensus agreement that includes automakers.

20                   At the same time this rulemaking  
21 reflects a transition that aspires to a more dynamic  
22 and innovative automobile manufacturing sector and a  
23 more effective process for setting fuel economy  
24 standards and emission standards for automobiles in the  
25 future.

1                   It requires EPA and NHTSA to  
2 harmonize and reconcile their strategies. It  
3 recognizes the dire circumstances of the auto industry,  
4 and allows it some breathing room to redefine and  
5 retool itself to face more rigorous and demanding  
6 regimes of future fuel economy and environmental  
7 improvement.

8                   Thus, the ultimate success of this  
9 landmark rulemaking will be in the framework of  
10 standard setting that it creates for the future. In  
11 fact, the transitional nature of this proceeding is  
12 evident where the standards have been set. The  
13 agencies have established the standards at the level  
14 agreed upon in consensual negotiation, but the  
15 subsequent analysis shows that the chosen level leaves  
16 a large amount of consumer economic, national security,  
17 and environmental gain unrealized.

18                   If the standards were set at the  
19 level that maximizes economic or maximum practicable  
20 environmental benefits, the standard would result in  
21 the following: Gasoline consumption would be lower  
22 than the proposed standard by 28 to 34 billion gallons.  
23 The net present value of societal savings would be \$20  
24 to \$25 billion higher. The consumer pocketbook savings  
25 would be about \$10 billion more.

1                   At the higher level of an effective  
2 standard the average cost of conserved energy is less  
3 than \$1.30 a gallon compared to a projected average  
4 cost of gasoline over the life of the vehicles of over  
5 \$3 a gallon. The gap between the cost of gasoline and  
6 the cost of conserved energy or saved gasoline is the  
7 efficiency gap. It is the measure of the market  
8 failure in this phase.

9                   Setting the standard to maximize  
10 economic benefits or maximum practicable environmental  
11 benefits is a win/win/win for consumers, the nation,  
12 and the environment. That is why EPA and NHTSA must  
13 not let the transition extend past the 2016 model year.  
14 Each year of delay in moving to setting standards at  
15 the more appropriate levels imposes severe harm on  
16 consumers and the nation.

17                   The Consumer Federation of America  
18 participated in the standard setting in the last round,  
19 and we offered comments to NHTSA about how to improve  
20 and ensure that future standards would be set in a  
21 manner that delivers the maximum benefit for consumers.  
22 We have similar recommendations in this joint  
23 rulemaking.

24                   In particular, EPA and NHTSA should  
25 balance the three goals in the underlying statutes of

1 technical feasibility, economic practicability, and the  
2 need to conserve energy, and the statutes really are in  
3 agreement here, by setting the standard at the mid  
4 point of the range between maximum economic benefit and  
5 maximum practicable environmental benefit.

6                   In addition, they should recognize  
7 the higher resale value of more fuel efficient  
8 vehicles. They should properly value fuel savings by  
9 removing the rebound effect from the consumer private  
10 welfare analysis and setting it at a lower level in the  
11 societal analysis. Rebound has no business in the  
12 private valuation.

13                   They should recognize consumer  
14 willingness to change their demand for vehicle  
15 attributes. The American consumer has shown they are  
16 willing to change.

17                   They should assign significant  
18 national security value to reducing oil consumption.  
19 We cannot keep using a zero for reducing oil imports.  
20 That just doesn't make any sense to the analysts or the  
21 American people.

22                   And, finally, we should establish an  
23 objective standard for evaluating the capacity of the  
24 industry to meet future standards. We believe it  
25 should be based on a 50 percent principle. If half the

1 automakers can achieve the standard, then it is  
2 practicable, and the other half have to work harder so  
3 that they can, too.

4 I want to briefly highlight today  
5 one issue that I think is of paramount importance as we  
6 move forward. The agencies must adopt a firm analytic  
7 framework that recognizes that fuel economy standards  
8 enhance consumer welfare. The billions of dollars of  
9 consumer welfare gains estimated by the agencies in  
10 their analysis are real and substantial. The final  
11 rule should clearly acknowledge not only the empirical  
12 estimates of these gains, it should also conclude that  
13 the theoretical justification for incorporating  
14 consumer welfare gains into the rulemaking is clear and  
15 solid.

16 Now, in the proposed rule the agency  
17 rejected claims that consumer welfare gains shouldn't  
18 be included on the basis of the empirical finding that  
19 the models are too imprecise. You're perfectly right  
20 to say that, but that is too weak of a rationale.

21 These models have a fundamental  
22 theoretical flaw. In order to conclude that consumers  
23 do not enjoy increased welfare as a result of fuel  
24 economy standards, one must assume that consumers have  
25 full information and perfect foresight in their vehicle

1 purchase decisions, and that the supply side of the  
2 market gives them a full, balanced, and unbiased range  
3 of choices to meet their needs. None of these  
4 assumptions is correct, and that's why we have a  
5 \$100 billion market failure.

6                   In fact, as we'll show in our  
7 comments, there's a broad range of theoretical and  
8 empirical evidence to support the conclusion that there  
9 is a substantial market failure with respect to  
10 efficiency and that fuel economy standards enhance  
11 consumer welfare.

12                   Our research shows that the market  
13 failure is on the supply side as well as the demand  
14 side. Survey research shows there is a huge mismatch  
15 between consumer demand and the vehicles offered in the  
16 marketplace for efficiency. Analysis shows that  
17 consumers began shifting their consumption patterns  
18 five years ago, but the automakers were unwilling or  
19 unable to respond, and they were left with a growing  
20 number of vehicles that they could not sell.

21                   But the most ironic fact is the  
22 following: The behavioral economics literature that  
23 the agencies cited in their notice conclude that  
24 consumers are deficient in motivation, perception, and  
25 calculation, and that that is a basis on which to

1 conclude there is a market failure. But at the same  
2 time those models incorrectly assume that producers are  
3 perfect, have perfect information, perfect foresight,  
4 and perfect analytic capability.

5                   It turns out, as the headline of the  
6 Detroit Free Press says today, "Producers are people,  
7 too." They suffer the same deficiencies of motivation,  
8 perception, and calculation, and it turns out they also  
9 have perverse incentives to exploit information  
10 asymmetries and abuse market power to increase profit.

11                   So these two sets of  
12 far-from-perfect actors come together in a set of  
13 market institutions that compound and magnify their  
14 deficiencies. The result is a 30-percent market  
15 failure, one of the grossest inefficiencies in our  
16 whole economy. We consume 30 percent more energy than  
17 we should if we're behaving efficiently. That  
18 shortfall costs consumers, reduces consumer welfare,  
19 and fuel economy standards are the way to address it.

20                   So EPA and NHTSA have an opportunity  
21 in the current rulemaking to establish a platform on  
22 which a dynamic, innovative automobile sector can be  
23 built in America, one which meets the needs for  
24 transportation in our continental economy in a manner  
25 that saves consumers money, enhances national security

1 through reduced oil imports, and ensures the  
2 transportation sector makes its fair contribution to  
3 meeting the challenge of global warming.

4                   To build that platform it is  
5 critically important to recognize the vital role that  
6 fuel economy standards play in correcting market  
7 failures and set standards at a level that captures the  
8 full measure of the value of the increased efficiency.  
9 In so doing, they will create an environment in which a  
10 new automobile industry can thrive. We look forward to  
11 working with the agency to build that platform. Thank  
12 you.

13                   MR. MEDFORD: Thank you, and thanks  
14 to all the panel for your testimony. Now I'll see if  
15 my colleagues have any questions. No questions? Well,  
16 thank you very much.

17                   I think we're going to not have  
18 lunch and move to Panel 4.

19                   MS. OGE: It's Mr. Johnson, Mr.  
20 Tavi, Ms. Stein, Mr. Peters, and Mr. Lee. Good.  
21 Please go ahead.

22                   MR. JOHNSON: Hello. Can you hear  
23 me okay?

24                   MS. OGE: Maybe put the microphone a  
25 little bit higher.

1                   MR. JOHNSON: Sure. How's that, all  
2 right? I'm Stuart Johnson. I'm a manager of the  
3 Volkswagen Group of America. I'm here today to offer  
4 some oral comments regarding the proposed rule.  
5 Representing Volkswagen Group of America, I'm here to  
6 represent Volkswagen, Audi, Bentley Motor Car, and  
7 Lamborghini.

8                   The Volkswagen Group is continuing  
9 to evaluate the NPRM and intends to provide written  
10 comments to the agencies regarding specific details of  
11 the proposed regulation, but I'm here today to offer  
12 some general comments.

13                   Volkswagen supports this approach on  
14 the National Program for both greenhouse gas and fuel  
15 economy, and the Volkswagen Group applauds the efforts  
16 of the White House, the Federal agencies, the State of  
17 California, and the automotive industry stakeholders  
18 involved in bringing this agreement together.

19                   Make no mistake, this regulation is  
20 very challenging, but we support a national solution to  
21 greenhouse gas and fuel economy regulation and we  
22 support the lead time and stability of the proposed  
23 regulation through the 2016 model year.

24                   The Volkswagen Group urges all  
25 stakeholders to continue developing this program and

1 working towards a National Program for 2017 and beyond.  
2 In particular, Volkswagen supports the government's  
3 efforts and the NPRM to provide the flexibility to the  
4 regulation that helps manufacturers transition to the  
5 proposed national greenhouse gas/CAFE program.

6                   The government correctly recognized  
7 that auto manufacturers are a diverse group  
8 representing many different market segments and  
9 different sales volumes in the U.S. market. In  
10 recognizing these differences, the agencies were able  
11 to develop credit banking and trading schemes that  
12 offer real greenhouse gas reductions and provide all  
13 manufacturers flexibility in complying with the  
14 regulation and with various credit pathways.

15                   In addition, Volkswagen supports the  
16 ability of manufacturers with smaller sales volumes in  
17 the U.S. to utilize a temporary lead time allowance to  
18 transition to this new regulation that will ultimately  
19 be enforced under the authority of the Clean Air Act.

20                   Again, the proposal is difficult and  
21 will require many changes in the auto industry. Going  
22 forward, Volkswagen intends to work closely with EPA  
23 and the NHTSA regarding details of the regulation, but  
24 today we can state that we support the framework and  
25 the idea of this proposed national regulation.

1 MS. OGE: Great, thank you.

2 Ms. Stein, good morning.

3 MS. STEIN: My name is Elizabeth  
4 Stein. I'm an attorney at Environmental Defense Fund.  
5 On behalf of Environmental Defense Fund and our more  
6 than 500,000 members nationwide, I sincerely thank you  
7 for the opportunity to testify today. America is a  
8 vast and diverse nation. But despite our differences,  
9 we are united by unyielding and common bonds. We are  
10 united in a commitment to our nation's security. We  
11 stand together in our quest to realize a shared  
12 prosperity for all Americans. And we are steadfast --  
13 as a nation of mothers, fathers, grandparents, uncles  
14 and aunts -- in our vigilance for a safe and healthy  
15 future for America's children.

16 On May 19th the President of the  
17 United States charted a path forward for our nation  
18 that ended years of discord and division. The  
19 President forged an accord on cleaner cars to begin  
20 breaking our addiction to foreign oil, to pioneer the  
21 clean energy technologies that will lead the way in the  
22 21st Century global marketplace, and to start reducing  
23 the global warming pollution that imperils our planet.

24 We sincerely thank the President and  
25 the leaders in labor, business, and state government

1 who worked together to break this logjam -- the United  
2 Auto Workers, the Alliance of Automobile Manufacturers,  
3 and the numerous states involved from California to  
4 Maine.

5                   By virtually any metric, the  
6 benefits of the EPA and Department of Transportation  
7 proposal to implement the Presidential accord measure  
8 up.

9                   The proposed standards strengthen  
10 our national security. The vehicles subject to these  
11 proposed standards are responsible for about 40 percent  
12 of all U.S. oil consumption. The standards would  
13 reduce our consumption of oil by 1.8 billion barrels  
14 while achieving a 5 percent annual improvement in fuel  
15 efficiency for the nation's passenger vehicle fleet.

16                   The proposed standards reduce global  
17 warming pollution from a significant and rapidly rising  
18 sector. The vehicles covered by the proposed standards  
19 account for 60 percent of heat-trapping emissions from  
20 the transportation sector and about 20 percent of all  
21 U.S. heat-trapping gases. These emissions have  
22 steadily increased by more than 1 percent annually.  
23 The EPA estimates the proposed standards would cut  
24 carbon dioxide pollution from passenger vehicles  
25 approximately 21 percent by 2030, reducing emissions by

1 950 million tons.

2                   The proposed standards will provide  
3 dividends in fuel savings at the pump for America's  
4 families. The estimated overall cost savings over the  
5 life of the vehicle are more than \$3,000. And families  
6 who finance a new vehicle purchase are expected to save  
7 estimated \$12 to \$14 a month over the duration of the  
8 loan.

9                   While these numbers mark progress  
10 for our nation, the benefits of the proposed standards  
11 are far-reaching in their measure.

12                   The proposal embodies the first  
13 national standards to limit global warming pollution.  
14 We applaud the President and the leadership at the  
15 Environmental Protection Agency for taking landmark  
16 steps to reduce heat-trapping gases and for following  
17 the law enunciated by the United States Supreme Court.

18                   The proposal weaves the innovative  
19 state clean car programs, the nation's clean air laws,  
20 and the nation's fuel economy laws into a single  
21 national policy that reduces global warming pollution  
22 and improves fuel efficiency through the clarity and  
23 certainty of an integrated program.

24                   The proposal provides compliance  
25 flexibility that will ensure consumers will have a full



1                   MR. PETERS: Good morning. My name  
2 is Doug Peters. I am a former sergeant United States  
3 Marine Corps and a current third-year law student at  
4 the University of Detroit Mercy School of Law. Living  
5 in Detroit and considering my background, I felt  
6 personally compelled to come here today to support this  
7 regulation because of the national security aspects of  
8 climate change and our nation's dangerous dependence on  
9 both foreign and domestic oil.

10                   I spent five years in the Marine  
11 Corps. In that time I participated in both Afghanistan  
12 and Iraq invasions. On January 9, 2002 seven Marines  
13 from my squadron became the first Marines to die  
14 following the 9/11 attacks. Seven of my friends of  
15 which I left American soil with were the first Marine  
16 casualties suffered by this nation. I guess my time  
17 overseas, particularly the time I spent in Pakistan,  
18 Afghanistan, and the Middle East in general served as a  
19 true wake-up call for me. I realized that the way  
20 America would have to interact with the world going  
21 forward had changed. I realized that new threats had  
22 emerged, unconventional threats. I witnessed U.S.  
23 military go from old war style of fighting to that of  
24 asymmetric warfare practically overnight.

25                   One of those new threats, as

1 intangible as it may seem at times, is climate change  
2 or climate disruption. Climate disruption is obviously  
3 not one of your traditional military threats. It's  
4 what the military refers to as a threat multiplier.  
5 Climate change has the potential to destabilize fragile  
6 governments, turning those governments into failed  
7 states, has potential to spark mass migration of  
8 populations, turning those populations into refugee  
9 populations, has the potential to spark conflicts over  
10 scarce water resources and scarce agricultural  
11 resources.

12                   In these types of environments and  
13 scenarios the possibility exists for extremists to  
14 hide, the possibility exists for extremists to recruit  
15 and train desperate members of these populations and  
16 turn them against us. We've already seen this happen  
17 in Bangladesh, Darfur, Somalia, and other places in the  
18 Horn of Africa. Climate disruption is such a viable  
19 threat, the Pentagon has already started creating  
20 contingency scenarios for them. In fact, the Pentagon  
21 will focus on its issue in its 2010 quadrennial defense  
22 review as I believe the State Department will in its  
23 quadrennial diplomacy and development review. In other  
24 words, U.S. military is going to be called upon to  
25 respond to such scenarios and threats. This is in

1 addition to the pre-existing wars and challenges the  
2 U.S. military already faces. I believe one of the most  
3 misunderstood or underfelt aspects facing today's  
4 military is the continuous deployment cycles of U.S.  
5 troops overseas.

6                   Now, the U.S. military will always  
7 step up, that's what we do, it's an honor and a  
8 privilege, but when troops are on their third, fourth,  
9 and even fifth deployments overseas to either  
10 Afghanistan or Iraq, that places a tremendous burden on  
11 the troops themselves and on their family members.  
12 This burden will only be intensified if the military is  
13 forced to respond to such threats posed by climate  
14 change or climate disruption. Good examples of this  
15 scenario can be found in the 2004 Indonesia tsunami  
16 when the U.S. military was called in to provide aid.  
17 The U.S. military is the only organization in the world  
18 that has the strength, the know-how, and the resources  
19 to respond to such conflicts or disasters. You can  
20 even take Hurricane Katrina as another example. For  
21 these reasons, implementation of this rule is vital to  
22 our national security. It is estimated that this rule  
23 will reduce greenhouse gas emissions by 950 million  
24 metric tons by 2016. Climate security, in other words,  
25 is our nation security.

1                   Equally threatening to our national  
2 security is America's dependence on oil. Now,  
3 obviously this is not a new threat, it's been around a  
4 while. It's been realized, but I don't believe it's  
5 been as recognized as it should be. As I mentioned,  
6 our military is already stretched very thin, and  
7 ensuring the constant flow of oil around the globe has  
8 become a constant if not secondary occupation and task  
9 of the U.S. military, yet this is another burden on top  
10 of the war fighting responsibilities and the  
11 preparation we have to put in for future contingencies.

12                   Because we simply do not have enough  
13 oil in the United States to meet our demand, we have  
14 to -- we are forced to rely on hostile regimes such as  
15 Iran or potentially Venezuela for our oil. Especially  
16 considering Iran and countries like Venezuela have  
17 nationalized their oil companies, so basically we're  
18 dealing directly with the nation-states themselves.

19                   In 2008 we sent over \$386 billion  
20 overseas for oil. That's over a billion dollars a day.  
21 When this amount of wealth is being transferred to  
22 countries like Iran, we are basically -- we are  
23 actually funding both sides of the war against terror.  
24 Everybody knows that, it's well known that Iran has  
25 funded and trained and supported insurgents in Iraq and

1 in broader Middle East in general. So as I said, we  
2 are actually paying people to fight against us.

3 Oil dependence also threatens our  
4 economic stability. Everyone knows that. In the last  
5 year alone we have seen the price of oil in a very  
6 volatile manner go from approximately \$140 a barrel  
7 down to \$40 a barrel. We'll pay a much higher price in  
8 terms of American lives and our economy if we delay or  
9 fail to act to reduce our oil dependence right now.  
10 This is the consensus among national security experts  
11 and retired generals and admirals. This is why this  
12 rule is so important. This regulation will be a  
13 tremendous first step. It is estimated this regulation  
14 will save 1.8 billion barrels of oil over the lives of  
15 the vehicles sold between 2012 and 2016. This is a  
16 very important step in a long road to the energy and  
17 climate security that our nation needs and, most  
18 importantly, cannot be the last.

19 I applaud the automakers for taking  
20 this step and their support of this regulation, and I  
21 want to thank the EPA. It's been an honor to testify  
22 before another organization whose duty it is to protect  
23 the United States and its citizens. Thank you.

24 MS. OGE: Mr. Peters, thank you for  
25 taking the time to come forward and testify. Clearly

1 you are bringing a unique and very important  
2 perspective to this public hearing, and we do want to  
3 thank you for your service to the country. Thank you  
4 very much.

5 MR. PETERS: Thank you.

6 MS. OGE: Mr. Lee, good morning.

7 MR. LEE: I want to thank the EPA  
8 and NHTSA commissioners for allowing me to testify  
9 today. My name is Adam Lee. I'm president of Lee Auto  
10 Components. Our company was founded in 1936 by my  
11 grandfather Louis Lee. I'm a third generation car  
12 dealer. Our company has both 12 new and used car  
13 dealerships throughout the state representing both  
14 domestic and imported brands. We are the largest  
15 hybrid dealer in Maine. We are also the largest Jeep  
16 dealer. I am also the chair of the Efficiency Maine  
17 Trust, which is a quasi-governmental agency with an  
18 annual budget of roughly \$70 million a year to be spent  
19 on energy efficiency and the reduction of greenhouse  
20 gases in Maine.

21 As some of you know, I have  
22 testified numerous times in support of stricter fuel  
23 economy standards and stricter air quality standards.  
24 I am here speaking on behalf of my family and myself.

25 After all these years, I couldn't be

1 more believed and proud that Detroit finally stands  
2 with the Obama administration in an effort to raise  
3 fuel economy standards and restrict greenhouse gas  
4 emissions. Every time I turn on the television I see  
5 most manufacturers boasting about their new hybrids,  
6 cars that really are cleaner and boasting about small  
7 and midsize cars with excellent safety ratings. There  
8 are several new hybrids from Detroit that have been big  
9 hits, the Malibu, the Ford Escape, the Ford Fusion,  
10 just to name a few, and there are probably about a  
11 dozen from Asia and Europe. Despite past mistakes,  
12 Detroit now appears to be somewhat sensitive to  
13 consumer demand and is at least making an attempt to  
14 market this new -- I read an article recently  
15 recounting the Cash for Clunkers effect on hybrid  
16 sales, and it noted that there were only 20,000 hybrids  
17 sold in September, down from around 39,000 in August.  
18 Now, these are very small numbers compared to overall  
19 car sales. However, who would have thought that this  
20 country would have bought 39,000 hybrids in one month,  
21 let alone 59,000 in two months. And I can tell you  
22 from personal experience that we ran out of hybrids and  
23 small cars very early on in the Cash for Clunkers  
24 Program. If I'd have had twice as many, we would have  
25 easily sold every single one. From a dealer's

1 experience, it's a classic issue of demand outstripping  
2 supply. So my point would be people want to buy  
3 hybrids and cars that are good on gas and cleaner.  
4 However, and it's disturbing, when I go to the National  
5 Auto Dealers Association website, I find the following  
6 link right on the home page. Fuel economy at the  
7 expense of safety is bad public policy. Anytime my own  
8 industry starts warning me that the cars we sell are  
9 unsafe, I get suspicious. They have consistently  
10 fought every single safety and environmental  
11 improvement as well as every single regulation aimed at  
12 improving the quality of our cars much the way a  
13 teenager instinctively objects to every word out of his  
14 parents' mouth. Detroit defended the use of leaded gas  
15 for over 60 years despite the fact that there was ample  
16 evidence that lead was poisoning and was, in fact,  
17 killing thousands of Americans. Seat belts, air bags,  
18 anti-lock brakes have all been derided as unnecessary,  
19 not wanted, and too expensive. The day these  
20 improvements became mandated, Detroit was promoting  
21 them as if it was always their idea to make them a  
22 requirement. For over 25 years they managed to make  
23 sure fuel economy standards did not change at all.  
24 Finally, they've been raised to an appropriate level  
25 and it appears that Detroit is embracing them.

1                   So here we are. For a variety of  
2 reasons, including crushing health care bills, massive  
3 debts to retired employees, and incredibly expensive  
4 union contracts, GM and Chrysler have gone through  
5 bankruptcy. They were saved by the generosity of the  
6 Federal Government, and I'll note that their near  
7 collapse was caused by an astounding loss of market  
8 share at a time of record car sales, and these aren't  
9 just good car sales, these were world record car sales.  
10 It now appears that Detroit has given up telling us  
11 that consumers won't buy cars that get better fuel  
12 economy. They are no longer saying that Americans  
13 don't care about clean air. And they appear to have  
14 given up lobbying NHTSA and EPA entirely and have  
15 apparently turned it over to NADA and our 20,000  
16 members, of which I am a member.

17                   So what is NADA saying and why  
18 shouldn't we have cleaner cars? Well, they've turned  
19 to Isaac Newton and are using the laws of physics to  
20 combat our efforts to make cleaner cars. Simply  
21 stated, a bigger object that is moving will exert more  
22 force than a smaller object, or if you're going to  
23 knock down a wall, use a bigger hammer, where driving  
24 and crashing in an 18-wheeler is a better idea than  
25 crashing in a Hummer. You get the point. The logical

1 conclusion is we should only drive very large cars,  
2 really large cars. The end result of this argument is  
3 we should all be driving 18-wheelers. Personally, I'm  
4 switching to a bulldozer, it is over 30,000 pounds and  
5 has a big blade on the front.

6                   The reality is some of the smallest  
7 car are safer than some of the largest cars. Because  
8 of technology, side air bags, better construction,  
9 really cool high-tech gadgets like electronic stability  
10 control, cruise control that slows you down if you're  
11 too close to the car in front of you, these cars are,  
12 in fact, very safe.

13                   The Tokyo Auto Show starts in three  
14 days. If you want to know why Detroit and NADA are  
15 using the bigger hammer argument, all you have to do is  
16 look at some of the featured production cars at this  
17 show. It's the Honda CRZ sporty hybrid, the Nissan  
18 Leaf electric car, Toyota Prius plug-in hybrid, and  
19 then the following concept cars, Honda ENV electric,  
20 electric city car, Subaru hybrid tour car, Mitsubishi  
21 electric cargo vehicle, and there are eight others I  
22 won't read through. Overall, they're small, high-tech,  
23 get really good fuel economy, and in some cases emit  
24 little to no greenhouse gases. And my guess is of all  
25 those concept cars, many of them we'll see in the next

1 few years.

2                   As usual, the American car industry  
3 is fighting the very thing that will make their cars  
4 better, make the world safer, and help them survive.  
5 They're denying the possibility of some sort of  
6 creative solution to their challenges. They're  
7 forgetting that they used to be the leaders and they  
8 can lead again.

9                   Our country desperately needs  
10 stricter fuel economy standards and stricter clean air  
11 standards. We finally have what NADA has been  
12 demanding, a single standard. So why are they still  
13 fighting? Europe, Japan, and even China have stricter  
14 fuel economy standards than the U.S. If they were  
15 smart, they would support, as I do, even higher  
16 standards in the future, because I know that they might  
17 be tempted to fight higher standards, I also continue  
18 to support States' rights to keep the pressure up. The  
19 Clean Air Act protects that.

20                   We're living in an age of incredible  
21 innovations. These innovations are so pervasive they  
22 don't even seem incredible anymore. You realize that  
23 10 years ago the first BlackBerry was introduced. I'm  
24 guessing someone in this room has a BlackBerry. Just  
25 think of what could be done if all the efforts were put

1 into continuing to improve the fuel economy of our  
2 nation's cars instead of constantly fighting every step  
3 of the way.

4                   We're at a time in history when  
5 Detroit really is at the final crossroads. They've  
6 gone from number 1 in car sales to bankruptcy. They  
7 now have to decide if they're going to set the stage  
8 for the last act. Will they go the way of Oldsmobile,  
9 Plymouth, Saturn, and Pontiac, or will they decide to  
10 be bold and come up with the first hybrid diesel car  
11 with the most innovative battery setup yet? Will  
12 Detroit come up with the iPod of cars or will they  
13 continue to make 8 track players? Thank you.

14                   MS. OGE: Thank you, Mr. Lee. Any  
15 questions for the panel? No? Thank you. I guess  
16 we'll go to the last panel.

17                   MR. MEDFORD: Panel 5, please.

18                   If there is anybody else that is  
19 registered to speak but is not on our list, you can  
20 please come to the table now and give your testimony.

21                   Are you Mr. Campbell?

22                   Mr. Kuszmar? Mr. Zaski? Okay.

23                   MR. CAMPBELL: Good afternoon. My  
24 name is Todd Campbell. I serve as the Director of  
25 Public Policy for Clean Energy, North America's leader

1 in clean transportation. We are a California-based  
2 fuel provider that has also expanded our business model  
3 to include the production of light-duty natural gas  
4 vehicles with our recent acquisition of BAF  
5 Technologies, a small-volume manufacturer based in  
6 Dallas, Texas.

7                                   Clean Energy's core business is  
8 natural gas as a transportation fuel, followed by  
9 increasing bio-methane and hydrogen strategic  
10 investments. As both Agencies are well aware, natural  
11 gas is the lowest carbon-based fossil fuel. In fact,  
12 according to the California Air Resources Board,  
13 natural gas on a well-to-wheels basis can provide  
14 roughly up to 30 percent reduction of carbon intensity  
15 for light-duty and medium-duty vehicles and up to a 21  
16 percent reduction for heavy-duty vehicles. Based on  
17 analysis performed by TIAX using California Air  
18 Resources Board's natural gas pathway analysis for  
19 carbon intensity, a Honda Civic GX powered by natural  
20 gas emits roughly 5 percent less CO2 equivalent  
21 emissions on a tank-to-wheels basis than a Nissan  
22 Altima hybrid that achieved a 35 city/33 highway mpg  
23 rating. In fact, if a well-to-wheels analysis were  
24 applied, the Honda Civic GX would outperform the Nissan  
25 Altima Hybrid by almost 12 percent in terms of CO2

1 equivalent emission reductions and if biomethane were  
2 to replace natural gas as the transportation fuel, the  
3 CO2 equivalent reduction for that Honda Civic over the  
4 Nissan Altima would be almost 90 percent less carbon  
5 emissions.

6                   Clean Energy supports the goals set  
7 by the proposed rulemaking to (1) improve our nation's  
8 energy security and (2) to actively reduce greenhouse  
9 gas emissions from the transportation sector. Clean  
10 Energy, as a company, pursued natural gas as a  
11 transportation fuel for these very reasons. Natural  
12 gas is a clean, affordable, and abundantly domestic  
13 source of energy for transportation use. The promise  
14 of bio-methane and the bridging capabilities of natural  
15 gas to hydrogen illustrate the potential of this  
16 transportation strategy to help us all achieve an ultra  
17 low carbon future. Clean Energy would like to thank  
18 both the US EPA and NHTSA staff for their hard work and  
19 foresight used in the development of this important  
20 rulemaking, and we apologize to focus on the points  
21 that we disagree with over those many points we feel  
22 make sense given time constraints.

23                   We, as a company, do share several  
24 concerns that the regulation as proposed: (1) is not  
25 strictly performance-based, (2) potentially picks

1 winners with a "CAFE-only approach," (3) undervalues  
2 ultra low carbon fuel potentials both and overvalues  
3 electric vehicle performance by applying a  
4 Tank-To-Wheels approach exclusively; (4) allows for  
5 generous air conditioning efficiency credits that  
6 appear to overshadow FFV credits that fully support the  
7 stated goals and objectives of energy independence and  
8 greenhouse gas reduction, (5) places a methane cap that  
9 appears to be designed for gasoline vehicles -- not  
10 natural gas vehicle performance, and (6) fails to  
11 provide greater incentives in the out years (2015 and  
12 beyond) that encourage hybridization of alternative  
13 fuel vehicles, with, so, for example, natural gas  
14 vehicles with plug-in hybrid electric drive trains. We  
15 do support the joint Agencies' proposals to extend the  
16 AFV credits beyond 2016 and the temporary lead time  
17 allowance alternative standard for those manufacturers  
18 who produce 400,000 or less units per year.

19                   Before I get into specifics, I would  
20 also like to preface my comments by saying that Clean  
21 Energy as a company is still reviewing the proposed  
22 National Program rulemaking and remains in the process  
23 of revising our comments based on our evolving  
24 understanding of the proposed regulation, so if I say  
25 something or testify to anything that seems not quite

1 right, please forgive me ahead of time. We are still  
2 reviewing this important regulation and what it means  
3 for our businesses.

4                           Performance Based Standard Over CAFE  
5 Only Approach.

6                           Clean Energy would have preferred to  
7 see a "performance based standard" that would provide  
8 manufacturers more options or greater flexibility  
9 comply with the National Program's stated goals.  
10 Specifically, Clean Energy would like to see a combined  
11 car and truck standard that requires a vehicle to  
12 achieve a 302 gram per mile CO2 standard or a 29.8 mile  
13 per gallon target for 2012 and a "combined car and  
14 truck" standard of 250 g/mi CO2 standard or a 31.1 mile  
15 per gallon target for 2016. As we understand the  
16 proposed rule, manufacturers will be encouraged to  
17 focus on improved efficiency of vehicles almost  
18 exclusively as the rulemaking makes several references  
19 that the miles per gallon targets must be met and is  
20 less clear on the firmness of g/mi targets.

21                           While efficiency is very important,  
22 such a position forgoes critical opportunities that  
23 could be achieved by low to ultra low carbon fuels --  
24 fuels that our country needs to achieve both near, mid,  
25 and long-term carbon goals for transportation. In

1 previous conversations that I have held with EPA staff  
2 regarding these concerns, I was told that EPA's focus  
3 on fuel advancement would largely be under the  
4 Renewable Fuel Standard Phase Two rulemaking. However,  
5 it is important to note that even if the RFS Phase II  
6 is adopted as proposed, the Mid-Atlantic and Northeast  
7 States estimate that the rulemaking will only reduce  
8 the region's carbon-intensity by three percent or less,  
9 far shy of the 10 percent carbon intensity reductions  
10 goals they require or hope to acquire by 2020. This is  
11 exactly why the California Air Resources Board  
12 complemented its Pavley rulemaking with a low carbon  
13 fuel standard. Clean Energy therefore believes that it  
14 is of equal importance to encourage both "efficiency"  
15 and "low to ultra low carbon fuel" strategies to meet  
16 both greenhouses gas and energy independence goals and,  
17 where possible, incentivize the combination of  
18 efficiency and low carbon fuels strategies.

19 Tank to Wheels Undervalues Low to  
20 Ultra Low Carbon Fuels and Potentially Overvalues Zero  
21 Emission Vehicle Strategies.

22 Clean Energy believes it is  
23 potentially irresponsible, and possibly hazardous, to  
24 exclusively regulate vehicles on a "tank to wheels"  
25 basis, as such an analysis fails to evaluate the

1 upstream emissions associated with the very strategies  
2 a rulemaking aims to promote. For example, according  
3 to the lifecycle pathways provided by the California  
4 Air Resources Board for various fuels, electric  
5 vehicles that draw on a California marginal electricity  
6 mix of natural gas and renewable energy sources (which  
7 is the best case scenario) achieve a carbon intensity  
8 value of 38.78 g/MJ CO<sub>2</sub>eq whereas a CNG light-duty  
9 vehicle powered by bio-methane produced from a  
10 California landfill can achieve 11.26 G/mj CO<sub>2</sub>eq target  
11 (or roughly a 71 percent advantage over an electric  
12 vehicle). By not accounting for upstream emissions,  
13 the bio-methane advantage would be erased and the new  
14 value for that CNG vehicle would be 68 g/MJ CO<sub>2</sub> eq or a  
15 43 percent disadvantage. That's a problem because it  
16 sends exactly the wrong message to the market. Any  
17 rulemaking that places the lowest carbon fuel  
18 strategies at a disadvantage to poorer strategies is  
19 counterproductive, and we encourage both EPA and NHTSA  
20 to revise the rulemaking to prevent such an outcome.  
21 By evaluating zero emission vehicle strategies from a  
22 "tank to wheel" only perspective, the rule fails to  
23 capture the actual greenhouse gas benefit, in fact, it  
24 overestimates it, and it prevents superior strategies  
25 from entering the transportation market. We highly

1 discourage this practice.

2                                   Valuation of Air Conditioning

3 Credits Are A Concern.

4                                   Clean Energy would like to better  
5 understand the proposal for air conditioning credits  
6 based on Table III.A.3-2, whereas projected FFV credits  
7 receive six credits in 2012 and zero credits in 2016  
8 and air condition efficiency credits receive 3.1  
9 credits in 2012 and 10.6 credits in 2016. While we  
10 support the collective Agencies' efforts to ensure that  
11 flex-fuel and bi-fuel vehicles actually make use of  
12 their respective alternative fuels starting in 2016, we  
13 believe natural gas bi-fuel vehicles take full  
14 advantage of natural gas fueling opportunities.  
15 Specifically, the cost of a natural gas conversion is  
16 significantly greater than the conversion costs  
17 associated with Ethanol 85 vehicles, for example. Not  
18 to take advantage of the cost savings associated with  
19 using natural gas as a transportation fuel defeats the  
20 very economic reason for natural gas vehicle  
21 conversion. With that understanding, for at least  
22 bi-fuel NGVs, it is difficult to understand how  
23 improving the air conditioning efficiencies of a  
24 vehicle receives more credits than an FFV. Flex-fuel  
25 vehicles that demonstrate the use of alternate fuel not

1 only can provide GHG benefits that can equal or exceed  
2 the rulemakings g/mi CO2 benchmarks, but they also have  
3 an even greater potential to displace foreign oil.

4 Dedicated alternative fuel vehicles certainly have this  
5 effect and, in fact, provide greater benefits than any  
6 CAFE standard that could be credibly considered under a  
7 rulemaking when it comes to foreign oil displacement.

8 Air conditioning units, on the other hand, only address  
9 greenhouse gases, and yet they receive more credit.

10 Clean Energy is therefore concerned that by providing  
11 generous credits to air conditioning efficiency  
12 improvements, this will provide yet another obstacle to  
13 the production of vehicles that can make use of low to  
14 ultra low carbon fuels, which is counter to the  
15 rulemakings multiple objectives.

16                                   The Proposed Methane Cap Needs  
17 Further Review.

18                                   EPA is proposing a methane (CH4)  
19 emissions standard or cap of 0.03 g/mi as measured on  
20 the Federal Test Procedure, to apply beginning with  
21 model year 2012 for both cars and trucks. EPA further  
22 believes that this level for the standard would be met  
23 by current gasoline and diesel vehicles, and "would  
24 prevent large increases in future methane in the event  
25 that alternative fueled vehicles with high methane

1 emissions, like some past dedicated compressed natural  
2 gas vehicles, become a significant part of the fleet."  
3 However, EPA also notes that this source of emissions  
4 accounts for as little as 0.2 percent of the greenhouse  
5 gases from cars and light-duty trucks.

6                   Clean Energy is concerned that the  
7 notice appears to take the position that the cap is not  
8 technologically forcing but rather is meant to ensure  
9 methane emissions do not increase. The notice states  
10 that "These caps are designed to ensure that N2O and  
11 CH4 emission levels do not rise in the future, rather  
12 than to force reductions in the already low emission  
13 levels, these standards are not designed to require  
14 automakers to make any changes in current vehicle  
15 designs." It, however, is not evident what data or  
16 technology EPA is considering when it comes to natural  
17 gas vehicles. It would be very helpful if EPA could  
18 share this data with our industry that indicates that  
19 natural gas vehicles can achieve a 0.03 g/mi methane  
20 standard, so that we can be assured that EPA is not  
21 just applying a gasoline or diesel vehicle standard  
22 based on gasoline or diesel engine data. Given the  
23 overwhelming carbon benefits that natural gas vehicles  
24 provide in terms of carbon intensity, EPA should  
25 accommodate natural gas vehicles and should avoid

1 imposing a requirement that could make it impracticable  
2 or technologically infeasible for OEMs to offer  
3 dedicated or dual-fuel natural gas vehicles. EPA  
4 should further consider an average for natural gas  
5 vehicles that takes into consideration our lower  
6 overall greenhouse gas emissions performance if, in  
7 fact, the 0.03 g/mi standard is not feasible.

8                               Clean Energy feels that it would be  
9 illogical to disallow technologies that have less  
10 overall greenhouse gas emissions on a well-to-wheel  
11 basis simply because such vehicles exceed an arbitrary  
12 limit on one GHG pollutant at the tailpipe. Further,  
13 by implementing a methane cap, there is a fairness  
14 issue if it appears that EPA is intentionally treating  
15 natural gas vehicles unfairly but ignoring upstream  
16 emissions from ethanol or battery electric vehicle  
17 strategies.

18                               Alternate Fuel Vehicle GHG Credits

19 Must Remain Intact:

20                               We support the alternate fuel  
21 vehicle credits currently proposed for 2012-2015, but  
22 we also request that the two agencies expand the  
23 incentives for natural gas vehicles. We would like to  
24 see the extension of the time frame for increased  
25 credits for dedicated vehicles beyond the phase-out of

1 for FFVs and bi-fuel or dual-fuel vehicles. The  
2 credits for alternative fuel vehicles phase-out after  
3 2015. We would like to see 1 - 2 additional years in  
4 order to further incentivize dedicated vehicles. As an  
5 alternative, we would request advanced technology  
6 vehicle credits for dedicated NGVs for several years,  
7 using a multiplier as EPA has proposed for fuel cell,  
8 PHEVs, and EVs. In fact, EPA should want to provide  
9 additional incentives for dedicated vehicles as these  
10 vehicles can clearly possess low to ultra low carbon  
11 emission advantages.

12 In terms of the Proposal to Defer  
13 Standards For Manufacturer's Meeting SBA's Definition  
14 of Small Businesses:

15 Clean Energy believes this deferral  
16 is appropriate, and we look forward to working closely  
17 with EPA and NHTSA in the coming years to design  
18 appropriate GHG standards for small volume  
19 manufacturers as part of a future regulatory action.

20 In conclusion, I'd like to thank all  
21 of you today on behalf of Clean Energy for the  
22 opportunity to provide comments on the proposed  
23 rulemaking. I hope that I have shared with you some  
24 constructive observations that could potentially  
25 improve the final rulemaking. Clean Energy does plan

1 to provide further written comments and will further  
2 refine the company's position and recommendations to  
3 both EPA and NHTSA.

4                   And I'd like to say there's a lot of  
5 hard work put into this rulemaking, and we appreciate  
6 it. We're very supportive of, you probably are new to  
7 our company, Clean Energy, we are mostly a  
8 California -- although we are nationally based, but we  
9 are extremely supportive of EPA's efforts to curb  
10 greenhouse gas emissions in the transportation sector,  
11 and we are just looking for ways that we can get to the  
12 same conclusion with more flexibility, using low carbon  
13 fuels and, also, seeing if there are ways to combine  
14 efficiency strategies with our technology as well. We  
15 believe that ultimately by employing progressive  
16 strategies like bio-methane, hybrid drivetrains, plug-  
17 in hybrid drivetrains, we can achieve 2015 emission  
18 targets for greenhouse gases.

19                   MR. MEDFORD: Thank you, Mr.  
20 Campbell.

21                   If there is anybody else that is  
22 registered to speak that hasn't had a chance, this is  
23 your chance.

24                   Questions for Mr. Campbell.

25                   MS. OGE: Mr. Campbell, thank you

1 for your testimony. I appreciate it. Also, I  
2 understand from your statement that you're going to  
3 give us more detailed comments, so we're looking  
4 forward to reviewing your comments.

5 I wanted to ask if you could  
6 elaborate a little bit more about your statement that  
7 this proposal provides generous credits for AC.

8 MR. CAMPBELL: As I understand it on  
9 the table and, again, the way I look at the table, it  
10 seems to provide even more credit in 2016, 10.6  
11 credits, or 10.4 versus no credits for flex-fuel  
12 vehicles or even -- and it's unclear to me in terms of  
13 alternate fuel vehicles how much the credit would be.  
14 And, you know, that's again my -- when I began my  
15 statement, and if I'm misspeaking I apologize, but what  
16 I'm very concerned about is the air conditioning credit  
17 addresses greenhouse gases, it does not necessarily  
18 address energy dependence, which is another issue, and  
19 that's important. And we believe that our bi-fuel and  
20 dedicated products either displace oil on a very  
21 significant level, if not 100 percent, in addition to  
22 providing significant greenhouse gas reduction  
23 opportunities for the market. So we're just afraid  
24 that another obstacle might be placed before a market  
25 that's trying to grow and trying to assist the

1 agencies, both agencies in the overall goals and  
2 objectives of the rule.

3 MS. OGE: Thank you for your  
4 testimony.

5 MR. CAMPBELL: And I'd like to  
6 further say that we don't dispute giving credits to  
7 improving efficiency of air conditioning. We think  
8 it's extremely important that manufacturers do just  
9 that. We're just concerned about are we properly  
10 weighting the benefits of the two strategies.

11 MR. MEDFORD: Thank you. Both EPA  
12 and NHTSA would like to thank everyone for coming out  
13 today, and we appreciate you taking the time to testify  
14 on what we think is a very important policy issue.  
15 Thank you.

16 (The proceeding was concluded at 12:30 p.m.)

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CERTIFICATE OF NOTARY

STATE OF MICHIGAN )  
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I, Laurel A. Frogner, Certified Shorthand Reporter, a Notary Public in and for the above county and state, do hereby certify that the above proceedings were taken before me at the time and place hereinbefore set forth; that the foregoing proceedings were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to either party nor interested in the event of this cause.

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Laurel A. Frogner, CSR-2495, RMR, CRR  
Notary Public,  
Oakland County, Michigan

My Commission expires: 4-22-2015

