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CLIMATE CHANGE AND ENERGY SECURITY: PERSPECTIVES FROM THE AUTOMOBILE INDUSTRY

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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CLIMATE CHANGE AND ENERGY SECURITY: PERSPECTIVES FROM THE AUTOMOBILE INDUSTRY

WEDNESDAY, MARCH 14, 2007

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 2:00 p.m., in room 2123 of the Rayburn House Office Building, Hon. Rick Boucher (chairman) presiding.

Members present: Representatives Melancon, Barrow, Markey, Wynn, Doyle, Harman, Gonzalez, Inslee, Baldwin, Hooley, Matheson, Butterfield, Dingell, Hastert, Upton, Whitfield, Shimkus, Pickering, Buyer, Bono, Walden, Rogers, Myrick, Sullivan, Burgess, and Barton.

Also present: Representatives Stupak and Engel.

Staff present: Sue Sheridan, Laura Vaught, Jonathan Cordone, Bruce Harris, David McCarthy, Kurt Bilas, Lorie Schmidt, Chris Treanor, and Peter Kielty

Mr. BOUCHER. The subcommittee will come to order. We have a recorded vote pending on the floor of the House, and we are going to recess the subcommittee at this point for the purpose of recording that vote, but a number of members who were present at this point wanted their presence recorded so that their priority in asking questions would be preserved. And so with that having been said the committee stands in recess until 5 minutes after the conclusion of this vote.

[Recess.]

OPENING STATEMENT OF HON. RICK BOUCHER, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF VIRGINIA

Mr. BOUCHER. The subcommittee will come to order. This afternoon we continue our focus on the proper United States response to the challenge of climate change by examining the views of leaders in the automotive industry. Our goal this year is to produce legislation that has an economy-wide application. Each sector of the economy will make a greenhouse gas control contribution. Applying this broad measure to the transportation sector clearly poses special challenges.

Unlike some other industries, auto manufacturers are subject to a pre-existing regulatory program, CAFE, which is designed to pro-

mote fuel economy but which also has a limiting effect on greenhouse gas emissions, notably the emission of carbon dioxide. Much thought must be devoted to an effective means of integrating the existing CAFE regulatory program into the new regulatory structure which will specifically target greenhouse gases.

While we have not made decisions at this point about the shape of the greenhouse gas regulatory program, some form of cap and trade system is obviously a major candidate for consideration when an approach is adopted.

Therefore, in order to gain maximum benefit from today's discussion, I would welcome views from the witnesses on how cap and trade might apply to the automobile sector and how do we effectively integrate CAFE along with a cap and trade greenhouse gas emission program. Some have suggested that because transport emission sources are individually small, highly dispersed, and mobile, direct CO^2 emissions monitoring per vehicle would be too costly to administer and that it is better to use proxies for each vehicle, such as the fuel that contains the carbon, or in the alternative, the fuel economy of the vehicle. Comment from our witnesses on these possible alternative approaches would be very helpful.

If transportation fuel is chosen as the best foundation for a transportation sector cap and trade program, where in the fuel distribution system should the accounting take place and tradable credits be generated, should that be upstream at the refinery gate and the port of entry, or should it be further downstream at the point of final sale for the fuel? Another question that we are asking is whether alternative transportation fuels pose special challenges for emission trading system design.

As these questions suggest, designing a greenhouse gas regulatory program for the transportation sector is a formidable task. While I don't expect our witnesses this afternoon to have complete and detailed answers to all of these questions, in posing them I want to direct your thinking to obtaining the answers and sharing those with use as we consider our approaches to structuring this program.

We are pleased to have each of our witnesses here today, and momentarily we will be turning to them for their statements.

I want to say just a word this afternoon about our schedule for drafting a greenhouse gas control measure. Earlier this year the Speaker assured me that this committee would have the time that it needs in order to produce a carefully-constructed bill. That early assurance was reconfirmed this week by the statement from the Speaker's office that climate change legislation will not be part of the July floor agenda.

It is my intention to continue our hearing process through the early spring and then begin the bill drafting process when the hearing process is completed, with the goal of having the comprehensive climate change bill on the floor of the House later this year. House passage this year will provide ample time for a conference with the Senate during 2008, and then completion of the passage of climate change legislation and the presentation of a bill to the White House during the course of next year. That is our intention.

Pursuant to a previous agreement between the majority and minority of the committee, the chairs and ranking members of both the subcommittee and full committee will be recognized this afternoon for 5-minute opening statements. Other members of the subcommittee and other members of the full committee who are participating in our hearing today will have the opportunity to offer a 1-minute opening statement. And then pursuant to the rules of the committee, any member who decides to waive an opening statement will have added to the time for posing questions allotted to that member the time that member could have used for an opening statement.

At this time it is my pleasure to recognize the ranking member of this subcommittee, the distinguished gentleman from Illinois, Mr. Hastert, for 5 minutes.

OPENING STATEMENT OF HON. J. DENNIS HASTERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. HASTERT. I thank the chairman, and thank you for holding this important hearing to discuss CAFE proposals and the auto industry's efforts to address climate change. Three weeks ago we heard from the administration on its proposal to address CAFE as part of the President's 2010 initiative, with a goal of reducing U.S. gasoline usage by 20 percent in the next 10 years.

I am very interested to learn about other initiatives that our domestic auto manufacturers are pursuing to reduce gasoline use and then to learn about the industry's reaction to the recent light truck rule. As you know, this rule and the process that accompanies that will be a precursor for how things may play out as we discuss modifying CAFE's standards for the passenger car fleets.

Reducing gasoline consumption in part by strengthening CAFE standards addresses America's need for energy security. It must be part of our deliberations on energy and environmental policy. But CAFE is not the only means.

We need to further increase our efforts to facilitate the use of alternative fuels, such as E–85 and biodiesel. For example, the E–85 dispensing pumps still await approval by Underwriters Laboratories, who have been dragging their feet now for almost a year. We also need to get more vehicles on the road that can actually use E–85. I want to hear from all the panelists on their efforts to increase production of flex fuel vehicles and their alternative-fuel vehicles and how soon in their best estimates we can expect real worldly results.

I realize markets don't create themselves overnight. It will take time for the mainstream consumers to learn and appreciate the benefits of alternative fuels. And while I realize that industry is investing hundreds of millions of dollars in new advanced technologies like hybrid vehicles, fuel cells, and hydrogen vehicles, clearly more needs to be done. We all know the number of flex-fuel vehicles currently on the road remains relatively small, and the number of drivers who know their vehicles are especially equipped is even smaller. I am very interested to learn how the auto industry is currently working to address this and other lingering concerns that are hindering the advancement of these fuels such as decreased fuel economy, price sensitivity, and market availability.

To further complicate matters, even the transition to alternative fuels at retail gas stations has been complicated by infrastructure issues such as the UL suspending certification for fuel dispensers for E–85 because of unfounded corrosion concerns. At this time when others are being asked to do more to reduce emissions, does the auto industry need to be doing more to work through all the aspects of the market, from manufacturer to retail to fueling?

Regarding the CAFE and the CAFE bill that passed this committee last year, it like the administration bill, would have given the Department of Transportation authority to establish fuel economy standards for passenger cars on a model-size by model-size basis. Had we enacted it, the CAFE reform process would already be well under way, and we would have begun enjoying the fuel savings much sooner. So now we have some catching up to do.

And while the administration has suggested a 4 percent increase in fuel efficiency it is controversial. It is either too aggressive or not aggressive enough. I believe any authority that is derived from a rulemaking should take careful consideration of safety, cost to automakers, the technologies involved, and the market and consumer choice. We in Congress are certainly not the experts on all of these issues. The examinations this committee gave last year yielded a bill with excellent balance in my view, and I am interested in hearing from our panelists where they are on these issues today. I look forward to their testimony and yield back the balance of my time. Thank you, Mr. Chairman.

Mr. BOUCHER. The Chair thanks the gentleman from Illinois and now recognizes the gentleman from Pennsylvania, Mr. Doyle, for 1 minute.

OPENING STATEMENT OF HON. MIKE DOYLE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. DOYLE. Thank you, Mr. Chairman. Mr. Chairman, I have consistently voted against arbitrarily raising CAFE standards because I felt that that policy could threaten thousands of jobs across our country. However, I must tell you I have grown extremely frustrated by the slow pace of the industry's progress in achieving better fuel economy. It is time for excuses to end and time for us to work together on a real solution for improvement.

The question is no longer if we are going to do something but rather what are we going to do. And there is no silver bullet to fix the problem. We are left with many options as to how to achieve this goal. I look forward to hearing as to how our panel will work as active partners in the pursuit of better fuel economy. I want to know what they can and will do, and I would like to hear what they believe we can do here in Washington to assist them.

Global warming is not a problem that can be fixed in Washington, Detroit, or any specific location. It is a problem that will take comprehensive solution pursued by a diverse group of participants from every sector of the American economy. By the end of this hearing I want to know if the auto industry will be a real partner. As such, I will pursue policies that reflect that level of commitment. I yield back.

Mr. BOUCHER. I thank the gentleman and now call on the ranking member of the full committee, the gentleman from Texas, Mr. Barton for 5 minutes.

OPENING STATEMENT OF HON. JOE BARTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BARTON. Thank you, Mr. Chairman. I appreciate you holding the hearing, I appreciate our witnesses being here today, especially given the status in their industry. It is good to have you here, but I want you to get back to your offices so we can keep the American economy going as efficiently as possible.

We are having a series of hearings, and I want to thank Mr. Boucher and Mr. Dingell for these hearings on global warming and climate change. I am a skeptic. I don't think we need to be rushing to legislation on this issue given the fact that our Earth cycles in thousands of years in terms of its climate warming or cooling. It seems silly to me to have to rush to judgment in weeks or even months on an issue of this importance.

I am glad that we have our automobile industry representatives here today, both on the management side and the labor side. We are going to look at the CAFE issue and how it has been addressed in the past and how it may need to be addressed in the future. Last year this committee passed a CAFE reform bill. It passed committee, did not go to the floor, did not go to the Senate, did not become law. Had the bill that this committee passed become law, we would be doing for automobiles what we have been doing for several years for light trucks. We would have given the Department of Transportation the authority to establish a fuel economy standard on a model-size by model-size basis. That bill did not pass, but I think it was helpful in raising public awareness that there are current problems with the current CAFE system, and the current CAFE system is in need of reform

With the recent success of the light truck rule, the administration has further expanded these concepts in its 2010 proposal with reducing gasoline consumption through increased vehicle efficiency being one of its top priorities.

I am particularly interested in hearing today our panel's reactions to the administration's suggested yearly 4 percent increase in fuel efficiency. How feasible is that goal? What kind of repercussions would occur within the industry if the administration proposal were enacted or if there were a number set in statute to accomplish that target? What market-based lessons have been learned through the recent history of gasoline price spikes and declines, and what are the industry's suggestions for moving forward, especially if the current status quo is not an option?

I am also interested in hearing from our witnesses regarding the administration's proposal about tradable credits for manufacturers to buy and sell CAFE. I would especially like to hear from Toyota and GM, since Toyota has said they won't sell them, GM has said they won't buy them. Some say that allowing the trading of these kinds of credits could add flexibility in meeting CAFE goals, but there are still strong concerns and several uncertainties with this concept. So I really hope our witnesses address that issue today.

It seems to me that a CAFE standard must be based on science and also on safety. We want people who know what they are doing to get the right balance of mileage and safety. We expect them to do it without destroying American jobs, especially jobs like the 2,000 assembly jobs at the GM assembly plant in my district in Arlington, Texas. This is one of the most complicated programs that NHTSA administers, and frankly, scientists and engineers should be better equipped to do it than activists and politicians.

With that, Mr. Chairman, I will yield back. Again, I want to thank our witnesses for being here. This is a very important hearing, and I hope that all members will stay and participate.

Mr. BOUCHER. Thank you, Mr. Barton. The chairman of the full committee, the gentleman from Michigan, Mr. Dingell0 is recognized for 5 minutes.

Mr. DINGELL. Mr. Chairman, I waive my right to an opening statement at this time. I want to commend you for your leadership and for the responsible and aggressive way in which you are handling these matters. I want to thank our witnesses for being with us, and note the presence of our old friend, Dave McCurdy, the new president of the Alliance of Automobile Manufacturers.

Mr. Chairman, I defer then my opening statement, I commend you, and I thank you for your courtesy to me.

[The prepared statement of Chairman Dingell follows:]



Statement of Rep. John D. Dingell
Chairman
Committee on Energy and Commerce

SUBCOMMITTEE ON ENERGY AND AIR QUALITY
HEARING ON "CLIMATE CHANGE AND ENERGY SECURITY: VIEWS FROM THE AUTOMOBILE INDUSTRY"

March 14, 2007

Thank you for calling this important hearing. Today the Committee continues its examination of global climate change. We have before us representatives from the five most significant participants in the automobile industry in the United States. I look forward to hearing their views on this pressing and immediate concern for the Congress.

The role the automobile industry plays in our Nation's economy is considerable. In my State of Michigan, General Motors Corporation, Ford Motor Company, and Chrysler Group hold a vital place in the economy and the community. The industry's impact extends beyond my State's borders. Light vehicle sale and production comprise nearly 4 percent of the Gross Domestic Product for the Nation, and according to a recent study, the automobile industry generates roughly 13.3 million private sector jobs across the country.

The contribution of the transportation sector, particularly light duty passenger vehicles, to greenhouse gas emissions is significant. According to the Environmental Protection Agency, approximately 16 percent of greenhouse gas emissions are attributed to passenger cars. As this Committee takes action to address climate change, the Committee must consider these emissions in addition to other large greenhouse contributors.

The discussion of how best to address the environmental and economic impacts of automobile emissions is not a new one. Ever since this Committee authorized the National Highway Traffic Safety Administration (NHTSA) to set Corporate Average Fuel Economy (CAFE) standards in 1975, industry representatives, environmental advocates, and policy makers have grappled with the issue of how regulatory regimes could be reformed and implemented to improve the efficiency of passenger vehicles. This debate has taken place in numerous contexts. Over the years, proponents of reform have discussed raising, lowering, or reforming CAFE standards. Energy conservation, consumer protection, economic growth, oil independence, and as recently as last Congress, rising gas prices at the pump, have all fueled these debates.

This year, the Committee has undertaken an inquiry into an issue that is arguably more critical than, though not unrelated to, any of the above issues. Scientists have been telling us for years that greenhouse gas emissions from human activity are contributing to warming the planet, and the recent Intergovernmental Panel on Climate Change report expressed little doubt that this conclusion is a justifiable one. I would urge both the Members of this Committee and the witnesses before us not to take this issue

lightly. It should cause all to reevaluate their approach to energy policy in the transportation sector and the economy as a whole.

Ladies and Gentleman, Hannibal is at the gates. The old debate is no longer sufficient. It is time to stop emphasizing what is wrong and what will not work. We need to talk about what can be done, and what can work. This should no longer be a political discussion; the time has come for us to discuss policy. I want to hear from our witnesses about their ideas to address climate change, and I want to hear what they think about the various policy proposals we have already seen.

It is my hope that our hearing will be productive rather than divisive, and that we see a genuine commitment on both sides of the aisle and on both sides of the dais to generate an effective and workable solution. We cannot delay, but nor should we rush flawed approaches without hearing from every group involved. Indeed, every industry, including those in the transportation sector, will have to contribute to the solution. I will take heed of what I hear today, and I would urge my fellow Committee Members to do the same. Thank you.

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(Contact: Jodi Seth or Alec Gerlach, 202-225-5735)

Mr. BOUCHER. The gentleman from Michigan waives his opening statement. The gentlewoman from California, Ms. Harman, is recognized for 1 minute.

Ms. HARMAN. Thank you, Mr. Chairman. I want to apologize for having to leave at 3:30 to chair another hearing, but I come from a part of the country where the automobile is more than just a mode of transportation. In Los Angeles the car is a cultural symbol and a way of life. It is no surprise then that the North American headquarters including the credit and R&D facilities of two major automakers are based in my district.

I had a longer statement which I will put in the record, but I do especially want to welcome my constituent, Jim Press, and to salute the efforts that Toyota is making to make our planet healthier and a bit safer. The witnesses today can either take the opportunity to shape change, or they can resist it. I hope they will take the opportunity to shape change, because change surely will come. Today is the first birthday of my first granddaughter, and I would love to give Lucy, her name is really Lucy, a safer and healthier world, and working together we can do that. Thank you.

[The prepared statement of Ms. Harman follows:]

PREPARED STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

I come from a part of the country where the automobile is more than just a mode of transportation. In Los Angeles, the car is a cultural symbol and a way of life. It is no surprise that the research and development facilities of two major automakers are based in my district.

Since I was first elected to Congress in 1992, I have watched with pride as my constituents engineered leaps and bounds in automotive technology and design. Hybrid cars—to cite one example—represent the first step in meeting the energy challenges of the 21st century that we are here to discuss and resolve. I'm proud to say that California has played an indispensable role in that technology.

But hybrids are only the first step. The breakthroughs of the future—including plug-in hybrids and hydrogen fuel-cell vehicles—will be symbols of not only energy efficiency and changing business models, but of good corporate citizenship. We will rely on automakers to help us solve the climate change and energy independence problems we face today.

The question is not whether we are pushing the ball forward—it is clear from the testimony we will hear today that innovation in the automotive industry is alive and well. The question is whether it will come fast enough.

The science is in, and the news from the Middle East depressingly repetitive. Energy independence and reductions in greenhouse gas emissions cannot come soon enough.

I hope our witnesses can help us find ways to push the envelope on R&D. As I've said before, done right, this is a win-win for both our planet and our economy.

Mr. BOUCHER. Thank you, Ms. Harman. The gentleman from Michigan, Mr. Upton, for 1 minute.

Mr. UPTON. I am going to defer and reclaim my minute in questions.

Mr. BOUCHER. The gentleman defers. The gentleman from Indiana, Mr. Buyer, for 1 minute.

OPENING STATEMENT OF HON. STEVE BUYER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF INDIANA

Mr. BUYER. Thank you. I would like to thank all of you for coming. I agree with Mr. Barton. You live pretty busy lives, and I am glad you are here. I am also glad that Mr. Boucher is chairing this

subcommittee. He is thoughtful, and he is deliberative, and I think you are here because I am just as concerned.

Washington, DC, is a dynamic city that loves to make decisions and judgments based on the emotion of the moment. Now, if you gentlemen did that in your business, you wouldn't last very long. And Washington, DC, has a very poor reputation, and so your concerns are real, and I understand that is why you are here. In Indiana, obviously, we have a great history with the automobile invented there in Kokomo, Indiana. The 15 years I have represented 30 counties of Indiana, and I have got manufacturing facilities of every one of you, and a lot of, you are successful because there are a lot of great workers out there and innovators that are making it happen. And they are equally as concerned.

So we will work through this, and I appreciate your presence here today.

Mr. BOUCHER. Thank you, Mr. Buyer. The gentleman from Washington State, Mr. Inslee, for 1 minute.

OPENING STATEMENT OF HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. INSLEE. Thank you. I want to welcome Alan Mulally, native little Boeing company out in our neck of the woods in Washington State. I want to note our success in aeronautics because we believe in game changing, changing the game in aeronautics, and I am optimistic now we are going to tackle this beast of global warming because we are going to have some game changers out of your industry.

And what I am interested in is how we can help create incentives and conditions for those true game changers to hit the road, and the reason I say that is that we have to reduce our CO^2 emissions by a full 80 percent to stabilize CO^2 emissions to pre-industrialized levels by 2050. Eighty percent reductions. We cannot do that by modest baby steps, incremental even, improvements. We have got to think of having whole revolutions in automobiles in this country, and I believe it is our destiny to lead the world to do that, and you have got the geniuses to do it.

So what I am interested in particularly is how we shape a regulatory environment to create an incentive that have true revolutions in the fuels we use so that we can move to advanced cellulosic ethanol and have the pumps available and the flex-fuel vehicles for Americans to use it broadly, not sort of on a marginal use. How we move to a true electrical platform, how we get to fuel cells, how we use the technology that is there today as quickly as possible to get it on the road. And I just think we have been stuck arguing about baby steps for now for 20 years, and we have got cars with less mileage than they did when Jimmy Carter was President of the United States.

So I look forward to this revolution. I would like to think this is the start of that revolution today and look forward to working with you.

Mr. BOUCHER. Thank you, Mr. Inslee. The Chair now recognizes the gentleman from Michigan, Mr. Rogers, for 1 minute.

OPENING STATEMENT OF HON. MIKE ROGERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. ROGERS. Thank you, Mr. Chairman. Thank you for being here. I think it is incredibly important that we find the balance in this, and I want to commend all of you on the work that you have done, and sometimes I don't think that we in Congress give enough kudos to the investment, the amount of dollar investment that you make in research and development to get us to that next generation of alternative fuels. Your work on lithium batteries, your work on the next generation of ethanol engine, your hybrid technology. I know many of your companies are doing, you are looking at putting hybrids on heavier vehicles so you get a higher yield, a bigger bang for the buck. I know many of you have many lines that are over 30 miles per gallon.

So I hope that in this this is your opportunity to talk to us about that kind of investment that you make and the success that you think is right around the corner, and I think it is really exciting where we are in cars. My generation was going to the moon. The next generation was the E economy, and I think this generation is going to be that alternative fuel vehicle that Americans want to buy and park in their car and brag to their friends about. And I can guarantee you, if it is designed by Congress, it ain't going to be all that attractive. If you design it and develop it and build it and get it on those parking lots around those auto dealers, I know Americans will buy them, and we are all going to be better off for it.

So I am eager to hear how you can do that, how we can help you and not punish you to that end. And I look forward to your testimony today. Thank you.

Mr. BOUCHER. Thank you, Mr. Rogers.

I am now pleased to recognize the gentlewoman from Oregon, Ms. Hooley, for 1 minute. Ms. Hooley waives her statement. The gentleman from Texas, Mr. Gonzalez, for 1 minute. Mr. Gonzalez waives his statement

The gentlewoman from Wisconsin, Ms. Baldwin, for 1 minute.

OPENING STATEMENT OF HON. TAMMY BALDWIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Ms. BALDWIN. Thank you, Mr. Chairman, and thank you to today's witnesses. It is one of the largest industries in the United States. The automobile industry plays an important role in addressing climate change, and in addition to being the major player in ongoing discussions about CAFE standards, auto companies also should be involved in conversations about increasing the energy efficiency through their day-to-day manufacturing operations. Both emissions output and energy use will only increase as more cars are on the road.

For far too long I think that Congress has failed to take action or show the leadership required to meet today's challenges. We have not required that manufacturers take advantage of or make use of the most energy-efficient and technologically-advanced products that are available today. We have set CAFE standards that fall far below levels that we are currently capable of achieving.

Quite frankly, until recently we in Congress have taken the easy way out. I think now is the time to push that envelope, and with your cooperation and input show that the American auto industry can be a leader in efficient and effective climate solutions.

I look forward to hearing your testimony today about how you plan to contribute in that bold effort. Thank you, Mr. Chairman.

Mr. BOUCHER. Thank you very much, Ms. Baldwin. Now recognized is the gentleman from Texas, Mr. Burgess, for 1 minute.

Mr. BURGESS. Mr. Chairman, I will defer and save time for questions.

Mr. BOUCHER. Mr. Burgess waives his statement.

The gentleman from Oregon, Mr. Walden, for 1 minute.

Mr. WALDEN. Mr. Chairman, I am going to waive as well.

Mr. BOUCHER. Mr. Walden waives his opening statement. The gentleman from Louisiana, Mr. Melancon, for 1 minute. Mr. Melancon waives.

The gentleman from Kentucky, Mr. Whitfield, for 1 minute.

Mr. WHITFIELD. I will waive.

Mr. BOUCHER. Mr. Whitfield waives. And the gentleman from Maryland, Mr. Wynn. Mr. Wynn also defers.

We now have an opportunity to hear from our witnesses, and I want to say a word of welcome to them this afternoon. We have a very distinguished panel of witnesses to share their thoughts with the subcommittee today. Mr. Ron Gettelfinger is the president of the United Auto Workers, which represents more than 640,000 workers and 500,000 retirees of the United States. Mr. Rick Wagoner is the chairman and chief executive officer of the General Motors Corporation, which is the largest passenger car and light-duty truck manufacturer in the world with approximately 150,000 direct employees in the United States. Jim Press is the president and chief operating officer of Toyota Motor, North America, which has operated in the United States since 1957. It directly employs approximately 34,000 workers in the United States. Alan Mulally is the new president and chief executive officer of the Ford Motor Company, headquartered in the district of our full committee chairman in Dearborn, Michigan. Ford employs approximately 280,000 workers in more than 100 plants world wide. Tom LaSorda is the president and chief executive officer of the Chrysler Group of DaimlerChrysler Corporation. The company employs more than 382,000 workers with more than 120,000 located in the United States. We welcome each of our witnesses. Without objection your prepared written statement will be made a part of the record, and we would welcome your oral summary of approximately 5 minutes each. Mr. Gettelfinger, we will be pleased to begin with you.

STATEMENT OF RON GETTELFINGER, PRESIDENT, INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE AND AGRICULTURAL IMPLEMENT WORKERS OF AMERICA, DETROIT, MI

Mr. GETTELFINGER. Thank you. Mr. Chairman, my name is Ron Gettelfinger. I am president of the UAW, and we appreciate the opportunity to testify before this subcommittee.

The UAW believes that climate change and energy security are serious problems. We urge Congress to pursue initiatives that will

deal with these issues in an integrated and balanced manner that protects jobs and benefits for American workers and retirees.

To address the problem of global warming, the UAW supports the establishment of an economy-wide, mandatory, tradable-permits program that will slow the growth of and eventually reduce greenhouse gas emissions in the United States. We believe this type of cap and trade program should be done on an upstream basis in order to minimize regulation and to ensure that all sectors of the economy participate in a proportionate manner.

In considering auto sector policies to address climate change and energy security, the UAW believes Congress should keep in mind several key principles. To be effective, any policies must address the fuels that go into vehicles as well as the efficiency of the vehicles themselves. The promotion of alternative fuels can make an enormous contribution to reducing greenhouse gas emissions and our dependence on foreign oil.

Furthermore, any auto policies requiring improvements in vehicle efficiencies should include measures to help level the playing field in the automotive industry and to provide struggling manufacturers with the resources needed for retooling efforts. Any assistance should be tied to investments in domestic production that will generate jobs for American workers and help the overall U.S. economy. It should also be structured in a manner that recognizes and helps to address the fundamental imbalance in the auto industry related to retiree healthcare legacy costs. Without such measures the UAW would be deeply concerned about the economic feasibility of any proposals to mandate significantly higher vehicle efficiency standards.

In light of the extremely serious financial conditions of General Motors, Ford, and DaimlerChrysler, and the disparate burden they face in retiree healthcare legacy costs compared to their competitors, the UAW believes that the imposition of stringent increases in vehicle efficiency standards could lead to calamitous results. This could include the closing of additional facilities and the loss of tens of thousands of additional automotive jobs in this country. It could also include the loss of healthcare coverage for 500,000 retired workers and their families.

The UAW urges Congress to explore the feasibility of establishing an additional carbon control policy requiring reductions in the carbon emissions of light-duty vehicles, as well as reductions in the carbon intensity of the fuels that go into these vehicles. This two-pronged approach could make a major contribution to reducing greenhouse gas emissions and contribute enormously to a reduction in oil consumption.

The UAW also urges Congress to use tax or other incentives to encourage domestic production of advanced technology vehicles and their key components. As was demonstrated by a November 2004, study conducted by the University of Michigan, this type of approach would help to maintain and create tens of thousands of automotive jobs in this country. At the same time it would help to accelerate the introduction of these advanced-technology vehicles and thereby reduce global warming emissions and our dependence on foreign oil.

The UAW believes Congress should pursue several policies to promote the use of alternative fuels in motor vehicles. We would support legislation mandating that certain percentages of all vehicles sold in the U.S. by each automaker must be flex-fuel capable by specified dates. We also would support incentives or mandates relating to the conversion of filling stations so they have the capability to distribute alternative fuels.

The UAW believes that changes in the CAFE Program are the least desirable option for addressing the problems of climate change and energy security. Moving to an attribute-based CAFE system for passenger cars would enable auto manufacturers to offshore all of their small car production. Over 17,000 American workers are currently employed in five U.S. assembly plants that produce small passenger cars. Almost 50,000 American workers produce parts for these vehicles. To prevent the loss of these jobs and to prevent the auto companies from upsizing their vehicles, thereby resulting in worse overall fuel economy, the UAW urges Congress to impose an anti-backsliding requirement on any new CAFE rules.

In conclusion, the UAW appreciates this opportunity to testify before this subcommittee concerning this critically-important issue of climate change and energy security. We look forward to working with this subcommittee to fashion measures that will enable the U.S. to make significant progress in reducing greenhouse gas emissions and oil consumption while protecting jobs and benefits for American workers and retirees. Thank you.

[The prepared statement of Mr. Gettelfinger appears at the conclusion of the hearing.]

Mr. BOUCHER. Thank you very much, Mr. Gettelfinger. Mr. Wagoner.

STATEMENT RICK WAGONER, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, GENERAL MOTORS CORPORATION, DETROIT, MI

Mr. WAGONER. Good afternoon, Mr. Chairman and members of the committee. I am Rick Wagoner, chairman and chief executive officer of General Motors Corporation. Thank you for the opportunity to speak about advanced technology and the very important subjects of climate change and energy security.

The global auto industry as a business necessity and as our obligation to society is developing alternative sources of propulsion based on diverse sources of energy to meet the world's growing demand for our products.

At GM we are committing massive resources to this effort, and we think it is very important for us and for the American public that we are working on the right things, things that will really make a difference in reducing oil consumption and CO^2 emissions.

At GM we are fully prepared to discuss these issues, including carbon constraints on the U.S. economy, and we believe the discussion should begin with a frank evaluation of the Corporate Average Fuel Economy Program.

The stated goals of the original CAFE Program were to reduce U.S. gasoline consumption and oil imports. However, because the number of vehicles on the road has nearly doubled since CAFE was

enacted and the total number of vehicle miles traveled has also nearly doubled, U.S. gasoline consumption has increased by 60 percent and U.S. oil imports have increased by more than 100 percent. These increases have occurred despite the fact that since CAFE was enacted automakers as a whole have increased new vehicle fleet fuel economy for light trucks by 60 percent and more than doubled it for passenger cars.

I am proud to note that General Motors has improved its fuel economy more than any other major auto manufacturer over this period, and I hasten to point out that we are applying a broad range of technologies to continue improving fuel economy going forward.

But clearly, no matter how you measure it, the CAFE Program has failed dramatically in meeting its stated goals. And yet our, for our Nation, the original goals of the CAFE legislation remain as important as ever. In fact, more so. It is time to move away from approaches that don't solve the problem and on to solutions that address not only the legitimate and important issue of reducing U.S. gasoline consumption and oil imparts, but also the critical challenges presented by CO^2 emissions. And the good news is that we now have these solutions within our grasp.

In the near term the best opportunity for reducing gasoline consumption, oil imports, and greenhouse gas emissions is through increased use of biofuels, and the biofuel with the greatest potential to displace petroleum-based fuels in the U.S. is ethanol. Consider the differences between CAFE and ethanol. A 4 percent per year CAFE increase would be extraordinarily expensive and technologically challenging to implement. On the other hand, GM, Ford, and DaimlerChrysler have already committed to make half of our annual vehicle production biofuel capable by 2012.

Beyond that, a 4 percent per year increase in CAFE according to the administration's analysis—would save 8.5 billion gallons of gasoline annually by 2017. That is less than half of the projected growth in American oil consumption. In other words, even with this proposed CAFE increase, as difficult as it is, America will still be using more and most likely importing more oil than ever before, as well as producing more CO^2 emissions.

On the other hand, if all the E–85 capable vehicles on the road today, along with those that GM, Ford, and DaimlerChrysler have already committed to produce over the next 10 years, if they were to run on E–85, we could displace 22 billion gallons of gasoline annually. And if all manufacturers made the same commitment, we could increase the savings to 37 billion gallons of gasoline annually. That is more than quadruple the savings that a 4 percent per year CAFE increase would achieve and very importantly, enough to actually reduce America's oil consumption by more than 10 percent versus today's levels as well as CO^2 emissions.

The potential of biofuels like E–85 is to significantly displace petroleum is within our grasp today. The vehicles are on the road or in the works, but they are not being fully utilized because of the constraints on E–85 supply and distribution. With continued push from Congress and the administration to grow biofuel production and distribution, including next generation cellulosic ethanol, we can make a big difference very quickly.

So E–85 offers tremendous opportunities to reduce oil consumption and imports even within a decade. Is there even more we can do beyond that? Absolutely, yes. And we are already working on it. At GM we are making a major commitment to electrically-driven vehicles, including development of plug-in hybrids, fuel-cell vehicles like the Chevy Sequel concept, and range-extended electric vehicles like the Chevy Volt. Why are we doing this now? Because of recent advances in energy storage technology, specifically in lithium ion batteries and hydrogen fuel cells. While not yet ready for prime time, in our view these technologies are getting close to commercial reality. And this is an area where Congress can really help by significantly enhancing funding for domestic advanced battery research and development and also expanding funding for development of hydrogen and fuel-cell technology.

In summary, we at GM believe now is the time for a new, more comprehensive and forward-looking national energy strategy that insures we are working on the right things, things that will really make a difference in reducing oil consumption and CO^2 emissions. At GM we are willing and able to play a leadership role in helping develop and implement that strategy.

Thanks very much, and I look forward to answering your questions.

[The prepared statement of Mr. Wagoner appears at the conclusion of the hearing.]

Mr. BOUCHER. Thank you, Mr. Wagoner. Mr. Press.

STATEMENT OF JIM PRESS, PRESIDENT AND CHIEF OPERATING OFFICER, TOYOTA MOTOR NORTH AMERICA, NEW YORK, NY

Mr. PRESS. Good afternoon, Mr. Chairman and members of the subcommittee. I am Jim Press, president of Toyota Motor North America. I am both humbled and honored to have this opportunity to discuss these issues of climate change and energy security with you today.

Two of Toyota's founding principles are the elimination of waste and service to society. These principles permeate our products and our actions now and well into the future. They are part of our DNA, and they guide us as we address climate change as well as energy security issues.

Toyota has long been mindful of and accepts the broad scientific consensus that climate change is occurring and will continue unless there are significant and coordinated global efforts to slow the growth of man-made greenhouse gas emissions. Toyota is committed to continued action to address climate change and promote greater energy diversity. We plan to increase the fuel efficiency of our products, develop new markets for advanced vehicle technology and alternative fuels, and reduce the greenhouse gas footprint from our vehicles, manufacturing, and distribution portions of our business.

The motor vehicle industry has a responsibility to be part of the solution, but these issues cannot be addressed by the industry alone. U.S. action on both issues must, by definition, be national in scope and involve a range of industries and sectors of the economy, as well as the consumers.

The centerpiece of our fuel efficiency efforts has been hybrid technology, a revolutionary powertrain system derived from our in-house research and development programs. This innovative system is designed to substantially increase vehicle fuel economy and reduce emissions significantly. Toyota hybrid vehicles are over 70 percent cleaner for smog-forming emissions than the average new vehicle and can offer up to twice the fuel economy. And beyond that hybrid technology is an essential and enabling element of future powertrains, such as plug-in hybrids and fuel cells.

The year 2007, marks the 10th year of our Prius, the first hybrid. I am happy to say the introduction of Prius was a sound business decision. Last year the Prius was our third best-selling passenger car in the U.S. after Camry and Corolla. As of January 2007, we have sold nearly half a million hybrids profitably in the United States, and we now offer six different hybrid models.

Hybrid technology embodies our core belief that the most effective solutions are mass market solutions, and that is why we see hybrid technology as critical to the commercialization of future drivetrains. Many of the same components found in our current hybrids are being used in hydrogen fuel cell vehicles that we are currently testing here in the United States. The same can be said for plug-in hybrids and other technologies we are pursuing.

It is not a lack of will that is keeping plug-in hybrids from commercialization. It is the absence of technical breakthroughs to address the issues of battery technology, weight, and cost.

While fuel cell and plug-in hybrid research continues, so, too, does our application of advanced technology on conventional gasoline engines. We are aggressively pursuing clean diesel technology, as well as vehicles capable of operating on renewable fuels such as ethanol and biodiesel.

In addition to vehicle technology improvements, in-use impacts from the existing fleet of vehicles can be reduced through a series of measures. For example, smarter land use planning, increased reliance on mass transit, and greater use of so-called intelligent transportation systems can reduce traffic, congestion, and energy consumption.

Toyota supports the use of national performance-based regulatory programs, as long as the programs are fair, technologically feasible, cost effective, and they do not discourage early compliance, technological innovation, or safety. In this context, we support increasing both the passenger car and light-duty fuel economy standards and giving NHTSA the authority to reform the passenger car standard.

The greenhouse gas impact from motor vehicles is inexorably linked to their fuel economy. Toyota's fleet in the United States has exceeded the applicable fuel economy standards since their inception in 1978. In 2005, our combined car and truck fleet economy was 28.9 miles per gallon, exceeding the combined average of the rest of the industry by 4.1 miles per gallon. That is nearly 17 percent. We have done this while providing a full range of vehicles from subcompacts to the best-selling passenger car, Camry, the best-selling luxury vehicle line, Lexus, as well as a full line of SUVs and trucks.

Toyota has a proven record of bringing advanced technology to market and achieving high levels of fuel economy. Over their lifetime, the past 10 model years of Toyota vehicles sold in the U.S. will use 11 billion fewer gallons of gasoline. That is 265 million fewer barrels of oil than if we had just met the standards. These same vehicles will emit over 100 million metric tons less of carbon dioxide.

Our commitment to reducing the greenhouse gas footprint of our products does not stop there. Energy conservation and energy efficiency are core considerations in the life cycle of our vehicles. In 2002, we set an internal target to reduce energy consumption from our manufacturing operations by 15 percent per unit of production by 2005, compared to a baseline of 2000. We have not only met but we exceeded that target ahead of schedule, and we now have an even more aggressive goal for the 2007–11, time period.

Tackling climate change and fostering energy diversity require careful deliberation and balancing with other national priorities. It also demands innovation, unconventional thinking, and most of all, action. I believe the time is right to enlist the immense talent and the might of the auto industry to help solve some of the key issues of our time. As an industry we have an obligation to be part of the solution, not the problem. Toyota pledges to do its part to lend a hand and to work with the rest of the world to help create real solutions.

I thank the subcommittee for its interest in our views and for this opportunity to share some of our current thinking. We will be happy to respond to your questions. Thank you.

[The prepared statement of Mr. Press appears at the conclusion of the hearing.]

Mr. BOUCHER. Thank you very much, Mr. Press. Mr. Mulally.

STATEMENT OF ALAN R. MULALLY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FORD MOTOR COMPANY WORLD HEADQUARTERS, DEARBORN, MI

Mr. MULALLY. Good afternoon. I am Alan Mulally, president and chief executive officer of the Ford Motor Company. It is a pleasure to be here and provide our perspective on these important issues.

Ford Motor Company operates facilities in 45 States. About one in every five American autoworkers is employed by Ford. Beyond direct employment of over 100,000 people in the United States, Ford impacts nearly 2 million American jobs. Over the last 3 years Ford has spent nearly $23 billion on research and development, the vast majority of which has been here in the United States. Ford was the first company in our industry to issue a report on the challenges of climate change for our business going forward, and I also brought a copy of that I would like to add to the record for your reference.

In addition, since 1999, we have had a specific focus on sustainability, the triple bottom line that addresses the environment, financial, and social impacts. Today I am here to tell you that Ford remains committed to working with you to secure our energy future and address climate change. But we need Government to be our partners, not our adversaries.

Energy security and climate change issues are linked. An effective policy for both must reflect an integrated approach among key stakeholders, including the automobile industry, the fuel industry, Government, and of course, the consumers.

Yes, we need more efficient vehicles, but we also need lower carbon fuels and policies that affect travel demand, infrastructure development, and consumer decisions. But in the end it is the consumers that will decide what they buy and how much they drive. This consumer demand, future developments in technologies, and ever-changing markets and political uncertainties require flexible solutions as well. The business strategy that Ford implements and the policies that we encourage must have the flexibility to meet a range of scenarios. There is, as was pointed out, no silver-bullet solution, and that is why Ford is investing in a broad range of innovative technologies.

CAFE isn't a silver bullet either. When the CAFE law was passed in the 1970's, the goal was to reduce our dependence on foreign oil. Frankly, that did not work. Even though today's average light truck gets better fuel economy than a 1970's compact car, the unintended consequence was that as gas prices fell, people actually drove more.

Ford will continue to do our part in producing flex-fuel vehicles and improving fuel efficiency. We support increasing CAFE standards to the maximum feasible levels and reforming the passenger car CAFE structure similar to the light-truck reform.

We also support taking the policies out of the CAFE decision. Setting CAFE standards can only be properly accomplished after a thorough analysis of the data; the technology data, economic data, and safety data. We believe NHTSA has this capability.

Ford also recognizes that we must particular in the solution to these issues, and we have invested substantial resource money into the research and development of innovative vehicle technologies. We are developing a range of advanced technologies that improve fuel efficiency through advanced gasoline engines and accommodate a range of alternative fuels including hybrid flex fuel vehicles, clean diesel, hydrogen internal combustion engines, and hydrogen fuel cells.

We are proud that Ford produced the first American-made full hybrid electric vehicle on the road, the Ford Escape hybrid. We have been building flexible-fuel vehicles for over a decade and have placed more than two million of these vehicles on American roads, and that is only a start. Just a few weeks ago we introduced the Ford Escape hybrid, electric E–85 demonstration project that combines two petroleum-saving technologies; hybrid electric power and E–85 flex-fuel capability.

Though there are many technical and cost challenges to address, if just 5 percent of the fleet were powered by E–85 hybrids today, oil imports could be reduced by 6 million gallons of gasoline each year. We stand ready with the technology, and we are willing to lead the way, but we need a partner with Government and the fuel providers. We must have renewable fuel infrastructure before we can effect change. We believe that there is a substantial opportunity to use American-grown renewable fuels to reduce carbon emissions and the nation's dependence on foreign oil. Today's corn

ethanol has the ability to reduce CO^2 emissions by approximately 25 percent. Tomorrow's cellulosic ethanol can increase the savings to about 85 percent, all while reducing imported oil.

Ford also supports incentives that encourage the production, distribution, and the use of these low carbon renewable fuels and flex-fuel vehicles capable of running on E–85. We can have a single American solution to both of these problems. However, Congress will have to make some tough choices. In the transportation sector alone there are a number of possible ways to limit carbon emissions. Increasing CAFE too quickly and aggressively without appropriate engineering lead times or necessary customer incentives to drive market demand will have a serious negative consequence on the American automobile industry. And it would significantly reduce customer vehicle choice. We can't lose sight of the benefits of transitioning to low-carbon fuels. We need to have a serious dialog with all key stakeholders, including Congress to develop real solutions to these problems.

Is the upstream cap and trade approach the answer? What about low carbon or biofuel standard? Or increasing the cost of driving, like a higher fuel tax the answer? How can we positively influence the customer without negatively impacting small business and denying families their mobility. These are tough questions and will require tough choices. At Ford we look forward to working with you on a comprehensive approach that will be both effective and fair without seriously impacting the U.S. economy.

I look forward to taking your questions. Thank you very much.

[The prepared statement of Mr. Mulally appears at the conclusion of the hearing.]

Mr. BOUCHER. Thank you very much, Mr. Mulally. Mr. LaSorda.

STATEMENT OF THOMAS W. LASORDA, CHIEF EXECUTIVE OFFICER AND PRESIDENT, CHRYSLER GROUP OF DAIMLERCHRYSLER, AUBURN HILLS, MI

Mr. LASORDA. Mr. Chairman and members of the committee, thank you for inviting me to testify before you on the subject of climate change.

DaimlerChrysler is committed to developing new advanced technologies which minimize the effects our products and processes have on global climate and the environment in general. We recognize that climate change and national security are serious concerns that require all of us; individuals, industry, and Government, to take actions to help reduce our dependence on oil and emissions of CO^2, and we have already taken actions to do so.

We have produced more than 1.5 million flexible-fuel vehicles, or FFV's, capable of running on E–85. That is more than 10 percent of our production over the last 9 years, a higher percentage than any other automaker. We stand ready to make by 2012, along with GM and Ford, 50 percent of our production as either flexible-fuel vehicles or vehicles capable of running on biodiesel. DaimlerChrysler offers seven clean diesel models this year, providing improved fuel economy of 30 percent and greenhouse gas reductions of 20 percent. And we are actively pushing for the adoption of a national standard for B–20 biodiesel fuel to speed its adoption in the marketplace.

We are partners in a global alliance in hybrid development with General Motors, BMW, and our sister company, Mercedes Car Group, in developing a new hybrid system that we expect will leapfrog the competition. The first Chrysler Group product, the Dodge Durango, will make its debut in the first quarter of 2008. DaimlerChrysler is a leader in producing 1,500 hybrid diesel electric buses through our Orion Transit Bus Company, and they are being sold in New York, San Francisco, and other cities across this great land.

We also have the only demonstration fleet of plug-in hybrids in service through our Dodge Sprinter vans. As you may not know, we are the world's leader in fuel-cell vehicle production with more than 100 vehicles ranging from small passenger cars to transit buses in worldwide operation today. And we continue to put advanced technology into our gasoline engine vehicles. Last year we introduced a new world engine for our four-cylinder cars and trucks, along with a new fuel-efficient continuously-variable transmission to achieve 30 plus miles per gallon. We are doubling the capacity of our four-cylinder engine plant to 840,000 units per year.

Just last month I announced a $3 billion powertrain investment. This investment will include development and production of more fuel-efficient powertrains, a brand new V–6 engine family, new cutting-edge transmissions and axles for our products. All in all these investments will further secure tens of thousands of jobs here in the United States.

We are also addressing our product mix. Earlier this year we announced the 40-plus mile per gallon Smart city car that will arrive in the U.S. early next year.

I have focused on where we are going from a technology perspective, to reduce petroleum consumption, and since they are directly related, greenhouse gases. Now I would like to comment on calls for a 4 percent annual CAFE increase over the next 10 years, which translates to a 50 percent fuel economy increase. In fact, we already do it. It is in Europe. The U.S. combined fleet averages about 24 to 25 miles per gallon, and in Europe the fleet averages 36 miles per gallon. That is a 50 percent difference.

Why the huge disparity between there and here? We are the same companies in Europe that we are in the U.S. with access to similar technologies. The difference is the European approach to energy and greenhouse gas policies. They have made some tough political choices. They have highly taxed gasoline, making the price three plus times higher than in the U.S., and they have incentives on diesel fuel.

Through policies which affect consumer demand, the mix of vehicles sold in Europe is radically different than here. About 60 percent of the products are compact cars or smaller, compared to about 15 percent here in the United States. About 50 percent of passenger vehicles sold in Europe are diesel powered. The European model, while far from perfect, is based on policies that leverage demand and market forces, not on policies that fight them.

However, in the United States our policies have historically addressed the supply side; light-duty vehicle fuel economy standards. But consider how a 50 percent fuel economy improvement relates to new vehicle technology alone. Assume if all the new vehicles sold

in the U.S. 10 years from now were hybrids or diesels, something that no one really believes is even feasible, fuel economy would improve by only 25 to 30 percent.

U.S. policymakers must adopt a new and unique formula that fits here. DaimlerChrysler supports a three-pronged comprehensive approach to climate change and energy security in the transportation sector, one that includes a combination of vehicle efficiency improvements by our industry, the expanded use of alternative fuels such as ethanol and biodiesel, and the harnessing of market forces to help drive consumer demand.

But the climate change challenge is bigger than any one industry. So today I am here to commit personally to work with you on a broad-based climate change program that addresses all sectors of the economy, not just automobiles, is market-based to insure that greenhouse gas reductions do not significantly harm the economy, is upstream, and is national, if not global, in scope.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. LaSorda appears at the conclusion of the hearing.]

Mr. BOUCHER. Thank you very much, Mr. LaSorda, and thanks to each of our witnesses for your presence here this afternoon and sharing that information with us. I will recognize myself for a round of 5 minutes of questions.

Under the current CAFE requirements and the system that those requirements are effectuated through, there is no ability on the part of the automotive manufacturers to trade CAFE credits. I think you are allowed to bank those credits under certain circumstances and use them yourself at a later time, but there is no opportunity to trade those within the industry.

Some have suggested that it might add to your flexibility if you had that opportunity, and it might give you some early experience with a trading program in the event that our climate change proposal leads to the imposition of cap and trade.

And so my question to you is whether or not you would support legislation that we could perhaps pass at an early date that would institute a credit trading program with regard to CAFE. Mr. Wagoner, do you have a comment?

Mr. WAGONER. Thank you, Mr. Chairman. It would be my personal view that it, such a program would not have a significant impact on addressing the issues that I think we are trying to address, which is really to try to provide appropriately-costed energy to the economy but at the same time reduce oil imports and reduce CO^2 emissions. I think realistically from a manufacturer's perspective we are going to do our best to meet any standard ourselves, and the prospect of if one is short, writing a check to your competitor so they will have more money to invest is one that practically isn't consistent with my competitive spirit. So I guess I can't say it would never work, but I would have to say I don't see it as a major part of a solution to the issues that I think we need——

Mr. BOUCHER. So you are not recommending that to us?

Mr. WAGONER. That is correct. Yes.

Mr. BOUCHER. Mr. Press, very briefly.

Mr. PRESS. Yes. I think that we would be open to considering that concept. But if a competitor had an expensive technology that

generated credits, and they could sell it to a competitor who could buy it for less than the company spent on the technology, it really wouldn't do either company any good.

Mr. BOUCHER. All right. So you are not recommending that either. Mr. Mulally.

Mr. MULALLY. I sure agree with my colleagues. I think I would also add that the idea though has a lot of merit of moving it up to almost like a sector of transportation or even higher where the real value would be trading between say the energy companies and the automobile industry. I think it would be a lot more effective and beneficial.

Mr. BOUCHER. All right. Well, we will certainly examine that opportunity. Mr. LaSorda, would you care to comment?

Mr. LASORDA. I agree with my colleagues here, and have nothing more to add, Mr. Chairman.

Mr. BOUCHER. All right. Chairman Dingell and I are currently working to draft a climate change control measure. Let me just talk about some of the characteristics and then I am going to ask you for your view of this. Our goal is to have a mandatory program that would make a substantial contribution to addressing the challenge of greenhouse gas emissions. It would be digestible by the economy. It would spread the burden equally across the economy. It would assure that no sector of the economy will be dislocated or disadvantaged in comparison with any other economic sector.

It will be a bipartisan measure. It will be an industry-supported measure, and it would be capable of passage both in the House and in the Senate and hopefully signature by the President during the next 2 years. That is the goal that we have. We are soliciting the views of all interested parties. We are particularly soliciting both views and participation in crafting this measure from the industries that are greenhouse gas emitters, and we welcome your participation.

So my question to you, and I think a one-word answer would be preferable, will you agree to participate with us? Mr. Gettelfinger, let us begin with you.

Mr. GETTELFINGER. Yes.

Mr. BOUCHER. Mr. Wagoner.

Mr. WAGONER. Yes.

Mr. BOUCHER. Mr. Press.

Mr. PRESS. Yes.

Mr. BOUCHER. Mr. Mulally.

Mr. MULALLY. Yes.

Mr. BOUCHER. Mr. LaSorda.

Mr. LASORDA. Absolutely.

Mr. BOUCHER. This is a fabulous panel of witnesses. Thank you. Thank you very much. Do you have any thoughts this afternoon on what I think is going to be one of the major challenges that we will confront, which is devising a way to bring the transportation sector into the broader greenhouse gas emission control program. We are probably going to be considering as a major approach to that measure some form of cap and trade, and so for purposes of discussion this afternoon let us assume cap and trade is the approach that we adopt. Do you have any thoughts today on how we might successfully integrate your pre-existing regulatory program, CAFE, with a

cap and trade regime. I wouldn't expect detailed answers but if you have any preliminary thoughts on that, we would certainly welcome that today. Mr. Wagoner.

Mr. WAGONER. A complex topic, as you indicate. I would say in general we do believe there is merit to addressing the issue as you have cited it. We think there are ways to go about this that could lead to solutions. We have some specific guidelines that we would like to suggest as part of that process and we would be pleased to work with your staff towards that end.

Mr. BOUCHER. Thank you. We would welcome your information on that. Mr. Press.

Mr. PRESS. Yes. Again, we would be open to considering any national program that would be fair and equitable, and that would make sure that those that have already made investments in technology are not disadvantaged. While credit trading between companies may be one concept, another idea is to allow a company to trade credits among its own fleets.

Mr. BOUCHER. Thank you, Mr. Press. Mr. Mulally. No comment. Mr. LaSorda.

Mr. LASORDA. Based on what you said earlier about all sectors in the economy being involved in the solution obviously we would like to participate in the discussions on this.

Mr. BOUCHER. OK. Thank you very much. My time has expired. I am now pleased to recognize the ranking member designate for the moment of the—oh, I am sorry, Mr. Barton, the ranking member of the full committee for 5 minutes.

Mr. BARTON. Thank you, Mr. Chairman. I have nothing but supreme affection and respect for our full committee chairman and subcommittee chairman. What Mr. Boucher just outlined would literally be a legislative miracle of Biblical proportions if he is able to pull it off, so let us wish him well, and if there is a way, we will attempt to be helpful but we are going to have to answer some very tough questions. And I am going to start asking some of those questions right now. My first question to the panel since everybody has kind of nodded your head that you support cap and trade, I want to make sure I understand that.

You support mobile sources being subject to carbon caps, is that true? Everybody on this panel supports there being not just on stationary sources but on mobile sources like tailpipe emissions for cars and trucks—the industry and labor union that represents UAW supports a mandatory cap and trade system. Mr. Gettelfinger.

Mr. GETTELFINGER. Yes, we support that, and we believe that there is a lot of merit to it, and we believe if is it upstream if it reduces the amount that goes into the fuel itself, and then on the——

Mr. BARTON. I just want to make sure you understand what you are saying.

Mr. GETTELFINGER. Yes, absolutely.

Mr. BARTON. You know that you are supporting a mandatory carbon cap on tailpipe emissions, you said yes.

Mr. GETTELFINGER. When you say tailpipe emissions——

Mr. BARTON. That is where the CO^2 comes out.

Mr. GETTELFINGER. That is correct, and we refer to that as the carbon burden, and that is correct, we do support that.

Mr. BOUCHER. Mr. Wagoner.

Mr. WAGONER. Yes, Congressman, we said we would support that, and we would. I think to be honest we have to be clear the devil is always in the details so with equity and fairness, et cetera, et cetera, is a big caveat to that.

Mr. BARTON. Yes.

Mr. WAGONER. Absolutely.

Mr. BARTON. Mobile source CO^2 is about 30 to 35 percent of emissions man-made, and so are stationary sources. They are both about the same. They are around a third so I am not happy with that answer, but if that is your answer, that is your answer. Mr. Press.

Mr. PRESS. Yes, I agree that we would be in support based on what the actual details would allow us to operate within. I think it is important for us to realize we have to be open to many new approaches, and we need to look at the whole plethora of opportunities. As for cap and trade, I think the further upstream you go the more efficient you are going to be.

Mr. BARTON. Mr. Mulally.

Mr. MULALLY. You bet. I just echo the upstream part because clearly we are never going to get to our mutual objective unless we include all the people that are associated with production of CO^2, and so our agreement is to help work with the entire industry, the whole sector, not just what comes out of the tailpipe because we need to have everybody involved.

Mr. BARTON. I understand that.

Mr. MULALLY. So cap the most upstream that we can.

Mr. BARTON. Mr. LaSorda.

Mr. LASORDA. The upstream, as I stated earlier, and the rest, is absolutely critical. Also, that we look at all sectors and what can be done upstream. And as my colleagues have stated, we would like to get into the details with members of the committee.

Mr. BARTON. My next question is a simple question. If we want to regulate greenhouse gases everybody seems to—right now the hysteria seems to be that we need to do that. I am a skeptic about that, but are we going to have greater impact regulating the greenhouse gases 0.01 percent or 95 percent? Which gives you the biggest bang for the buck if you decide to regulate greenhouse gases? The greenhouse gas that is 95 percent of the atmosphere or the greenhouse gas that is 0.01 percent in terms of man-made? It is not a trick question.

Mr. PRESS. I fully don't understand the question and can't answer at this time.

Mr. BARTON. If you are trying to impact an outcome, do you manage 95 percent of the problem or 0.01 percent of the problem? Which gives you the greatest likelihood of getting the outcome you want?

Mr. WAGONER. Well, obviously if you can address the problem the most comprehensive way you have got the greatest likelihood of getting a cost effective outcome. To be honest, that is one of the issues that I try to address in my testimony as far as improving

both energy security and emissions, really better to try to address it by——

Mr. BARTON. My time has expired, but water vapor is 95 percent of greenhouse gases and man-made CO^2 is 0.01 percent, and you gentlemen have just gone on record that you want to manage that 0.01 percent, and I will postulate that anything in any activity that I have ever had any part in trying to manage, you do a better job of getting your outcome when you tackle what causes the majority of the problem instead of what even barely scratches the surface. And with that, Mr. Chairman, I yield back and good luck on your miracle.

Mr. BOUCHER. Well, thank you very much, Mr. Barton. Let me just comment on your very generous offer to work with us assuming that challenging test is met, but if that test is not met, I can't vote for the bill either so thank you very much, and I appreciate that.

Mr. WHITFIELD. Mr. Chairman, can Mr. Mulally make his comment? I think he wanted to make a comment.

Mr. BOUCHER. Absolutely. Mr. Mulally, we would be happy to hear from you.

Mr. MULALLY. I think I certainly do understand what you were asking, and I think our answer would be that what we really want to do is to address the greenhouse gases that stay in the atmosphere the longest and clearly CO^2 can stay in the atmosphere for 100 years. So the most important thing is to deal with the gases that stay there the longest. The water vapor in the case that you——

Mr. BARTON. Well, the water vapor is constant in the atmosphere. It goes up and down a little bit but it is a constant too.

Mr. MULALLY. So the one that you are adding that stays up there the longest is the one that I think we want to address.

Mr. BOUCHER. The time of the gentleman has expired. I am now pleased to recognize the chairman of the full committee, Mr. Dingell, for 10 minutes.

Mr. DINGELL. Mr. Chairman, I begin by thanking you for your recognition but also commending you for the diligent, vigorous, energetic, and competent fashion in which you have been addressing the difficult questions before us. I have been pleased to listen to the comments made by Mr. Barton. I look forward as this matter goes through the markup process to working with him. His comments on CAFE and caps on CO^2 emissions remind me that for all intents and purposes, these two things are somewhat different but mostly similar versions of the same thing.

Gentlemen, our witnesses here, I have listened to all of your testimonies and almost all of you have exclusively discussed Corporate Average Fuel Economy and Government incentives to encourage advanced technology vehicles. I would observe several things. First, I support incentives for the domestic production of advanced technology vehicles, and I believe this committee would too. We need to find ways to develop and produce technologies for the new century here in the United States.

Second, I understand our current system of regulating fuel economy is dependent upon what consumers choose to buy, not what your companies are capable of producing. It is not, I think, a per-

fect mechanism. Third, I understand that a statutory increase in fuel economy standards may have unintended consequences in the marketplace to the detriment of jobs, and so I think our good friend, Mr. Gettelfinger, would observe vehicle safety and competitiveness of American manufacturers. And by that I am not simply referring to Ford, General Motors or Chrysler alone. I want everyone to know that my position on this matter has been consistent and is quite clear.

Fourth, I understand the administration's proposal to increase fuel economy standards by 4 percent annually is not currently feasible. I have my doubts about what an attribute based system would be and how it would affect passenger, cars, jobs and everything else in this country. I have even greater doubts that any manufacturer would utilize a CAFE credit trading system, and I also doubt that it would provide any significant environmental benefits. The only thing I am certain of, with respect to these issues, is that the administration has not done its homework, as we found the other day, on this matter.

Fifth, the issue of global climate change must be addressed. It is my view that everyone should be required to put an appropriate contribution into the collection box. This includes the auto industry and all of you gentlemen who are there at the committee table. Fuel economy regulations have effectively regulated CO^2 emissions thus far. However, I question whether the current system, given all of its flaws and your well-stated concerns today, remains the right way to go forward. Gentlemen, I have heard from all of you previously what will not work. I agree with much of what you have stated in that regard. What I have not heard, however, is what will work, how this committee will put together legislation that will in fact accomplish our national purpose of reducing imports and reducing the emissions of greenhouse gases here in the United States.

Frankly, I think the American people are frustrated. Members of Congress on both sides of the aisle are frustrated. And, very frankly, my dear friends, I am very much frustrated myself. I would like to ask you questions about your testimony, and about the administration's proposals or about bills that have been introduced with respect to fuel economy standards. Unfortunately, there isn't time for me to do that, and I would observe that most of this old debate is pretty stale. The existing system of regulating fuel economy may no longer be sufficient to address the needs of this country, so we need more involvement and your leadership very much, and these are needed for us to succeed in the difficult work that we have to undertake under rather considerable time pressure.

So, gentlemen, I ask you, are you willing to work with this committee to produce mandatory regulations to address the issue of global climate change? I would appreciate a yes or no response. Mr. Gettelfinger.

Mr. GETTELFINGER. Yes.

Mr. DINGELL. Mr. Wagoner.

Mr. WAGONER. Yes.

Mr. DINGELL. Mr. Press.

Mr. PRESS. Yes, sir.

Mr. DINGELL. Mr. Mulally.

Mr. MULALLY. Yes.
Mr. DINGELL. Mr. LaSorda.
Mr. LASORDA. Yes, sir.
Mr. DINGELL. Gentlemen, I understand the inclination to stick with the devil that we all know, but are you willing to go beyond Corporate Average Fuel Economy standards and consider new regulatory regimes? Please respond yes or no. Mr. Gettelfinger.
Mr. GETTELFINGER. Yes.
Mr. DINGELL. Mr. Wagoner.
Mr. WAGONER. Absolutely, yes.
Mr. DINGELL. Mr. Press.
Mr. PRESS. Yes, we are open to considering any national——
Mr. DINGELL. Mr. Mulally.
Mr. MULALLY. Yes.
Mr. DINGELL. Mr. LaSorda.
Mr. LASORDA. Yes, sir.
Mr. DINGELL. Gentlemen, my own dad used to say something that I thought was pretty useful. He used to say you can't just sit at your end of the boat and tell the fellow at the other end of the boat that his end is sinking. Now the question here is, gentlemen, are you willing to work together amongst yourselves and with us to get beyond this old-fashioned thinking of CAFE and make real environmental progress? Mr. Gettelfinger.
Mr. GETTELFINGER. Yes.
Mr. DINGELL. Mr. Wagoner.
Mr. WAGONER. Yes.
Mr. DINGELL. Mr. Press.
Mr. PRESS. Definitely, yes.
Mr. DINGELL. Mr. Mulally.
Mr. MULALLY. Yes.
Mr. DINGELL. Mr. LaSorda.
Mr. LASORDA. Absolutely.
Mr. DINGELL. Gentlemen, now are you willing to work with other sectors in the economy to assure that we produce an effective regulatory regime that fairly distinguishes and fairly distributes responsibilities and obligations to all concerned? Mr. Gettelfinger.
Mr. GETTELFINGER. Yes.
Mr. DINGELL. Mr. Wagoner.
Mr. WAGONER. Yes.
Mr. DINGELL. Mr. Press.
Mr. PRESS. Yes.
Mr. DINGELL. Mr. Mulally.
Mr. MULALLY. Yes.
Mr. DINGELL. Mr. LaSorda.
Mr. LASORDA. Yes.
Mr. DINGELL. Are you then willing gentlemen, to consider a system that regulates the emissions of carbon dioxide from your vehicles alone or in tandem with carbon content of the fuels? Mr. Gettelfinger.
Mr. GETTELFINGER. Yes.
Mr. DINGELL. Mr. Wagoner.
Mr. WAGONER. Yes.
Mr. DINGELL. Mr. Press.
Mr. PRESS. Yes.

Mr. DINGELL. Mr. Mulally.
Mr. MULALLY. Yes.
Mr. DINGELL. Mr. LaSorda.
Mr. LASORDA. Yes.
Mr. DINGELL. Gentlemen, I want to commend you for your testimony. We have a difficult task here before this committee and that is to write a good, responsible, and balanced piece of legislation that will serve the broad public interest and address the concerns that the Nation has and that other countries have with regard to the questions of greenhouse gas emissions and the risk that this contains with regard to the world for climate change and with regard to global warming. I think that we can assemble here in this committee members of Congress who will be willing to work beyond the stalemate now before us to achieve real results in the environmental work that the American people want done today.

I hope that you will engage in that dialog and be a part of the solution. Having worked with you before, I know that you are and I want you to know that I appreciate that. I do observe that inaction will not work and telling us what doesn't work is useful but no longer sufficient. With that, gentlemen, so ends my catechism, and I thank you for your presence and your assistance to the committee.

Mr. BOUCHER. Thank you very much, Mr. Dingell. The gentleman from Michigan, Mr. Upton, is recognized for 5 minutes.

Mr. UPTON. Thank you, Mr. Chairman, and I want to associate myself with a goal of what you indicated. My only question to you is will it also slice bread?

Mr. BOUCHER. We are working on that, and we are going to have a hearing on that subject.

Mr. UPTON. I am sure that rises to the top. I want to say that every American, we all want better fuel economy, and I say that as a consumer and I say that as a family that is in the market for a new vehicle as well. It is very important, and I think for most consumers that is often a bottom line question that they ask. As we struggle with this issue, I would be interested to know one of two things, two things from each of the companies represented here. One is how much is your company this year spending on research and development on fuel economy? I am not interested in other things that you are looking at but just specifically on fuel economy and what that number would be say over—the collective number of what that is say over the last 5 or 10 years as well. Mr. Wagoner, a ballpark number.

Mr. WAGONER. Just to give you an idea, we recently approved projects to convert our four- and five-speed transmissions to six-speed transmissions to give you an idea. That is a $3 billion investment for us to do something to get you something between 6 and 8 percent fuel economy.

Mr. UPTON. Is that all being done this year?

Mr. WAGONER. It is being spread out over a period of years, a period of 4 or 5 years, I guess. If you look at the development of a fuel cell vehicle, that is going to cost well in excess of a billion dollars to get the first product really on the road. These are massive dollar commitments so I think the response to your question if you consider it comprehensively from the changes to conventional en-

gines and transmissions to pure R&D and fuel cell or ethanol type fuels the investments are in billions of dollars on an annual basis for our company, and I suspect our competitors, as well.

Mr. UPTON. Mr. Press?

Mr. PRESS. Yes, I think, from our perspective, almost all the dollars that we are spending in R&D, even the new products we are introducing as an industry, have better mileage and our focus is to have a better car with better mileage and still provide good customer satisfaction.

We are currently spending about $11 billion a year, or $23 million a day on R&D through the broad range of projects. In addition, we are working with fuel companies and other partners to find solutions that will give us global application. Virtually our whole R&D effort on new products is focused on how we can improve fuel economy as well as other aspects of the product.

Mr. UPTON. Mr. Mulally.

Mr. MULALLY. Yes. Over the last 5 years we spent approximately $23 billion on product development, and the real focus there of course are the capability of the vehicles and the fuel efficiency and the safety to make innovations in each of those areas.

Mr. UPTON. Mr. LaSorda.

Mr. LASORDA. Well, every year on total product development spending, I will start there just to give you a scale of size, the Chrysler group alone spend $6 billion on total product programs, and then if you add Mercedes and our commercial vehicle division, we are over $9 to $10 billion. On the fuel economy side, when you look at new diesels, the new world engine that we put into the—in Michigan we built a new plant. There will be new plants being built over the next 4 or 5 years. We will be spending in excess of $4 to $5 billion just in these areas.

Mr. UPTON. So you all are spending sizable sums every year. I know when the administration announced as part of the State of the Union address that they wanted to increase mileage by 4 percent every year beginning in 2010 for light trucks and 2012 for vehicles they asked for a 4 percent increase. If you were able to make that target, how much more do you think you would have to spend? I know Toyota makes that now but at some point because in the out years it is 4 percent additional. The report that I had heard was that you thought the response from most of the industry was that it would be very challenging to make. What additional dollars would that cost the industry? And I want to ask one more question after this so if you can go quickly, go ahead. Mr. Wagoner.

Mr. WAGONER. The administration's estimate for us was in the $40 billion range. It is my assessment that that is low. The number would be significantly higher than that.

Mr. UPTON. Mr. Press.

Mr. PRESS. I think it is very difficult without knowing more to get to a definitive answer but the reality is there may not be enough money. We have to really take a look at what the challenge is.

Mr. MULALLY. I agree with the previous comments.

Mr. LASORDA. Similar to the group.

Mr. UPTON. The three of you met with the President last fall and you talked, as I recall, you talked about battery research and devel-

opment, and I think you had presented a proposal to the President asking for a ramp up of Federal funds of over $100 million per year through 2012. The President's budget for 2008 was released a couple weeks ago. It didn't ask for $100 million. It asked for $11 million. And I would be interested to know what your reaction to that is. And it is in this context, all of you are spending tremendous amounts of money looking for research, as I look to what we want to get to in terms of the final answer, I want the Government to be able to in fact help you as we insist that you hit these targets. If we do that, I want to make sure that we help you along that way and at least on the surface of things as I look at this $11 million isn't anywhere close to where we ought to be as you look at that final goal, but I would like you to say that, not necessarily me. And I am saying that because I am 12 seconds in arrears. Mr. Wagoner.

Mr. WAGONER. I fully agree with your assessment, and it is a shame because these are high leverage opportunities, so we will get a huge impact if we can get breakthroughs in fuel cells and batteries, which we believe we can, so we are disappointed at that number. It is way less than it should be.

Mr. UPTON. Mr. Mulally.

Mr. MULALLY. Agree.

Mr. LASORDA. Absolutely.

Mr. UPTON. Thank you very much. I look forward to working with you.

Mr. BOUCHER. Thank you, Mr. Upton. Mr. Markey from Massachusetts is recognized for 5 minutes.

Mr. MARKEY. Thank you, Mr. Chairman, very much. Mr. Mulally, you said that CAFE was not a success. You couldn't be more wrong, Mr. Mulally. In 1970 we were importing about 20 percent of our oil. It has skyrocketed to 1977 to 46.5 percent of our oil was imported. The Congress has passed a law, a law that mandated that there was a doubling of the fuel economy standards in the United States of America. Over the next several years there was a decline to only 27 percent of our oil being imported by 1985, 1986. CAFE was a huge success, Mr. Mulally, and I think Ford deserves a lot of the credit for making that work. I think you are making a mistake in taking credit away from you and Chrysler and General Motors for the job you did technologically.

But since 1986, Mr. Mulally, with no new improvements in fuel economy we are now 60 percent dependent upon imported oil. It has gone up, in other words, 33 percent in the last 20 years. That is a national security crisis. We have 135,000 young men and women over in the Middle East right now. There are 20,000 more on the way as part of a surge. We cannot allow that to continue to skyrocket as the auto industry continues successful to block improvements in fuel economy standards. On that second issue, the second issue is vehicle miles traveled that Mr. Wagoner raised. On that issue, vehicle miles traveled has increased consistently for the last 35 years. The only time it went down in terms of our total oil consumption was during the time that the fuel economy standards were hitting our economy. That is when we broke the cycle because obviously there are more people and more vehicles but with increased fuel economy standard we actually imported less oil.

So this question of national security goes to the heart of this debate and since we import 70 percent of our oil, 60 percent of our oil right now, we have got a crisis on our hands. Are you saying that, Mr. Mulally, what Ford did back then was not a success and that what we are asking for you to do this time is impossible?

Mr. MULALLY. I think that what we have done together to improve fuel economy absolutely has been a success, absolutely.

Mr. MARKEY. You call CAFE a failure.

Mr. MULALLY. My only thought about your second question is that we are absolutely, all of us, committed to continuous improvement of fuel efficiency. It is what the customers want, it is the right thing for the environment, and it is absolutely the right thing for national security and our reliance on oil. So we are absolutely in agreement on the objective. I think——

Mr. MARKEY. Mr. LaSorda, do you think the CAFE was a failure?

Mr. LASORDA. Well, when you take a look at the charts that you showed, fuel prices skyrocketed in the 1970's and early 1980's. People consumed less energy and switched to other segments and that is what happened as well as CAFE.

Mr. MARKEY. That is your answer. Do you think, Mr. Wagoner, that CAFE was a failure?

Mr. WAGONER. Yes, sir. Against its stated goals of, and I am quoting, "reducing U.S. gasoline consumption and oil imports" it wasn't effective. I think for the reason Mr. LaSorda mentioned, basically consumers make their choices very heavily influenced by fuel price, so that is why in my comments, Congressman, I specifically endorsed that the initial ideas, the reasons behind the desired outcomes of the original CAFE program are in fact excellent ones and suggest, I think, very real approaches to move significantly in the right direction to achieve those objectives.

Mr. MARKEY. I just can't believe the testimony I am hearing. The charts demonstrate conclusively that the testimony you are giving is completely wrong, and I don't know why you are going to maintain that a drop from 46 percent imports to 27 percent imports at the same time that we have doubled our fuel economy from 13 to 27 miles per gallon is not something that is in direct correlation. I find your inability to at least take credit for what you did so technologically to be troubling to me. You did the job. America was benefited from that. What we are asking for you now is to tell us what you can do technologically going forward when it is hard to do that if you continue to maintain that there was no success story for our country from a national security perspective back in the 1980's. I thank you, Mr. Chairman.

Mr. BOUCHER. Thank you very much, Mr. Markey. The gentleman from Illinois, Mr. Shimkus, is recognized for 6 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman. So much to ask, so little time, but it is great to have you all here. In respect to Mr. Markey's chart, I think there is one thing there was the change in speed limits too that there was a major effect. And coming from Illinois, I always hate the debate on Europe, let me tell you, because I lived in Europe for 3 years. You can drive across Europe in about 7 hours. You can't get through the State of Illinois in 7 hours. So these comparisons with Europe or Japan, if you want to talk about

how long it takes to drive across Japan, we are a big country that likes to go places and we are going to drive those places.

And when this gets down to a local consumer level that is going to be a big issue. First of all, a couple questions. Mr. Gettelfinger, how many people do you represent?

Mr. GETTELFINGER. I think active workers would be somewhere in the neighborhood of 500,000.

Mr. SHIMKUS. Mr. Wagoner, how many do you employ?

Mr. WAGONER. Globally 285,000, in the U.S. about 125,000.

Mr. SHIMKUS. Yes, let us stay with the U.S. Mr. Press.

Mr. PRESS. In the United States we have 34,000.

Mr. SHIMKUS. Thirty-four thousand. Mr. Mulally.

Mr. MULALLY. Approximately 100,000.

Mr. SHIMKUS. Thank you. Mr. LaSorda.

Mr. LASORDA. About 65,000.

Mr. SHIMKUS. How many of those have what you would consider good paying jobs?

Mr. GETTELFINGER. I would say they are good paying jobs.

Mr. SHIMKUS. You bargained for them, right? Go on down the line, please.

Mr. WAGONER. I would say 100 percent are good paying jobs.

Mr. PRESS. Every one.

Mr. MULALLY. Every one.

Mr. LASORDA. Every one, yes.

Mr. SHIMKUS. Health care benefits.

Mr. GETTELFINGER. Very good.

Mr. WAGONER. Good.

Mr. PRESS. I think probably among the richest in the country.

Mr. MULALLY. Great.

Mr. LASORDA. Excellent.

Mr. SHIMKUS. Thank you. Thank you for providing our constituents good paying jobs with health care benefits. We are not here to be up on you. I am here to say thank you, and we want to keep you a vibrant part of our economy. I have great respect, and he knows this as the chairman of this committee, and we want to make sure when he says he wants to bargain in good faith and make sure that you are still a vibrant part of our economy, I take him at his word. I am still a skeptic, but I trust Mr. Boucher and hopefully we will do the least harm through this process. I like Ranking Member Upton's also questions on research and development because I was going to go in that direction also.

How many of your R&D dollars, Mr. Gettelfinger, you don't have to answer this, do not pay off, what percentage?

Mr. WAGONER. From GM's side we certainly don't bat about 1,000 on that. I think it depends a little bit how you cut it.

Mr. SHIMKUS. The bottom line is when you R&D there is sometimes that it doesn't pay off and you have got millions of dollars out there for no return.

Mr. WAGONER. Right, but what we try to do is the up front R&D isn't the expensive part. It is bringing stuff into production so we really try to look at a lot of options up front so a lot of the real basic research frankly doesn't work out. It is not huge dollars. The issue is picking the right ones to get in production.

Mr. SHIMKUS. And if I can get everybody. Mr. Press.

Mr. PRESS. I would agree. The reality is we probably learn from those failures too, and so it does move forward and the dollars do help.

Mr. SHIMKUS. Mr. Mulally.

Mr. MULALLY. I think a key element of your question is the fact that we really do—we really cannot bet on what the single one technology is going to be that is going to help us achieve our mutual objectives, and so we have continued to invest in multiple technologies because we know it is going to be a basket of solutions which is another important piece, I think.

Mr. SHIMKUS. Thank you. Mr. LaSorda.

Mr. LASORDA. Congressman, when you take a look at what has evolved in this industry, we have moved more to joint research and development projects than doing them on our own as well just to try to minimize risk and bring in more technical science from the different companies. I stated earlier, our hybrid technology is a joint venture with BMW, General Motors, and Mercedes, and we have a fuel cell venture with Ford Motor Company. You are going to see more and more of that because of that very question you asked.

Mr. SHIMKUS. Thank you. I have had a chance to do—I am on the hydrogen vehicles, the van that was out, and I can't remember whose it was but it was $100 million. I tell kids about this. I drove a hydrogen van. It had good pickup. We went on the interstate and it is only at $100 million right now, the cost to buy that van. So obviously we want to get there and it costs a lot of money, and you ought to be congratulated for that for the money that you are putting in right now. I am a big flex fuel guy, you all know that. I had an Explorer, Taurus, and now I have a Jeep Grand Cherokee, 22 filling stations. What are you doing about the compression ratio so that we get miles per gallon competitive with gasoline? Anyone?

Mr. MULALLY. There is about a 20 percent drop off.

Mr. WAGONER. Yes, the energy density of ethanol is less so the fact is there is always going to be some shortfall but we have been working on the gasoline for 100 years and the ethanol for a much shorter period of time. We will be able to improve it.

Mr. SHIMKUS. And I am going to stop with you because it is kind of the same answer, but as long as we have ethanol 85 at 20 cents, 30 cents less a gallon it is a wash and it works out well for me. Mr. Press, flexible fuel, when are you guys going to get on board?

Mr. PRESS. We have announced our first flex fuel vehicle will be in 2009, and we are considering beyond that other products in the future including hybrid flex fuel.

Mr. SHIMKUS. We went to welcome it to the community. You can see now that everyone has embraced it. It has been a long haul. We appreciate the leadership that the automobile industry, especially Ford on the 85 corridor, which has been great for Illinois and Missouri and it has helped push at the retail level, and we have seen great success. My time has expired. Thank you, Mr. Chairman.

Mr. BOUCHER. Thank you very much, Mr. Shimkus. The gentleman from Pennsylvania, Mr. Doyle, is recognized for 5 minutes.

Mr. DOYLE. Mr. Chairman, thank you, and you have set some lofty goals for our committee. I want you to know that you have

my commitment that we are going to work together to achieve those goals so I think we can do that. I want to share a lot of what Mr. Dingell said. I think the way we are going to achieve this is maybe thinking differently than how we thought about it in the past, to start to think outside the box and it just seems to me that the answer here is technology and initially with hybrid and flex fuel vehicles eventually with fuel cells. I want to commend Toyota. I have to tell you, I only buy American cars but you are to be congratulated because you are buying cars that Americans want to drive, and you are able to meet standards that just aren't being met by some of your competitors here in America, and you got six hybrid cars.

Now having said that, I have a Ford Escape hybrid, and I bought one of the first ones off the line. I was glad to finally see an American car company make one I could buy, and you should be making more of them and Americans want to drive these cars. And I want to tell you, I haven't done anything to that Fort Escape hybrid but put gas in it and very little gas in it, and it runs perfect and I have never had a problem with it. And I just don't understand why you don't have a lot more of these kinds of cars on the road. Americans do like to drive them. And it is frustrating for those of us that want to see American car manufacturers compete in this market that Toyota and other companies like them seem to get what you guys haven't got in the past and they are way ahead of you on some of this.

Having said that I think it is technology that is going to do it, in fact, I think some people are concerned if we were to raise CAFE standards annually by 4 percent that a lot of people feel you may start pulling away from your research from the next generation type of vehicles to focus more on how you can improve the combustion engine to meet this 4 percent. I am wondering how accurate you believe that kind of an argument is. And what I really want to get to because we are talking about solutions, not want doesn't work but what can work. What would be the single most significant incentive that the Government could provide through the tax code or any other thing to help push this envelope of technology forward? What are the obstacles in the law that you think need to be amended to encourage more advances in the technology? And I am talking about helping you to roll out and deploy these technologies sooner rather than later.

We know hydrogen fuel cells are way down the road, but the sooner we get there the better, and what can we do to encourage more of these bridge technologies until we get the hydrogen, what can we do to help you do that? And I will just let you each take a turn, just go down the line.

Mr. WAGONER. Thank you. First of all, Congressman, I would like to point out we at GM will have four hybrid vehicles introduced this year. We introduced a couple last year, and we will have 12 on the road in 2008 so we will be glad to be in that game, and we share enthusiasm for the importance of technology. If we could ask the Congress for three things I think in the area of ethanol we need radically ramped up distribution of ethanol, and it has been sticky. It has been hard to break through, kind of 1,000 fueling stations out of 170,000 offering it, so any ideas or help on how to get

all these people who now bought the E–85 flex fuel capable vehicles given the opportunity to use ethanol would be a huge help.

The second area, as was discussed by Congressman Upton, advanced battery research. We see a battery that will work and do a lot of the stuff that you are talking about down the road. There is some work that still needs to be done and other countries are moving much faster. And then, third, I would say generally continuing incentives for consumers as the Congress has passed in the area of hybrids to help defray the fact that they do cost more at this stage are three things that I would suggest.

Mr. PRESS. Thank you for that question. First of all, the tax incentive really helps. You have to create the environment for new technology. About 80 percent of the customers that buy a hybrid buy it because of the fuel economy. The biggest reason they choose not to buy a hybrid, about 45 percent, is the cost. And the reality is if we get economies of scale we get lower cost for our suppliers and we can increase the volume and really bring the cost down substantially. And a lot of these technologies are like the old batteries in our cell phones you used to carry around on your shoulder. Now these new technologies in hybrids are like a small cell phone. They are getting miniaturized. The same thing for transitioning or manufacturing costs to assist in domestic production of these products. Any way to reduce the cost difference and improve carbon-based fuel advantages and ethanol would be a very big advantage.

Another key is education. We need to bring the consumers into this to understand the scope of the problem and get them to be part of the solution.

Mr. MULLALY. I would add especially on the hybrids the available of batteries, which is our limiting factor right now. And, for example, we don't have a domestic, a United States source for the batteries in the hybrids.

Mr. DOYLE. Where do you get them?

Mr. MULLALY. Right now we get them from Japan. And you heard the collaboration that we all have going on on batteries, not only today's batteries but also lithium ion batteries, which clearly can be part of the future so getting an available U.S. source will help us but we are actually committed to the hybrid and the technology. Going back, I would like to just——

Mr. BOUCHER. Mr. Mulally, unfortunately the gentleman's time has expired.

Mr. DOYLE. That is exactly what I was going to say.

Mr. BOUCHER. Thank you very much, Mr. Doyle. The gentleman from Michigan, Mr. Rogers, is recognized for 5 minutes.

Mr. ROGERS. Thank you, Mr. Chairman. I had some great advice from a member of this committee who is a long and distinguished member here, Mr. Dingell, who told me when I first got here when you are suppering with the devil make sure you have a very long spoon, which is great advice, Mr. Dingell. I appreciate it. I was a little surprised to hear you all acquiesce so quickly to as it was termed a regulatory regime. I own a small business and that scares me to death, just the words in and of itself. And I sometimes wonder if we are not coming at this thing a little bit backwards. Did anyone tell you to get into the lithium battery business for research and development? Did the Government tell you to do that? Did the

Government tell you to develop a flex fuel vehicle? Is there any rule that you know of that that—anybody? No.

Did the Government tell you to work on hydrogen fuel vehicles? Was there some Government mandate that told Chrysler or Ford or Toyota that you are aware of? You did that on your own, did you not? Why did you do that?

Mr. WAGONER. From our side, I think that consumer concerns about environmental issues, the availability of energy, the constant ups and downs in oil prices suggested to us that eventually we were going to need to come up with a better answer than the traditional one, so frankly having gone through a lot of them that we knew were going to be higher cost and require customer trade offs like our EV1 in California in the mid-1990's, we said, hey, what is something that can really work, and so we put a lot of efforts behind the couple areas you mentioned.

Mr. ROGERS. Wasn't the EV1 really in reaction to a mandate in the State of California for 10 percent electric cars at that time so you tried to fill that market void, didn't you?

Mr. WAGONER. Well, to be perfectly honest, I wasn't here at the time so I can't give you the blow by blow but I can tell you unfortunately that obviously from a business perspective the battery technology wasn't ready so it didn't work. We learned something from it but it didn't work.

Mr. ROGERS. I guess my point here is that we all have agreed, including all the companies here before us today, we want to do something about CO^2 emissions. That is a good outcome. We want to do something about buying oil from overseas. That is a good outcome if we can lessen our dependency on foreign oil. You have taken steps because the market is driving you that way already. You are investing literally billions of dollars over the course of time into these products. Back in World War II, we asked the car companies to help us out to build tanks and artillery tubes, and you all stepped up to the plate.

There is a place in my district where they went from building trucks to artillery shells in 8 weeks to meet the demand for World War II. That is pretty impressive. So my argument is maybe instead of telling you and creating this big government regulatory regime to try and mandate and tell you exactly how to do it, won't you have to have people who are trying to figure out what that regulatory scheme is and how that fits into your development schedule and what that means for projects that you will and will not work on, is that right? I mean that is just the way it works now, does it not? Is that correct? I don't want to put words in your mouth. Is that right?

Mr. WAGONER. Yes.

Mr. ROGERS. So what if we came up with a way to provide you a different kind of incentive and say, listen, here is the problem in America. We don't want to buy foreign oil anymore if we can avoid it, and we want to cut our CO^2 emissions. That would be great. And we also want a car that somebody would put in their driveway and want to buy, right? That would be really good too, wouldn't it? So what if we let all the intellectual capital that you all have come to those conclusions?

I am a big ethanol guy. I drive an ethanol vehicle. It is great. I love it. It is like giving a good salute to Iranian Ayatollah every time I step on the gas. I enjoy it a lot. Is there a better way, can we provide capital in some way either through the free market process that would allow you to spend money on research and development and help us get out of this problem and help you develop a car that Americans want to buy? Mr. Wagoner?

Mr. WAGONER. Yes, I think so. I think the things we talked about today to the extent that we can consent to production distribution of ethanol the Government could play a big role in helping to reduce the oil imports. Helping with battery research would be a big help. I just want to comment, Congressman Rogers, you talked about us sort of being willing to be regulated. I think you know and everyone on the committee knows, we have been heavily regulated under CAFE for 30 years unlike a lot of other parts of the energy consuming economy in the U.S., and our goal would be to have a—if we are going to be regulated let us regulate in the direction that actually solves the issues that are on the table which, as you highlight, oil imports, emissions, things of that sort.

Mr. ROGERS. Just quickly, if we came up with a Federal loan guarantee that was very specific to research and development on alternative fuels, and you decide what that is, you decide what the market is, would you be interested in something like that that allowed you to make those decisions and maybe reduced the cost of your loan?

Mr. WAGONER. Sure, because our own situation is such that our credit rating is low and while we have a lot of capital in the business we need a lot of capital investment so anything that could support in that direction would be appreciated.

Mr. ROGERS. Mr. Mulally.

Mr. MULALLY. Yes. That would be great.

Mr. LASORDA. Yes.

Mr. BOUCHER. Thank you very much, Mr. Rogers. The gentlewoman from Wisconsin, Ms. Baldwin, is recognized for 5 minutes.

Ms. BALDWIN. Thank you, Mr. Chairman. I mentioned in my opening that the automobile sector is not only in the best position to improve the fuel economy of its vehicles but also to reduce the greenhouse gas emissions in the day-to-day manufacturing operations, and manufacturing automobiles is clearly an energy intensive enterprise. So as one of the largest industries in the United States, you are in a position to lead by example, and I wonder if you could each briefly address the steps you are taking to increase energy efficiency in your plants across the United States. I am hoping I will get a chance for a second question so if you can briefly respond to that, that would be great.

Mr. WAGONER. Yes. You are familiar, we have a plant in your district, I think.

Ms. BALDWIN. Just next door.

Mr. WAGONER. We put, let me say, a broad-based target across all of our manufacturing facilities in North America. We exceeded the target. We reduced 23 percent between 2000 and 2005. We set another target of 17 percent between 2006 and 2010 so we can have a 40 percent reduction over that time period, and that we are employing every single imaginable thing you can do from getting

people to turn off lights to buying more energy efficient equipment. You name it. It is micro stuff that adds up to big numbers.

Ms. BALDWIN. Mr. Press.

Mr. PRESS. Since 2000 we have had a 30 percent reduction per vehicle produced. We have very aggressive plans going forward on a preventive basis, and this goes all the way to zero landfill. We just finished a new plant in San Antonio, Texas where the energy cost per unit is about a third less than anything we have ever built before in the new plant. New plants allow us to do that and we will continue these efforts.

Ms. BALDWIN. Mr. Mulally.

Mr. MULALLY. We also have improved I think a little over 15 percent in the last few years, and we have a target to improve each year continuously. And we also joined the Chicago Climate Exchange where we can trade the carbon also. It is very important to our business, and it is good business.

Ms. BALDWIN. And this is also through multi-faceted strategies or anything in particular to get that 15 percent?

Mr. MULALLY. Just looking at every part of the operation on generating and using power.

Ms. BALDWIN. Mr. LaSorda.

Mr. LASORDA. Yes. Since 2002, our plants reduced about 20 percent. We used outside, experts as well in the energy business who are running our power plants with us and it is a mindset to get every employee—and, by the way, costs of energy have gone up so much it is a natural fixed cost reduction. We have to focus on taking it down. So it is combined, both.

Ms. BALDWIN. Thank you. Mr. Wagoner, you noted the plant that is just adjacent to my district in Jamesville. While the plant is located just across the district border, I know that many of the 2,600 employees who work in that plant are constituents of mine and we are very proud of the work that they do, which includes producing about half of GM's 400,000 E–85 flex fuel vehicles in 2006. I want to touch on just a little more detail on what Mr. Doyle raised in his questioning about the challenges faced by owners of flex fuel vehicles in terms of the fueling stations that have been slow to get behind the growth of the availability of these vehicles, and what steps are GM and the other automotive manufacturers doing to encourage the development of the infrastructure for delivery of E–85 to the consumer. Are you working with the oil companies? Are you working with the industry and what steps should you be taking, what steps should we be taking to move this forward?

Mr. WAGONER. Excellent question because it has perplexed us to a certain extent. We have worked with several of the oil companies. I think to be honest our biggest success has been working with some of the so-called big box retailers, Meijers, for example, and working with them on specific programs to convert some of their fueling pumps over to ethanol. It is a slow process. We are talking with some of the other major retailers to do the same. And I think it is critical that we get over this because eventually people are going to either not use the E–85 capability or lose interest in this great opportunity that we have if we are not able to push that more aggressively.

I know there are incentives to offer current gas station operators, tax credit to convert. I don't know if the level of that is adequate to actually induce people to do so.

Mr. MULALLY. I might just add to Rick's comment that it is really tough for us to help move that infrastructure along as you know because we are not in that business, but we will continue to go out of our way to make sure that everybody knows the value of the alternative fuels and the benefit to all of us. And as far as the business proposition that they are dealing with, I think some encouragement and some help and some incentives to put in that infrastructure is absolutely going to be needed.

Ms. BALDWIN. One last comment. I understand anecdotally that many people who are purchasers of flex fuel vehicles may not be aware of that attribute so in terms of your education, consumer education of the consumer to make them demand this service of their local fuel stations is certainly a helpful component.

Mr. BOUCHER. Thank you very much, Ms. Baldwin. The gentleman from Oklahoma, Mr. Sullivan, for 6 minutes.

Mr. SULLIVAN. Thank you, Mr. Chairman. I would like to thank all the panelists for being here today. I know that you face a lot of challenging times right now in the auto industry, and I think you are doing a good job. I think you will get through it all because you guys are bright men, you got good teams. I think that the innovation and the technology is very exciting. Mr. Wagoner, I bought a Suburban, one of those flex fuels, I haven't been able to put ethanol in it though in Oklahoma. I can't find a place to put ethanol in it. I would have to drive to Kansas, I think, to do it, but I might do that some day.

But one of the neatest things, one of the technological features of it I think that is pretty cool is it operates on a V4 to V8, and that is a neat technology too that saves a lot of fuel. I love that. I think too I would like to refer to my colleague from Michigan, what he said, is that you are doing these things already. You are getting into this. No one is making you do it. It is really kind of you have a constituency of a market like we have a constituency of voters. We like to do what they want because we want to get reelected. You want to do what you want to do so you can sell more cars.

I think if people wanted purple cars you would probably make those if you saw in your data that they wanted them. And so I think it is really market driven. You guys are doing a good job in that, and the technology is really neat and I commend you for it. But I would like to refer to another issue that no one has really talked about, and it is about safety. And when you achieve the technology to get to certain arbitrary standards that some people over here might want to do, you would have to maybe downsize in weight and other maybe aerodynamics and things that might jeopardize safety. And I just want to ask could automobile or highway safety be jeopardized if the Congress decides to set these arbitrary cap A levels and the companies have to consider downsizing or down weighting vehicles in order to produce a fleet of vehicles that will comply?

Mr. WAGONER. History would suggest that, yes, that is a risk. We obviously do everything we can to mitigate that risk. We have

added a lot of safety equipment on vehicles but I think the historical data speaks for itself that it does bring that risk along with it.

Mr. PRESS. I may have a little different viewpoint from the standpoint that technology may allow you to achieve safety and emissions improvements, like a hybrid system applied to a vehicle but it is an extra cost and it does take extra engineering. It depends and it has to be carefully considered when any rule is made the impact it would have on safety and then how we execute it. It has to be open and available so we can maintain safety and reduce the fuel consumption.

Mr. MULALLY. Clearly, it is absolutely a key component and one reason we have been very supportive of NHTSA doing that evaluation and helping us get the maximum feasible levels is that they take into account the technology, he economics of doing it, and the safety. I think that has served us very well, especially the last program was a light truck program. It took into account all those considerations because there are real issues. They are doing a good job at it.

Mr. LASORDA. When we design a car, we start with obviously something the consumer wants, and then we want to make it safe because they need to be safe. Of course, the fuel economy, the aero, these are all factors that we take into consideration almost 4 years in advance before it hits the road. Some people think we can make a car in a couple of months. These take a lot of time and a lot of effort including new technology on materials that could be used for safety and fuel economy for weight reduction.

Mr. SULLIVAN. Don't you think that engineers and others are more suited to make these decisions than career politicians, and probably better than us as well. OK. Also, another thing I would like to focus on is these batteries. I think that is a very neat innovation. I am interested in hearing more about that. It means battery advancements that may be—advancements that may be needed to allow your companies to consider producing plug in hybrid vehicles, what more do we need to learn to have usable battery packs, and how soon do you think we might be able to get there where you see them all over the place, and the batteries are smaller and weigh less and cost effective.

Mr. WAGONER. The challenge is—I mean the chemistry is focused in on this so-called lithium ion model for batteries. It has been very successful in smaller applications. There is actually a company in California that is going to be offering in the next couple of years the opportunity to buy a vehicle that is powered by these small batteries. The problem is there is like 6,900 of them to power the car, so that is as you can imagine pretty expensive. So what we need to do is find a way to be able to get a more efficient application of this battery technology. How fast can that be done, I can't give you an answer for sure but I think if we get on it and put all our muscle behind it, it is more like a 5-year time frame than a 25-year time frame. It is something that we made a huge amount of progress in this battery technology in 5 years, and we are using the technology and your cell phone or whatever, so there is a lot of hope that we can scale that up and get the cost down.

Mr. PRESS. Obviously, the battery is a limiting factor right now. If you took a Prius and made it a plug-in vehicle, the trunk would

literally be full of batteries due to the technology, but that doesn't mean that in the future that we won't be able to achieve a great deal of reduction in cost and weight and efficiency and safety of batteries. These are issues we are all working on very diligently at this time. In terms of the time, it really depends on how this whole process plays out and the kind of support there is and the focus and the amount of energy required from an electrical vehicle perspective. If that is stimulated then it becomes faster.

Mr. BOUCHER. Thank you, Mr. Sullivan. The gentleman's time has expired.

Mr. SULLIVAN. Thank you very much.

Mr. BOUCHER. The Chair now recognizes the gentleman from Texas, Mr. Burgess, for 6 minutes.

Mr. BURGESS. Thank you, Mr. Chairman. I want to thank the panel. This has been a very informative afternoon. I really enjoyed all of the testimony. You have heard from every person up here who drives a hybrid and who drives a flex fuel vehicle. I drive a hybrid. I believe in the technology. But, Mr. Press, I have to ask you, someone I think mentioned that we can't predict the time line or the duration of the technology or how quickly the technology can come to market. You have had the hybrid in process for 10 years, did you tell us, and 10 years ago did people think they had to hit a home run with that?

Mr. PRESS. Ten years ago when we introduced the Prius, gas was $1 a gallon, and it was a long range project. We really wanted to start learning and getting some experience from it. What has happened is we have advanced much quicker than we thought. We have been able to bring a second generation and soon a third generation version which has lower weight, lower cost, and a lot more performance, and it has progressed quite well.

Mr. BURGESS. But at some point in the future we know that the price of oil is cyclical and we may again see oil come down dramatically from where it is today. Do you see that as impacting your business model with the future changes to the hybrid?

Mr. PRESS. From the standpoint of the market if you considered creating demand and sow into the market, no. We need to start marketing the products. We have to make hybrids attractive. We have to make them cost effective and make sure that there is an education of what the advantages are, and we and we can help create a mainstream hybrid market and that is——

Mr. BURGESS. Can I just interrupt for a minute because we got this vote, how long did it take you to develop that technology when you made the commitment that we were going to do this? How long did that go from bench to the assembly line?

Mr. PRESS. The development of the program itself was about a 7-year project where we got into production. The concept of a hybrid though goes all the way back to the 1900's and this technology we have been working on for a very long time.

Mr. BURGESS. That 7-year interval, was any of that research and development funded by the Government?

Mr. PRESS. No, sir.

Mr. BURGESS. So that was all just done under your own initiative?

Mr. PRESS. Yes.

Mr. BURGESS. And I appreciate you doing it. Mr. Mulally, I actually too was waiting for a Ford Escape hybrid but you only sold them on the east and west coast, and being in middle America I had to rely on Mr. Press for a hybrid, but it serves a purpose. It gives me a good deal of moral superiority when I drive, and I like that.

Now, unfortunately Mr. Markey is gone with his charts. When I take a look back to the 1970's and a mental image of the CAFE standards, and what I envision is the Yugo, and I really don't want to see us go back there. I guess, Mr. Gettelfinger, at the time I left, I am most concerned about the constituency that you represent. These other fine gentlemen are all going to be OK one way or the other regardless of whether it is corn or whether it is hybrid or electricity or lightning bolts. They are going to be OK.

But the constituency that you represent is probably more at risk when you hear, and everyone is gone from the other side, but we heard terms like a 80 percent reduction in carbon emissions by 2050. Does that startle you when you hear talk like that?

Mr. GETTELFINGER. Well, not necessarily because if you look back over time and then move forward to today there has been a lot of change in the industry. What is of concern though is a loss of jobs in this country.

Mr. BURGESS. Absolutely. And you have already heard that the batteries are only made in Japan.

Mr. GETTELFINGER. That is correct. And that is the one difference I have here with Mr. Wagoner a while ago on the consumer credit because what we are really doing is we are subsidizing then the product that is made overseas. And as everybody here has testified, if you take one of these products that has got the power train brought in from Japan you drop the content of that vehicle from perhaps 80 percent down to 55. And so, yes, that is a concern, and we tried to address that in our testimony because we are losing a lot of jobs in this country and we are not replacing them either.

Mr. BURGESS. Correct, and if I may, when you couple that with the fact that the wages are good, the health benefits are significant, and the retirement benefits are significant, and a lot of that can be overcome by outsourcing overseas that is of concern to me because you individually represent a constituency that is as large as all of the other gentlemen at the table combined if I did my math right as we were going through the employment numbers. And I just wonder if we have talked about people thinking outside the box. I just wonder if you should be thinking of using the power or equity that you have in collective bargaining to work with your partners to your left at the table there to insure that they do.

Don't rely on us. You see how we are going to fight about CAFE standards. Don't rely on us to do that job for you. I would say it is incumbent upon the union to use their power or collective bargaining to go to General Motors, to go to Ford, and see what can be achieved together to make these products deliverable and achievable within our natural life time because there is a very popular television show that begins in about an hour that talks about the war on the middle class, and I would submit to you that the CAFE standards and that the carbon tailpipe emission standards

may well represent the new war on the middle class, and unfortunately it will be your constituency that suffers the greatest.

Mr. GETTELFINGER. It would depend on how it is designed and put into place. But again everybody at this table, NUMMI, the GM-Toyota joint venture and with all these folks here at the table that are represented here, we work with the companies. In fact, we go through presentations like with Mr. Wagoner, we just had a presentation on what they are doing as far as advance technology vehicles, Mr. Mulally, as well as Mr. LaSorda, so we do try to stay on top of that. Because in the final analysis everybody to my left is in good shape financially. If the jobs go away the impact on the community or whatever they are going to be all right. But we deal with the day-to-day worlds of the people that have lost their jobs and they have got nowhere to go. And so we do have a very big interest in that, and that is why we have pointed out the University of Michigan study that said as far as advanced technology vehicles, we should give incentives to everybody here to produce those products in this country, but also to help move the needle forward quicker as far as technology goes by incentivizing.

Mr. BURGESS. And I couldn't agree with you more. I know the committee will work with you. I would just say you can't tell when a carbon monoxide molecule comes out of the tailpipe whether it originated from fossil fuel or part of the carbon cycle for corn but every one of those carbon dioxide molecules has a union label on it. Thank you, Mr. Chairman, I will yield back.

Mr. BOUCHER. Thank you. The gentleman's time has expired. I am pleased to recognize now the ranking member of our subcommittee, the gentleman from Illinois, Mr. Hastert.

Mr. HASTERT. I thank the chairman. The energy policy act that we passed at the last Congress among other things encourages the development and use of E–85 fuel. Exploiting America's domestic agriculture resource to achieve energy security and provide jobs for Americans, I think is of utmost national importance. Mr. Wagoner, what is General Motors doing to promote the use of E–85 flex fuel vehicles?

Mr. WAGONER. First and foremost, Congressman, we are obviously radically expanding the number of vehicles and the types of vehicles we offer this option on, first and foremost. Second of all, we are spending a lot of money educating consumers about it. We have run a big marketing campaign, Live Green, Go Yellow. We have actually put different color gas caps on our E–85 vehicles so people are reminded every time they go to a fuel station that they have the capability to use flex fuel. And finally I was mentioning earlier that we worked with some of the big retailers to encourage, help them offer ethanol distribution, which I think is at this particular moment having adequate stations for consumers to use on a convenient basis is probably the biggest bottleneck we see in the system although there could be others.

Mr. HASTERT. As you know, there is somebody that got their fingers around the hose and the stopping ability—you know, if you build automobiles that is fine. People buy them and expect to be able to use E–85 but if you have to drive 40 or 50 miles to get the fuel that is a difficult situation to be able to crack. Underwriter Laboratories, UL, has been working to certify E–85 fuel dispensers

since last summer. This is just to certify. In the meantime, big box retailers as you say are delaying the roll out of additional E–85 pumps around the country pending UL certification.

This represents thousands of refueling stations across the country. How does this impact the sale of flex fuel vehicles, and is your company working with UL to try to expedite this process?

Mr. WAGONER. I am aware of one very specific large case where that is exactly the issue that you cite that we could significantly increase the number of fueling stations but they don't want to proceed this retailer unless there is clarification of this issue. It is a liability issue. So we are frankly continuing to produce and continuing to talk about the benefits of flex fuel but behind the scenes obviously our own people in R&D have offered to and to the best of my knowledge are continuing to work with UL to understand what the issues are that are leading them to withhold that approval, and we continue to be available to try to work through those. We obviously have a lot of experience in this in places like Brazil so we know it can work.

Mr. HASTERT. The U.S. Air Force uses it. The military uses it. Brazil has used it. I don't know what the hang up is, and we have used E–85 in engines for a long time. As a matter of fact, Mr. Mulally, I have been told that UL doesn't even have enough information about the effects of E–85 on fuel tanks and pumps. I think the original Model T was capable of running on ethanol, is that correct?

Mr. MULALLY. Absolutely, because Henry Ford also cared about farming too and so he was the first one—actually the first Model T ran on ethanol. They had a long time to take a look at it.

Mr. HASTERT. Mr. Mulally, I assume that before your company began producing flex fuel vehicles you did significant testing on the effects of E–85 on fuel tanks and other components within the car, I assume, is that correct?

Mr. MULALLY. Absolutely.

Mr. HASTERT. Have you shared this data with UL?

Mr. MULALLY. Maybe I better get back to you on that specifically. I am sure we have because we have been like all of us a real proponent of moving towards flex vehicles.

Mr. HASTERT. Well, I am reminded that we have a vote that we have to get to. I really appreciate this panel. I am sorry that I got pulled off on another meeting for part of your testimony. You are a major producer of what Americans are proud of and use every day. The automobile is part of our way of life. We need to know how to adapt it and what we have to do to meet requirements and make, quite frankly, our environment healthier. But there are ways to do it. We appreciate your testimony and look forward to working with you. Thank you very much.

Mr. BOUCHER. Thank you very much, Mr. Hastert. The gentleman from Mississippi has arrived, and, Mr. Pickering, we have 2 minutes left to cast our votes on the floor. However, I note that 348 Members have not voted yet so I have a feeling that this one is going to remain open for a little while, but I would ask the gentleman to be as expeditious as he can with his 5 minutes of questions.

Mr. PICKERING. Mr. Chairman, I will be very brief, and I will use my time basically just to make a few comments and so then we can adjourn and end this good day. But I thank all the leaders of the American automotive industry and manufacturers. And I want to personally welcome Mr. Press with Toyota. He is now our Tupelo honey. The birthplace of Elvis Presley will now be the birthplace of many cars, we hope, flex fuel cars, new hybrid cars, fuel cell cars. And the American spirit and the American car go together. It does represent and symbolize freedom.

I do not think mandates, CAFE mandates, are the best way to go. I think research and opportunities develop technological solutions and incentives for people to find a way to solve our problems on security, on fuel independence, and on environmental issues is the best way. I appreciate what you all are doing and look forward to working with you as we go forward in this process.

Mr. BOUCHER. Thank you very much, Mr. Pickering. I want to express appreciation on behalf of the committee to all of our witnesses. You have spent a long afternoon with us today. I know each of you is very busy, and we do appreciate your time and the very valuable information that you have shared with us. I also want to say thank you for your commitment to work with us as we undertake the major challenge of drafting a greenhouse gas emission bill. We will be consulting closely with you and those with whom you work, and we very much appreciate your cooperation. That being said, the hearing stands adjourned.

[Whereupon, at 4:50 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

STATEMENT OF THOMAS W. LASORDA

Mr. Chairman and Members of the Committee, thank you for inviting me to testify before you on the subject of climate change. DaimlerChrysler is committed to developing new, advanced technologies, which minimize the effects our products and processes have on global climate and the environment in general. We recognize that climate change and national security are serious concerns that require all of us—individuals, industry and government—to take actions to help reduce our dependence on oil and emissions of CO^2. And, we have already taken actions to do so.

DaimlerChrysler has long been committed to reducing petroleum consumption and emissions of greenhouse gases of its motor vehicles.

- We have produced more than 1.5 million flexible fuel vehicles (FFVs)—vehicles capable of running on E–85—in spite of the limited availability of E85 fuel to consumers. That is more than 10 percent of our production over the past nine years, a higher percentage than any other manufacturer. We stand ready to make, by 2012, 50 percent of our production as either FFVs or vehicles capable of running on biodiesel.
- DaimlerChrysler offers seven clean-diesel models this year—providing improved fuel economy of 30 percent and greenhouse gas reductions of 20 percent. As we announced at the Washington Auto Show in January, our new heavy-duty Dodge Ram diesel meets the stringent, 50-state, 2010 emission standards TODAY. And, we are actively pushing for the adoption of a national standard for B20 biodiesel fuel to speed its adoption in the marketplace.
- We are partners in a global alliance in hybrid development with GM and BMW in developing a new hybrid system that we expect will leapfrog the competition. The first Chrysler Group product—the Dodge Durango—will be on sale in 2008.
- DaimlerChrysler is a leader in producing hybrid diesel-electric buses through our Orion transit bus brand. We also have the only demonstration fleet of plug-in hybrids in service—our Dodge Sprinter vans.
- As you may not know, we are the world's leader in fuel cell vehicle production, with more than 100 vehicles—ranging from small passenger cars to city transit buses—in worldwide operation today. Thirty-two of these are in the U.S. We are

putting significant resources into developing these new types of propulsion with the objective of significantly reducing greenhouse gases.

• And we continue to put advanced technology into our gasoline engine vehicles. Last year we introduced a new World Engine for our 4-cylinder cars and trucks, along with a new fuel-efficient continuously variable transmission.

• Just last month we announced a $3 billion powertrain investment. This investment will include the development and production of:

• A significantly more fuel efficient V–6 engine family; and

• New cutting-edge transmissions that improve fuel economy by an additional 5–10 percent alone.

• Plus, we will double the production capacity of our 30 plus mpg 4-cylinder engine plant in Michigan to 840,000 units per year.

• All in all, these investments will further secure tens of thousands of U.S. jobs associated with the engineering and manufacturing of the vehicles that will benefit from these new technologies.

• We're also addressing our product mix. Earlier this year, we announced a 40-plus mpg "Smart" city car that will arrive in the U.S. early next year.

I've focused on what we are doing, from a technology perspective, to reduce petroleum consumption—and, since they are directly related, greenhouse gases. But I need to mention one more item in this vein. For those who advocate 4 percent annual CAFE increases over the next 10 years—which translates to a 50 percent fuel economy increase—we know how to do that, too.

In fact, we already do it—in Europe. The U.S. combined fleet averages 24–25 mpg, and in Europe the fleet averages 36 mpg. That's a 50 percent difference.

Why is there a huge disparity between our fleets there and here? After all, we are the same companies in Europe that we are in the U.S., with access to similar technologies. The difference is the European approach to energy and greenhouse gas policies. They've made some tough political choices. They've highly taxed gasoline, making the price three times higher than in the U.S., and they have incentives on diesel fuel. As a result of these policies, fuel economy is always high on a customer's list, and not just when there's a spike in fuel prices.

Through policies which affect consumer demand, the mix of vehicles sold in Europe is radically different than here—about 60 percent compacts or smaller, compared to about 15 percent here; and about 50 percent of passenger vehicles are diesel powered.

There's no magic at work here. A gas-engine mid-size car in Europe gets the same mileage as a gas-engine mid-size car in the U.S. It's just that customers demand a very different mix of vehicles in Europe.

The European model, while far from perfect, is based on policies that leverage demand and market forces, not on policies that fight them.

However, in the U.S., our policies have historically addressed the supply side—light-duty vehicle fuel-economy standards. But, consider how a 50-percent fuel-economy improvement relates to new vehicle technology alone. If all the new vehicles sold in the U.S. 10 years from now were hybrids or diesels—something that no one really believes is feasible—fuel economy would improve by only 25–30 percent.

U.S. policymakers must adopt a new and unique formula that fits here. DaimlerChrysler supports a three-pronged, comprehensive approach to climate change and energy security; one that includes a combination of:

• vehicle efficiency improvements;

• the expanded use of alternative fuels—such as ethanol and biodiesel; and,

• the harnessing of market forces to help drive consumer demand.

We all need to be very clear on one point—new vehicle efficiency improvements alone will never result in the overall decline in petroleum consumption and greenhouse gas emissions we need. The demand for fuel will continue to grow, as more drivers enter the market and vehicles are driven longer distances.

There are more than 230 million light-duty vehicles currently in use today in the U.S. which travel nearly 3 trillion miles. That is nearly 13,000 miles traveled by each vehicle, each year—an increase of about 30 percent since 1985. Thus, greenhouse gases and the demand for petroleum will not be offset by only addressing efficiency improvements among the 16–17 million new vehicles that enter the U.S. market each year. In order to decrease total greenhouse gas emissions and petroleum consumption, we need to accelerate the adoption of alternative fuels such as E85 and bio-diesel, which will affect a greater proportion of the population of light duty vehicles.

And by the way, while travel is growing in the U.S., it will grow exponentially as China and India increase the global automotive market dramatically. The com-

bined Indian and Chinese existing car fleet will almost triple during the next 10 years to about 90 million vehicles, while the U.S. fleet is forecast to grow 25 percent.

To address this increase in demand, we need a comprehensive approach that addresses energy use and greenhouse gas emissions from all sectors of the U.S. economy, and encourages the most efficient reductions in energy use. Our approach should not just address the supply of energy-efficient products, but also spur demand for them, while establishing reasonable time-tables for compliance and realistic levels of reductions.

Although it should go without saying, I'll say it anyway: This effort needs to be national in scope. We need to avoid an unacceptable and inefficient patchwork of inconsistent Federal, State, and local approaches. In fact, to truly be effective in curbing greenhouse gases, we need a global solution.

On the vehicle efficiency side, we at DaimlerChrysler recognize the need for action. And we're taking it. Every day, our engineers are working to reduce greenhouse gases and petroleum consumption. We absolutely will be part of the solution and we will accelerate our efforts. We also support reforming the CAFE program to base it on vehicle attributes and pledge to continue to work with NHTSA to establish maximum feasible levels of fuel economy—levels that are based on sound science and that recognize the limits of technology, cost, and consumer demand.

But again, if we intend to make meaningful progress in reducing petroleum consumption in this country, in addition to vehicle technology improvements, we look to the Federal Government to establish policies that address consumer demand and bend the bias of transportation fuels toward lower carbon alternatives.

Thank you and I look forward to answering your questions.

HENRY A. WAXMAN, CALIFORNIA
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RICK BOUCHER, VIRGINIA
EDOLPHUS TOWNS, NEW YORK
FRANK PALLONE, JR., NEW JERSEY
BART GORDON, TENNESSEE
BOBBY L. RUSH, ILLINOIS
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BARON P. HILL, INDIANA

DENNIS B. FITZGIBBONS, CHIEF OF STAFF
GREGG A. ROTHSCHILD, CHIEF COUNSEL

ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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June 5, 2007

Mr. Thomas W. LaSorda
Chief Executive Officer and President
Chrysler Group of DaimlerChrysler
CIMS 485-15-30
1000 Chrysler Drive
Auburn Hills, MI 48321-2766

Dear Mr. LaSorda:

Thank you for appearing before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions directed to you from certain Members of the Committee. In preparing your answers to these questions, please address your response to the Member who has submitted the questions and include the text of the Member's question along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received no later than the close of business on June 19, 2007. Your written responses should be delivered to 2125 Rayburn House Office Building and faxed to (202) 225-2899 to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at rachel.bleshman@mail.house.gov. Please send your response in a single Word or WordPerfect formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry A. Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality

DAIMLERCHRYSLER

DaimlerChrysler Corporation
Deborah L. Morrissett
Vice President - Regulatory Affairs
Product Development

June 22, 2007

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515-6115

Dear Mr. Chairman:

Thank you for providing Mr. LaSorda with the opportunity to express DaimlerChrysler's position at the March 14, 2007 Subcommittee on Energy and Air Quality hearing, "Climate Change and Energy Security: Perspectives from the Automobile Industry."

Attached are DaimlerChrysler's responses to follow-up questions from several Members of the Subcommittee that were included in your June 5, 2007 letter to Mr. LaSorda.

If you have any additional questions, please don't hesitate to contact me or my staff.

Sincerely,

Deborah L. Morrissett

Deborah L. Morrissett

cc: T. W. LaSorda

Attachment

DaimlerChrysler Corporation
800 Chrysler Drive CIMS 482-01-96
Auburn Hills MI USA 48326-2757
Phone 248.512.4946
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e-mail: dlm10@dcx.com

The Honorable Edward J. Markey

1. Some of you have recommended the integration of the automobile sector into an economy-wide cap and trade system instead of increasing fuel efficiency standards.

   a. How much of a reduction in emissions for the transportation sector are you willing to support - by 2018, 2030, and 2050? How high a percent reduction in CO_2 emissions would you support applying to your sector for each of these years?

   b. Since there is a correlation between reductions in emissions and increases in fuel economy standards - how much more efficient will you need to make your fleets in order to meet those caps? Are you prepared to commit to making such an increase by altering the way in which cars and light trucks are manufactured, or would you prefer to have the option to purchase CO_2 credits or participate in CO_2 offset programs such as forestation in order to meet the obligation?

   c. Do you anticipate that the automobile sector would actually participate in such a system by making its vehicles meet the cap – or would you anticipate that instead, the sector would prefer to purchase credits from other industry sectors or take other measures to offset emissions (such as forestation) and thereby avoid making its vehicles more fuel efficient?

      As Mr. LaSorda testified at the March 14, 2007 hearing, DaimlerChrysler is committed to the reduction of petroleum consumption and greenhouse gases through continuous improvements in our products and manufacturing processes. We desire to work with the Congress as it develops legislation in these areas and have stated our willingness to consider cap and trade systems.

      Clearly, there is a correlation between reductions in greenhouse gas emissions and higher fleet fuel economy, as the question implies. But this question is too narrow in scope. To most effectively and efficiently reduce both greenhouse gas emissions and petroleum consumption, the Nation must address not just the fuel economy of automobiles, but also the carbon content of the fuels used to power them and the broad issue of consumer demand. Only through a comprehensive approach to these issues will we be able to address our dependence on oil and the issue of climate change.

      For our part, we will continue to improve the fuel economy of our vehicles. On June 21st, we announced a broadening of our "powertrain offensive" to significantly improve the fuel efficiency of future Chrysler, Jeep, and Dodge products. Our announcement

described the development of mild-hybrid technology and the expansion of our already-announced two-mode hybrid program. It included the development of more fuel efficient six- and eight-cylinder engines, including cylinder deactivation in a V-6 engine; dual-clutch transmission technology; a common axle program; weight reduction, aerodynamic and drivetrain initiatives; and another BLUETEC clean-diesel vehicle.

In the absence of knowing the details of a cap-and-trade program, it is impossible for us to comment on what specific actions we might take to meet unknown goals. However, as stated at the hearing, we are willing and desirous to work with the Congress in developing such legislation.

2. It has been suggested that making cars and SUVs more fuel-efficient might somehow make them less safe.

   a. Do you believe that the Ford Escape hybrid, which gets 32 miles per gallon in the city and 29 mpg on the highway, is less safe than a Ford Escape, which gets 21 mpg in the city and 24 mpg on the highway?

   b. Do you believe that the Toyota Camry hybrid, which gets 40 mpg in the city and 38 mpg on the highway, is less safe than a Toyota Camry, which gets 24 mpg in the city and 33 mpg on the highway?

   We are not in a position to judge the safety performance of our competitors' vehicles.

   c. In light of your responses to the previous two questions, do you believe that it is possible to get significant increases in fuel economy WITHOUT making cars less safe?

   As the question does not define what "significant increases in fuel economy" means, we can not respond with any precision. However, standards that are set beyond the levels of what engine, drivetrain, and other technologies can achieve can lead to the negative safety consequences stated in the 2002 National Academy of Sciences report.

3. Some of you have expressed concerns that the imposition of more stringent fuel economy standards could have an adverse impact on your industry and on American jobs.

a. If you believe that higher fuel economy means fewer jobs, then how do you explain the fact that Honda and Toyota, which have made the choice to manufacture more efficient vehicles, have actually created MORE jobs in the U.S. over the same timeframe fuel economy standards have stagnated, while the domestic manufacturers have been forced to lay people off and close manufacturing facilities?

Higher fuel economy standards alone do not necessarily equate to fewer U.S. jobs. It is the form of the standards and the mandated rate of improvement that will dictate whether there is a net automobile industry job loss in the U.S. This includes whether the legislative increase in fuel economy contains commercially realistic fuel economy levels, has separate levels for both cars and trucks, and contains reasonable timeframes that allow automakers to meet the higher fuel economy standards.

The U.S. EPA report, "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2006" notes that industry fuel efficiency has continually improved in Ton-miles per gallon terms for the past twenty years. Until the recent fuel price increases, consumers have placed a higher priority on other vehicle attributes (such as vehicle size and utility) versus fuel economy.

Legislation that does not maintain the 32-year statutory distinction between cars and light trucks will penalize full-line manufacturers that sell a larger mix of trucks than cars and will benefit those manufacturers with a higher car mix.

To attribute employment level increases for some Japanese-based manufacturers solely to product fuel economy is incomplete. These companies have a significant competitive cost advantage in their U.S. operations as a result of having a new and young workforce and few retirees and hence an inherently lower cost structure. In contrast, GM, Ford and DaimlerChrysler support 739,000 retirees and spouses (a ratio of 2:1 employees to retirees) and provide health care to over 2 million Americans. Retiree and health care costs are not borne equally by all manufacturers and are an important aspect of the overall profitability of manufacturers. Japan has no corporate support for either health care or pensions.

Japanese-based manufacturers have benefited and continue to benefit from the ongoing weakness in the Yen. These manufacturers have a significant price advantage in exporting assembled vehicles as well as in exporting many of the components which are then assembled in the United States.

Legislation that does not take into account the above factors could have a significant adverse impact on net U.S. auto jobs.

b. According to the 2002 National Academy of Sciences Report on fuel economy, "General economic conditions, and especially the globalization of the automobile industry, seem to have been far more important than fuel economy regulations in determining the profitability and employment shares of the domestic automakers and their competitors." Moreover, the report concluded that "total employment in automobile manufacturing in the United States reached its highest level ever (more than 1 million) in 1999, thanks largely to foreign companies' decisions to move manufacturing to the United States to take advantage of the most profitable market in the world." Do you agree or disagree with this statement? If so, why and based on what data?

There are many factors that affect U.S. auto jobs. Although jobs held by foreign automakers have increased by about 55,000 between 1995 and 2005, during the same timeframe, employment at DaimlerChrysler, Ford, and General Motors facilities has dropped by roughly 170,000 (not including the spin-off of Visteon and Delphi). This is a net loss of an estimated 115,000 U.S. auto jobs.

c. If you believe that raising CAFE standards is bad for U.S. jobs, that would logically suggest that NOT raising CAFE standards might be GOOD for U.S. jobs. However, between 1995 and 2005, employment of Americans by the foreign automobile companies went up by 52%. This was happening at the same time that the Big 3 were hemorrhaging jobs and shuttering plants all over the country. Shouldn't we conclude then that raising fuel economy standards would either be GOOD for American jobs, or neutral from a job standpoint – rather than something that would harm U.S. auto industry employment? If not, why not?

As noted above, U.S. employment can not be correlated to the fuel economy of a manufacturer's products. The issue is much more complex.

The Honorable Henry A. Waxman

1. All of the witnesses at this hearing emphasized that using fuels with a lower carbon intensity must be part of the solution to global warming.

   As Congress considers policies to promote the use of alternative fuels, it will be important to consider the carbon impacts of our policies. One proposal that is being strongly advocated by certain interests right now is to adopt policies to encourage conversion of coal- to-liquid fuels. While that technology might make some contribution on energy security, researchers and environmental groups have raised the concern that it may substantially increase carbon dioxide emissions. Studies show that absent successful sequestration of the associated carbon dioxide, fuel from coal will have almost two times greater carbon emissions than gasoline. At my request, the National Academy of Sciences is now examining technologies for alternative fuels to provide Congress with information to ensure that we do not exacerbate global warming in an effort to reduce our dependence on foreign oil.

   One concern is that if we do not reduce the carbon content of our transportation fuels, we would need to make much greater cuts in greenhouse gas emissions from other entities and sectors to avoid making global warming worse.

   Please provide your views on government action to promote coal-to-liquids fuel as part of an initiative to address global warming or as part of a broader national energy policy.

   Alternatives to petroleum-based transportation fuels are important to increasing the nation's energy security and reducing greenhouse gases. Any alternative should be considered for that task. With the tremendous coal resource that we have, coal-to-liquids fuel must be considered. To address the concern for carbon emissions from transportation, reduction of carbon from all alternatives must be pursued. This may be a special challenge for processing coal, but a challenge that Congress could help to address.

The Honorable Michael C. Burgess

1. Does the technology exist to increase the fuel economy to a level greater than it is now without imposing major new costs?

   Any technology used to increase fuel economy has cost implications. Major increases in fuel economy demand major investments and will increase manufacturer costs and consumer prices. For example, fuel economy-optimized hybrid systems and highly efficient clean diesel products could improve fuel economy by about 30 percent. The cost of deploying these types of technologies is thousands of dollars per vehicle. In a market that has not yet demonstrated a desire to spend that much more for better fuel economy, the adoption of those technologies in particular, and others in general, is a considerable challenge.

2. Do you think an increase in CAFE standards would subsequently increase the number of hybrids offered by American manufacturers? Do you have any new insight on market trends towards increased demand for hybrids

   Improved fuel economy should not be about choosing or forcing particular technologies. Hybrid technology is expensive and is one of the many technologies that we are developing to reduce our products' petroleum consumption. Another important reason for deploying hybrid technologies is to increase the viability of creators and suppliers of electric powertrain components for the eventual deployment of fuel cell powered electric vehicles. To the extent that these technologies can be used in a competitive commercial market place, they will be used. The limitation is and will continue to be the apparent unwillingness of the market to pay the full cost of these still young technologies.

   The recent increases in fuel prices are increasing the awareness of customers about options that can offer better fuel economy. Hybrids are in the mix of offerings that increasingly include clean diesel products and the ever-improving familiar gasoline powered product.

   In the June 21st announcement, referenced earlier, are commitments by DaimlerChrysler to introduce a technologically advanced two-mode hybrid system in our Chrysler Aspen and Dodge Durango models next year and to offer a mild-hybrid in other models.

TESTIMONY OF

RON GETTELFINGER
PRESIDENT

INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE & AGRICULTURAL IMPLEMENT WORKERS OF AMERICA (UAW)

on the subject of

"CLIMATE CHANGE AND ENERGY SECURITY: PERSPECTIVES FROM THE AUTOMOBILE INDUSTRY"

before the

SUBCOMMITTEE ON ENERGY AND AIR QUALITY
COMMITTEE ON ENERGY AND COMMERCE

UNITED STATES HOUSE OF REPRESENTATIVES

March 14, 2007

Mr. Chairman, my name is Ron Gettelfinger. I am President of the International Union, United Automobile, Aerospace & Agricultural Implement Workers of America (UAW). Accompanying me today is the UAW's Legislative Director, Alan Reuther. The UAW represents over one million active and retired workers across the country. Many of these UAW members work or receive retirement benefits from auto manufacturers and parts companies. The UAW appreciates the opportunity to testify before this Subcommittee on the subject of climate change and energy security.

The UAW shares the growing national concern about climate change. Scientific studies have confirmed that human use of fossil fuels is contributing to global warming. These studies underscore the major environmental challenges posed by global warming, including rising sea levels, changes in climate patterns and threats to coastal areas. To avoid these dangers, the growth in greenhouse gas emissions must be reduced, and ultimately reversed.

The UAW is also concerned about the national security implications of our nation's dependence on foreign oil. Currently, 28 percent of the world's oil is produced in the Persian Gulf. Although less than 11 percent of the oil used by the U.S. comes from this volatile region, disruptions in this oil supply can still create serious problems for our economy. As a result, in recent years our nation has become entangled in deadly, costly conflicts in the Middle East. In our judgment, the long range economic and national security interests of the U.S. would better be served by implementing policies to reduce our dependence on foreign oil.

The UAW believes that climate change and energy security are serious problems that need to be addressed by Congress and the Bush administration. We urge Congress to pursue initiatives that will deal with these issues in an integrated and balanced manner that protects jobs and benefits for American workers and retirees.

Need for Economy-Wide Policies to Address Global Warming

It is important to recognize, at the outset, that the problem of global warming cannot be solved through measures, such as the Corporate Average Fuel Economy (CAFE) program, that focus exclusively on the auto industry. Light duty vehicles (passenger cars and light trucks) account for approximately 16 percent of greenhouse gas emissions in the United States. The CAFE program affects new vehicles sold each year, which represent about 7 percent of the total vehicle stock on the road. It takes about 14 years for the U.S. vehicle fleet to completely turn over. Thus, it is apparent that any changes in the CAFE program would only have a very modest impact in the short term in reducing greenhouse gas emissions.

To address the problem of global warming in a meaningful way, the UAW believes we need a broad, comprehensive policy. In our judgment, this policy should require all sectors of the economy to come to the table and help to reduce our nation's greenhouse gas emissions. This includes all mobile sources, not just light duty vehicles. It also includes stationary sources, such as power plants and factories. And, of course, it includes our fossil fuels such as coal, oil and natural gas. Each sector should be required to contribute to the reduction of greenhouse gases in a proportionate manner. No sector should enjoy a free ride. No sector should be required to bear a disproportionate burden, or to shoulder costs that would have a devastating impact on its operations or employment.

Specifically, the UAW strongly supports the establishment of an economy-wide mandatory tradable-permits program that will gradually slow the growth of, and eventually reduce, greenhouse gas emissions in the United States. We believe this type of "cap-and-trade" program should be done on an "upstream" basis in order to minimize regulation and to ensure that all sectors of the economy participate in a proportionate manner. We also believe this program should include a "safety valve" cost cap to ensure that no sector is hit with unacceptable burdens that would have a negative impact on economic growth and jobs. In addition, this program should include measures to ensure that our businesses and workers are not placed at an unfair competitive disadvantage with U.S. trading partners and developing countries.

The UAW believes that this type of "cap-and-trade" program can make a major contribution to reducing greenhouse gas emissions. It would ensure that such reductions are accomplished in an economically efficient manner. Because of the ripple effect of higher oil prices throughout the economy, it would also help to reduce oil consumption and our dependence on foreign oil.

Auto Sector Policies to Address
Climate Change and Energy Security

The UAW recognizes that the auto sector has an important role to play in addressing the energy security and climate change issues. In addition to emitting about 16 percent of greenhouse gases, light duty vehicles account for about 42 percent of oil consumption in the United States.

In considering auto sector policies to address these issues, the UAW believes Congress should keep in mind several key principles. First, to be effective, any policies must address the fuels that go into vehicles, as well as the efficiency of the vehicles themselves. The promotion of alternative fuels can make an enormous contribution to reducing greenhouse gas emissions and our dependence on foreign oil.

Second, any auto sector policies should recognize that it is much more expensive to achieve reductions in greenhouse gas emissions from light duty vehicles than from other sectors. In our judgment, the best way to address this disparity would be to integrate any auto sector policy with economy-wide efforts to reduce greenhouse gas emissions. At a minimum, the federal government should provide assistance to the auto industry to offset this much higher compliance cost.

Third, and most importantly, the UAW believes that any auto policies requiring improvements in vehicle efficiency should include measures to help level the playing field in the automotive industry, and to provide struggling manufacturers with the resources needed for retooling efforts. To meet more stringent vehicle efficiency standards, the auto companies will have to incur significant additional engineering and retooling costs. However, they do not have a level playing field in terms of their ability to shoulder these retooling costs. The recent profit/loss situations of GM, Ford and DCX are very different than Toyota and Honda. In addition, because they have been operating for a long period of time and have many retirees, GM, Ford and DCX have very substantial retiree health care legacy costs. In contrast, Toyota and Honda have few retirees from their operations in this country, and the health care costs from their Japanese facilities are heavily subsidized through a national health care system.

Without measures to level the playing field and help struggling auto manufacturers, the UAW would be deeply concerned about the **economic feasibility** of any proposals to mandate significantly higher vehicle efficiency standards. In light of the extremely serious financial conditions of GM, Ford and DCX, and the disparate burdens they face in retiree health care legacy costs compared to their competitors, the UAW believes that the imposition of stringent increases in the CAFE standards could lead to calamitous results. This could include the closing of additional facilities and the loss of tens of thousands of additional automotive jobs in this country. It could also include the loss of health coverage for 500,000 retired workers and their families.

In the past two years, we have already seen these companies post shattering losses. In response, they have announced unprecedented plans to downsize their operations, involving the closing of numerous automotive facilities and buy-out programs that could result in the loss of almost 90,000 jobs. Meanwhile, speculation continues about further industry restructuring that could lead to more plant closings and job loss.

The difficulties in the U.S. automotive industry extend beyond GM, Ford and DCX. Overall, the industry has lost over 310,000 jobs since the last employment peak in February, 2000. These losses have occurred in both the auto parts and the assembly sectors. A number of parts companies have filed for bankruptcy. In addition to the enormous loss of jobs in the auto parts sector, there has been

tremendous downward pressure on the wages and benefits for the workers that remain.

Thus, to prevent a serious worsening of the situation in the auto industry, the UAW urges Congress to make sure that any auto sector policies include measures to help struggling auto manufacturers and to level the playing field in the industry. In our judgment, any assistance should be tied to investments in domestic production that will generate jobs for American workers and help the overall U.S. economy. It should also be structured in a manner that recognizes and helps to address the fundamental imbalance in the auto industry related to retiree health care legacy costs.

A). Auto Carbon Burden Cap

The UAW urges Congress to explore the feasibility of establishing an additional carbon control policy that would require reductions in the carbon emissions of light duty vehicles sold in the United States, as well as reductions in the carbon intensity of the fuels that go into these vehicles. This two-pronged approach could make a direct, major contribution to reducing greenhouse gas emissions. At the same time, it also would contribute enormously to a reduction in oil consumption.

Under this approach, auto manufacturers would have a strong incentive to improve the efficiency of their vehicles. But there also would be a strong incentive to increase the availability and use of alternative fuels. This approach could be integrated with the economy-wide cap-and-trade program, thereby increasing the overall efficiency of efforts to reduce greenhouse gases and oil consumption. It would also avoid the gaming and other complications that have arisen in connection with the CAFE program. Significantly, this approach could also help generate the revenues needed to provide assistance to struggling auto manufacturers and to level the playing field in the auto industry.

Obviously, there are many details that would have to be worked out in order to establish this type of carbon burden system for the auto sector. The UAW is prepared to work with this Subcommittee in fashioning this system.

B). Tax Incentives

The federal government currently provides tax credits to consumers who purchase certain advanced technology (hybrid, diesel, fuel cell) vehicles. These incentives are designed to encourage consumers to purchase more fuel-efficient vehicles. However, the tax credits are available regardless of where the vehicles and their key components are built. They are not tied to domestic production. Unfortunately, many advanced technology vehicles currently are assembled in other nations. Even worse, virtually all of the key components (hybrid electric motors; diesel engines) for these vehicles are built overseas, including the key

components for vehicles assembled in this country, as well as those assembled in other countries. As these advanced technology vehicles gain a larger share of the market, this means we are replacing vehicles with higher domestic content with vehicles that have much lower domestic content. As a result, the consumer tax credits effectively subsidize the movement of automotive jobs overseas. For this reason, we believe it would be a major mistake for the federal government to rely solely on these consumer tax credits to encourage the expansion of advanced technology vehicles. Certainly, these tax credits should not be expanded by increasing the amounts or lifting the cap on the number of qualifying vehicles.

Instead of this flawed approach, the UAW urges Congress to use tax or other incentives to encourage **domestic production** of advanced technology vehicles and their key components. As was demonstrated by a November, 2004 study conducted by the Office for the Study of Automotive Transportation (OSAT) of the University of Michigan Transportation Research Institute, and commissioned by the bipartisan National Commission on Energy Policy, this type of approach would help to maintain and create tens of thousands of automotive jobs in this country. At the same time, it would help to accelerate the introduction of these advanced technology vehicles, and thereby reduce global warming emissions and our dependence on foreign oil. Moreover, in light of the highly competitive nature of the U.S. auto market, any savings realized by the auto manufacturers and parts companies would inevitably be translated into cost reductions for consumers, and thereby encourage sales of these more efficient vehicles. Significantly, the OSAT study indicated that the increased tax revenues for federal, state and local governments generated from the jobs created for American workers would more than pay for the costs of such manufacturer incentives.

The UAW was pleased that this type of proposal for a manufacturer's tax credit to encourage domestic production of advanced technology vehicles and their key components was included in a number of bipartisan bills that were introduced in the last Congress. We urge this Subcommittee to include this proposal in any climate change or energy security legislation that is developed in this Congress. This proposal would be consistent with the auto carbon burden cap discussed above.

C). Alternative Fuels Initiatives

There are a range of other initiatives that Congress could pursue to promote the use of alternative fuels in motor vehicles. These initiatives could make an enormous contribution to reducing greenhouse gas emissions and our reliance on foreign oil.

Obviously, there is a need to promote the production of vehicles that are capable of running on alternative fuels. The technology required to make vehicles flex

fuel capable is relatively inexpensive - about $150 per vehicle. GM, Ford and DCX have already voluntarily committed to making 50 percent of their fleets flex fuel capable by 2012. The UAW would support legislation mandating that certain percentages of all vehicles sold in the U.S. by each automaker must be flex-fuel capable by specified dates. Meanwhile, to avoid any counterproductive disincentive, the CAFE credit for flex fuel vehicles should be extended and expanded to cover bio-diesel.

To expand the use of alternative fuels, there also is a need to overcome technical hurdles facing cellulosic ethanol and bottlenecks in distribution networks. Thus, the UAW supports the continuation of existing incentives for the production of bio-fuels. We also support additional incentives or mandates relating to the conversion of existing filling stations so they have the capability to distribute alternative fuels.

The UAW welcomes the Bush administration's proposal to increase the renewable fuels mandate. We also believe that the fuels carbon cap that was recently proposed by Governor Schwarzenegger represents a thoughtful approach that is worth examining on a federal level. Indeed, this proposal is consistent with the auto carbon burden cap described above.

D). CAFE

The UAW believes that changes in the CAFE program are the least desirable option for addressing the problems of climate change and energy security. The CAFE program does nothing about the fuels that go into vehicles. It would not be integrated with any broader economy-wide cap-and-trade program to limit greenhouse gas emissions. Historically, the CAFE program has been subject to gaming by the auto companies. And it does not generate any revenue that could be used to assist struggling auto manufacturers to do the retooling needed to meet stiffer efficiency requirements.

The Bush administration has proposed a number of changes in the CAFE program. In particular, it has requested the authority to establish an attribute-based CAFE system for passenger cars, similar to the system that the National Highway Traffic Safety Administration (NHTSA) has already implemented for light trucks. In addition, the administration has proposed that auto manufacturers be permitted to trade CAFE credits.

The UAW recognizes that moving to an attribute-based CAFE system for passenger cars similar to the system for light trucks would have the benefit of eliminating the discriminatory impact of the current passenger car CAFE rules against full line producers. We would strongly applaud this development. The UAW has long complained that the structure of the current passenger car CAFE rules does not take account of differences in the product mix of the various auto manufacturers. As a result, it imposes a heavier, unfair burden on companies

that have a product mix more oriented towards larger passenger cars. Moving to an attribute-based CAFE system for passenger cars would correct this problem, and require all companies to make similar efforts to improve fuel economy across their entire line of vehicles.

However, as the UAW indicated in our testimony on May 3, 2006 before the House Energy & Commerce Committee, moving to an attribute-based CAFE system for passenger cars would also have the major down side of enabling auto manufacturers to offshore all of their small car production. Under the existing passenger car CAFE program, the combination of the fleet wide averaging and the two-fleet (domestic and foreign) rules ensures that full line auto manufacturers must maintain small car production in North America. This is because the production of smaller, more fuel efficient vehicles is needed to offset the production of larger, less fuel efficient vehicles.

As a matter of national energy policy, the UAW believes it is vital that the U.S. retain domestic production of smaller, more fuel efficient passenger cars. As we have all witnessed, sharp increases in gas prices can lead to shifts in consumer demand towards smaller, more fuel efficient vehicles. Unless we retain domestic production of such vehicles, consumers interested in this segment of the market could be forced to purchase foreign-made vehicles.

Over 17,000 American workers are currently employed in five U.S. assembly plants that produce small passenger cars. This includes GM, Ford, DCX, and NUMMI plants in Lordstown (Ohio), Spring Hill (Tennessee), Wayne (Michigan), Belvidere (Illinois), and Fremont (California). Almost 50,000 American workers produce parts for these vehicles. The jobs of these workers would be directly threatened by any CAFE proposals that undermine fleet wide averaging and/or the two-fleet rule for passenger cars. The loss of these jobs would inevitably have a negative ripple effect on the rest of the economy.

Some commentators have tried to dismiss concerns about the loss of small car production by arguing that the companies will simply substitute large car or light truck production at these facilities, leaving the overall production and employment levels unchanged. This ignores the harsh reality that there currently is significant over capacity in the auto industry. The real world impact is that certain companies would take advantage of any shift to an attribute-based CAFE system for passenger cars to further downsize their operations by closing their small car facilities. The net result is that tens of thousands of automotive jobs would be lost, without any compensating replacements with large vehicle production and jobs. Because of the high multiplier effect of auto industry employment, this also would lead to a net loss of hundreds of thousands of jobs in the overall economy.

As the UAW testified last year, there is an easy way to obtain the benefits of moving to an attribute-based CAFE system for passenger cars, while avoiding

the down side of losing our small car production and jobs. Specifically, the UAW urges Congress to impose an "anti-backsliding" requirement on any new CAFE rules that NHTSA would be authorized to promulgate for passenger cars. This requirement should specify that both the domestic and foreign passenger car fleets for each auto manufacturer would still have to meet or exceed the CAFE standard under the current system (i.e., the 27.5 flat MPG fleet wide standard). This "anti-backsliding" benchmark should be increased in line with the overall fuel economy improvements required under any attribute-based passenger car CAFE system.

The adoption of this type of "anti-backsliding" requirement would prevent companies from offshoring all of their small car production and jobs. This would protect the jobs of tens of thousands of American workers, and guarantee that we would continue to maintain domestic production capacity for smaller, more fuel efficient vehicles.

This type of "anti-backsliding" requirement also would ensure that the auto manufacturers cannot subvert the objective of any new CAFE system by "up-sizing" many of their vehicles, resulting in worse overall fuel economy. It would guarantee that the companies will actually improve fuel economy across the entire range of their passenger cars, and that consumers and our nation will indeed receive the benefits of more fuel efficient vehicles.

The imposition of this type of "anti-backsliding" requirement would not be burdensome for the auto manufacturers. It could be structured in a manner that still allows the companies to obtain the benefits of moving to a CAFE system that takes into account product mix differences between the companies. If the companies are genuinely taking steps to improve fuel economy across their entire range of passenger vehicles, and if they do not shift small car production overseas, they should easily be able to meet this requirement.

Thus, the UAW would support legislation authorizing NHTSA to establish an attribute-based CAFE system for passenger cars, **provided this is coupled with an "anti-backsliding" requirement that protects small car production and jobs in this country**. If this type of "anti-backsliding" requirement is not included, then we would vigorously oppose such legislation.

The UAW believes that the establishment of a "credit trading" system that would allow auto manufacturers to buy and sell CAFE credits for passenger cars and/or trucks would also have the effect of undermining the two fleet rule and/or fleet wide averaging. As a result, it would inevitably jeopardize the continuation of small car production. It could also aggravate the uneven playing field that currently exists between foreign and domestic auto manufacturers. For these reasons, we oppose the proposals put forward by the Administration and others for such "credit trading" systems.

One of the key issues in any discussion of the CAFE program is the stringency of and time frame for any proposed increases in the fuel economy standards. In his State-of-the-Union address, President Bush estimated that the CAFE changes advocated by the administration would save 8.5 billion gallons of gasoline by 2017. Back-up materials provided by the administration indicated that this assumes a 4 percent annual increase in CAFE standards for both passenger cars and light trucks. However, NHTSA has subsequently indicated that this is just a target, not a firm commitment. A number of Members of Congress have also put forward proposals to increase CAFE to 35 mpg for the combined passenger car and light truck fleets, to 40 mpg for passenger cars, or to require 4 percent annual increases in the CAFE standards.

The UAW remains very skeptical about all of these proposals. We question whether increases of this magnitude are technologically feasible. In our view, the study by the National Academy of Sciences in 2001 does not support increases of this magnitude.

As previously indicated, the UAW is deeply concerned about the economic feasibility of these proposals. In our judgment, the imposition of CAFE increases of this magnitude could have extremely negative consequences for production and employment at GM, Ford and DCX, and for the continuation of retiree health benefits for 500,000 retired workers and their families. To avoid serious job and benefit loss, we believe Congress must ensure that any proposals for increases in the CAFE standards also include measures to provide assistance to struggling auto manufacturers, and to help level the playing field in the industry with respect to retiree health care legacy costs.

Conclusion

In conclusion, the UAW appreciates the opportunity to testify before this Subcommittee concerning the critically important issues of climate change and energy security. We look forward to working with this Subcommittee to fashion measures that will enable the U.S. to make significant progress in reducing greenhouse gas emissions and oil consumption, while protecting jobs and benefits for American workers and retirees.

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ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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June 5, 2007

Mr. Ron Gettelfinger
President
International Union, United Automobile, Aerospace
and Agricultural Implement Workers of America
8000 East Jefferson Ave
Detroit, MI 48214

Dear Mr. Gettelfinger:

Thank you for appearing before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions directed to you from certain Members of the Committee. In preparing your answers to these questions, please address your response to the Member who has submitted the questions and include the text of the Member's question along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received no later than the close of business on June 19, 2007. Your written responses should be delivered to 2125 Rayburn House Office Building, Washington, D.C. 20515, and faxed to (202) 225-2899 to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at rachel.bleshman@mail.house.gov. Please send your response in a single Word or WordPerfect formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry A. Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality

INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE & AGRICULTURAL IMPLEMENT WORKERS OF AMERICA – UA

RON GETTELFINGER, President ELIZABETH BUNN, Secretary-Treasurer

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June 19, 2007

House Committee on Energy & Commerce
Rayburn House Office Bldg., Room 2125
Washington, D.C. 20515

Attention: Rachel Bleshman

Dear Ms. Bleshman:

In response to the letter dated June 5, 2007 from Chairman Dingell, attached you will find responses from UAW President Ron Gettelfinger to the questions posed by Members of the Committee in connection with the hearing that was conducted on March 14, 2007 by the Subcommittee on Energy and Air Quality on the subject of: "Climate Change and Energy Security: Perspectives from the Automobile Industry."

Thank you for your attention to this matter.

Sincerely,

Alan Reuther
Legislative Director

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The Honorable Edward J. Markey

1. Some of you have recommended the integration of the automobile sector into an economy-wide cap and trade system instead of increasing fuel efficiency standards.

Ans. The UAW has supported an economy-wide cap and trade system, but NOT instead of increasing fuel efficiency standards. Rather, we believe there should be an economy-wide cap and trade system and improvements in fuel efficiency standards.

a. How much of a reduction in emissions for the transportation sector are you willing to support - by 2018, 2030, and 2050? How high a percent reduction in C02 emissions would you support applying to your sector for each of these years?

Ans. The UAW generally supports the revised greenhouse gas reduction targets advocated by the National Commission on Energy Policy. In terms of fuel efficiency standards, we support the proposal contained in the discussion draft released by Representative Boucher.

b. Since there is a correlation between reductions in emissions and increases in fuel economy standards - how much more efficient will you need to make your fleets in order to meet those caps? Are you prepared to commit to making such an increase by altering the way in which cars and light trucks are manufactured, or would you prefer to have the option to purchase C02 credits or participate in C02 offset programs such as forestation in order to meet the obligation?

Ans. With respect to light duty vehicles, total greenhouse gas emissions are determined by a number of factors, including vehicle efficiency, the carbon content of the fuel, and the vehicle miles traveled. The UAW believes the federal government should persue coordinated policies to address all of these factors. We believe any improvements in vehicle efficiency should be set at a level that is both economically and technologically feasible for the auto manufacturers. We believe all manufacturers should be required to meet certain vehicle efficiency standards, and not be allowed to purchase CO2 credits to avoid this obligation. However, we also believe that integrating a vehicle efficiency program with a broader economy-wide cap and trade program would be very helpful, both in providing incentives for CO2 reductions in excess of the minimum standards, and in providing the resources needed

to retool manufacturing facilities in this country to make more efficient vehicles.

c. Do you anticipate that the automobile sector would actually participate in such a system by making its vehicles meet the cap or would you anticipate that instead, the sector would prefer to purchase credits from other industry sectors or take other measures to offset emissions (such as forestation) and thereby avoid making its vehicles more fuel efficient?

Ans. See the answer to question 1 b.

2 It has been suggested that making cars and SUVs more fuel efficient might somehow make them less safe.

Ans. The UAW has not made this argument.

a. Do you believe that the Ford Escape hybrid, which gets 32 miles per gallon in the city and 29 mpg on the highway, is less safe than a Ford Escape, which gets 21 mpg in the city and 24 mpg on the highway?

b. Do you believe that the Toyota Camry hybrid, which gets 40 mpg in the city and 38 mpg on the highway, is less safe than a Toyota Camry, which gets 24 mpg in the city and 33 mpg on the highway?

c. In light of your responses to the previous two questions, do you believe that it is possible to get significant increases in fuel economy WITHOUT making cars less safe?

3. Some of you have expressed concerns that the imposition of more stringent fuel economy standards could have an adverse impact on your industry and on American jobs.

a. If you believe that higher fuel economy means fewer jobs, then how do you explain the fact that Honda and Toyota, which made the choice to manufacture more efficient vehicles, have actually created MORE jobs in the US over the same timeframe fuel economy standards have stagnated, while the domestic manufacturers have been forced to lay people off and close manufacturing facilities?

Ans. Honda and Toyota have achieved higher CAFE numbers for their vehicle fleets largely because of their product mix, not because their vehicles are per se more efficient. We believe the CAFE program needs to be reformed so as to reflect product mix differences between various manufacturers.

The reasons that GM, Ford and Chrysler have been forced to close facilities and layoff workers, while Honda and Toyota have created more jobs in the U.S., have mostly to do with the flawed trade and health care policies of the United States. Honda and Toyota do not have to deal with the same health care costs, especially the retiree health care legacy cost burdens, that GM, Ford and Chrysler have to shoulder. In addition, currency manipulation by Japan gives a huge cost advantage and subsidy to the Japanese automakers. And, as a result of unfair trade practices, Japan continues to maintain huge auto trade surpluses with the U.S. These trade and health care issues need to be addressed if we are truly going to have a level playing field in the auto industry.

b. According to the 2002 National Academy of Sciences Report on fuel economy, "General economic conditions, and especially the globalization of the automobile industry, seem to have been far more important than fuel economy regulations in determining the profitability and employment shares of the domestic automakers and their competitors." Moreover, the report concluded that "total employment in automobile manufacturing in the United States reached its highest level ever (more than 1 million) in 1999, thanks largely to foreign companies' decisions to move manufacturing to the United States to take advantage of the most profitable market in the world." Do you agree or disagree with this statement? If so, why and based on what data?

Ans. ***See the answer to question 3a. Also, since February, 2000, the United States has lost 326,000 jobs in the motor vehicles and parts sector. Notwithstanding the fact the foreign automakers have established some manufacturing facilities in the U.S., our auto trade deficits have continued to mushroom with Japan, Mexico, Korea and China. Thus, we are importing more automotive products from these countries into the United States.***

c. If you believe that raising CAFE standards is bad for U.S. jobs, that would logically suggest that NOT raising CAFE standards might be GOOD for U.S. jobs. However, between 1995 and 2005, employment of Americans by the foreign automobile companies went up by 52%. This was happening at the same time that the Big 3 were hemorrhaging jobs and shuttering plants all over the country. Shouldn't we conclude then that raising fuel economy standards would either be GOOD for American jobs, or neutral from a job standpoint -- rather than something that would harm U.S. auto industry employment? If not, why not?

Ans. See the answers to questions 3a & b. Furthermore, the UAW has never taken the position that increases in the CAFE standards are per se bad for employment. Indeed, we have consistently supported reasonable increases in the CAFE standards that are technologically and economically feasible. However, we believe that extreme increases in the CAFE standards, such as those proposed in H.R. 1506, are not economically feasible. We believe the enormous and disparate retooling costs that would be imposed on GM, Ford and Chrysler would lead to further plant closings and job loss, as well as threaten the health insurance benefits for 525,000 retired workers and their families.

4. In your testimony, you state that it will be more expensive for the auto industry to reduce greenhouse gas emissions from light duty vehicles than from other sectors, and that is one of the reasons why the transportation sector should be integrated into an economy-wide cap and trade system. Does that mean that you believe that the auto sector should simply be able to purchase C02 credits from other sectors or take other measures to offset emissions (such as forestation) rather than do what it takes to make its vehicles use less oil?

Ans. No. As previously stated, the UAW believes the auto manufacturers should be required to meet reasonable increases in vehicle fuel efficiency standards. The purpose of integrating any vehicle efficiency program into the broader economy-wide cap and trade system would NOT be to allow the auto companies to purchase CO2 credits in order to avoid making their vehicles more efficient. Rather, the purpose would be to provide incentives for CO2 reductions in excess of the minimum standards, and to provide the resources needed to retool manufacturing facilities in this country to make more efficient vehicles.

5. You also state that the government should help the auto industry with its higher costs of reducing C02 emissions relative to other industry sectors, and that the Big 3 also have to shoulder the additional costs of health care and other benefits for their workforces that other manufacturers do not have. If the federal government were to provide the auto manufacturers and workers with the assistance they needed in these areas, would that help to address your concerns about a mandatory increase in fuel economy standards?

Ans. The UAW believes it is extremely important that the federal government provide assistance to the auto industry to make it economically feasible for GM, Ford and Chrysler to meet any higher

fuel economy standards. This includes assistance with the retooling costs, and incentives to encourage domestic production of advanced technology vehicles. It also includes mechanisms to help level the playing field in the industry with respect to health care costs.

6. In your testimony, you reference the hybrid consumer tax credits and point out that many of the components that go into hybrid vehicles are not made domestically. You recommend against expanding upon these tax credits, because they "effectively subsidize the movement of automotive jobs overseas". The gas guzzler tax was imposed by Congress to discourage consumers from buying cars that get less than 22.5 miles per gallon. But Congress didn't apply the tax to the purchase of gas guzzling SUVs - only cars - and this results not only in a subsidy of $2.4 billion for the purchase of light trucks in 2007 alone, but also creates a perverse consumer incentive to buy larger, less fuel efficient vehicles. You say you support tax credits for advanced technologies that encourage domestic production because that would be more equitable for the domestic manufacturers. Do you also think that the gas guzzler tax should be applied to light trucks, because that would be more equitable for the manufacturers of smaller vehicles? Why or why not?

Ans. The UAW strongly supports federal incentives (tax or otherwise) to encourage domestic production of advanced technology vehicles and their key components. We support this type of initiative for two main reasons. First, this would help to accelerate the introduction of these vehicles, thereby reducing oil consumption and greenhouse gas emissions. Second, it would help to create tens of thousands of jobs for American workers.

The issues associated with application of the gas guzzler tax are not similar to those associated with providing incentives for the domestic production of advanced technology vehicles.

The Honorable Henry A. Waxman

1. All of the witnesses at this hearing emphasized that using fuels with a lower carbon intensity must be part of the solution to global warming. As Congress considers policies to promote the use of alternative fuels, it will be important to consider the carbon impacts of our policies. One proposal that is being strongly advocated by certain interests right now is to adopt policies to encourage conversion of coal to liquid fuels. While that technology might make some contribution on energy security, researchers and environmental groups have raised the concern that it may substantially increase carbon dioxide emissions. Studies show that absent successful sequestration of the associated carbon dioxide, fuel from coal will have almost two times greater carbon emissions than gasoline. At my request, the National Academy of Sciences is now examining technologies for alternative fuels to provide Congress with information to ensure that we do not exacerbate global warming in an effort to reduce our dependence on foreign oil. One concern is that if we do not reduce the carbon content of our transportation fuels, we would need to make much greater cuts in greenhouse gas emissions from other entities and sectors to avoid making global warming worse. Please provide your views on government action to promote coal-to liquids fuel as part of an initiative to address global warming or as part of a broader national energy policy.

Ans. The UAW believes that any economy-wide cap and trade system must reduce the amount of greenhouse gas emissions in order to combat global warming. There should not be any exemptions or loopholes to this over-riding objective.

The UAW believes the federal government should commit substantial resources to develop adequate technologies and mechanisms to successfully sequester carbon dioxide associated with the conversion of coal to liquid fuels, so this does not lead to greater greenhouse gas emissions.

The Honorable Michael C. Burgess

1. Does the technology exist to increase the fuel economy to a level greater than it is now without imposing major new costs?

Ans. The UAW supports reasonable increases in the CAFE standards that are technologically and economically feasible for the auto manufacturers. We believe such reasonable increases can be accomplished without imposing undue cost burdens on consumers.

2. Do you think an increase in CAFE standards would subsequently increase the number of hybrids offered by American manufacturers? Do you have any new insight on market trends towards increased demand for hybrids with recent spike in gas prices?

Ans. The UAW believes that increases in the CAFE standards will encourage the auto manufacturers to more rapidly deploy advanced technologies, including hybrids and clean diesels. We urge Congress to provide incentives to encourage domestic production of these advanced technology vehicles and their key components.

3. You mention in your testimony that it is much more expensive to achieve reductions in GHG emissions from light duty vehicles than other sectors. Can you explain that statement further?

Ans. Several studies have estimated that the cost of reducing greenhouse gas emissions through improvements in vehicle efficiency is over $100 per metric ton. A report by the MIT Joint Program on the Science and Policy of Global Change (# 136) estimates this cost at over $100 per metric ton, and cites a 2003 CBO paper that estimates this cost at $117 per metric ton. The National Commission on Energy Policy has proposed a $10 per ton "safety-value" price for greenhouse gas emissions under its cap-and-trade proposal, and estimates that the reduction of greenhouse gas emissions from most other sources would fall below this cost in the near term.

WRITTEN TESTIMONY OF:

Alan Mulally

President and CEO

Ford Motor Company

House Energy and Commerce

Subcommittee on Energy and Air Quality

"Climate Change and Energy Security:
Perspectives from the Auto Industry"

Wednesday, March 14, 2007

MEMBERS OF THE COMMITTEE:

Good afternoon, I'm Alan Mulally, President and CEO of Ford Motor Company. It is a pleasure to be here in the Nation's capital, to provide our perspective on these important issues. But before I talk about energy security and climate change, I would like to spend a moment telling you about our company.

Ford Motor Company is comprised of many brands and affiliates including: Ford, Lincoln, Mercury, Volvo, Land Rover, Jaguar, Mazda and Ford Credit. We operate facilities in 45 states and about one in every five American autoworkers is employed by Ford Motor Company. Beyond direct employment of over 100,000 people in the United States, Ford impacts nearly 2 million American jobs or nearly 2 percent of private sector employment. Over the last three years, Ford has spent nearly $23 billion on research and development – the vast majority of which has been here in the United States. This is about as much as the Department of Energy spends on R&D for all of its programs and national laboratories.

As you know, Ford is facing significant challenges in North America and some of you might be wondering what the future holds. I can tell you that we have a strong plan, with the right team, to turn around our company. Our plan is rooted in the deployment of advanced, innovative technologies to improve the fuel efficiency of our vehicles and to deliver outstanding quality and features that our customers desire.

And our plan is beginning to show results. Earlier this year, *Consumer Reports* recognized our progress by displaying the Ford Fusion on the cover of their automotive issue, highlighting its outstanding quality. The Ford Fusion had strong sales in its first month – and our new "crossover" vehicle, the Ford Edge, has posted even higher sales in its first two months while also being named a "Top Safety Pick" by the Insurance Institute of Highway Safety. And our car sales over the last two years have increased by 13 percent. We have a realistic plan, we have more great products coming, and we have more than one hundred thousand dedicated and talented employees here in the United States determined to deliver new technologies and outstanding results.

Now let's talk about global climate change and energy security. Although I'm new to this debate, I am aware that Ford was the first company in our industry to publish a report on the business impact of climate change. Here's a copy of that report that I would like to submit to the record. In addition, since 1999 we've reported on sustainability -- the triple bottom line that addresses environmental, financial and societal impacts. In 2005, after the Katrina hurricane when gas prices spiked, our Chairman, Bill Ford, called for a "national dialogue" to seek solutions that address our nation's energy security.

Today, I'm here to tell you that Ford remains committed to working with you to secure our energy future and address climate change. But we need government to be our partners, not our adversaries. Ford has long acknowledged the importance of climate

change and recognizes its potential impact on the environment, the economy, workers, and society.

As we work to address climate change, one important principle to remember is that "all CO2 molecules are created equal" – once those molecules reach the upper atmosphere, they contribute to greenhouse gases, regardless of their source. So, CO2 has no boundaries or borders. However, the cost of mitigating man-made carbon emissions varies significantly depending on the source. The atmosphere doesn't care where the CO2 comes from, but the economy does and we should attempt to achieve the most economically efficient solutions possible.

As you know, the transportation sector produces about one-third of the nation's CO2 emissions and about one-fifth comes from cars and trucks. We recognize that reducing CO2 from cars and trucks will be an important element of any energy security and climate change policy. We also recognize that an effective policy must consider an "integrated approach" – a partnership of all stakeholders which includes the automotive industry, the fuel industry, government, and consumers. Yes, we need more efficient vehicles, but we also need lower carbon fuels and consumer incentives to adopt these technologies. Within the transportation sector, the government must reconcile decisions affecting fuels, vehicles, and travel demand in order to achieve the twin goals of reducing carbon emissions and securing our energy future. Our analysis shows that the most cost effective solutions to lowering the CO2 emissions from vehicles must be a combination of bio-fuels and vehicle technology advancements. But overall it is the

customer who will choose what they buy and how they drive. The truth is that we must all accept that these are long-term challenges and that we are all part of the solution.

In addition, future developments in technologies, ever-changing markets, consumer demand and political uncertainties require flexible solutions. The business strategies that Ford implements, and the public policies that we encourage, must have the flexibility to meet a range of potential scenarios. All scenarios will call for reduced CO2 emissions, but within that broad expectation is a host of possibilities. Today, we are continually challenging our engineers to improve fuel economy through weight reductions, improved aerodynamics, optimization of accessory loads, and more efficient transmissions. No one can predict if the powertrain of the future will be hydrogen, bio-fuels, battery electric, advanced diesel and gasoline or some combination of these technologies. There is "no silver bullet" solution and that's why we are involved in so many development paths - sometimes with unique partners.

CAFE isn't a silver bullet either. When the CAFE law was passed in the 1970s, the goal was to reduce our dependence on foreign oil. Frankly that didn't work. Even though today's average light truck gets better fuel economy than an average 1970s compact car, the unintended consequence was that as gas prices fell, people drove more. In fact while the number of vehicles on the road today is three times the number in the late 1960s, the miles traveled has quadrupled making us more dependent on foreign oil.

Therefore, new solutions to address the energy security and climate change problems must not have unintended consequences or impede our U.S. global competitiveness.

Ford recognizes that we must participate in a solution to these issues and we have invested significant money and resources into the research and development of innovative vehicle technologies. We are developing a range of advanced technologies that improve fuel efficiency and diversify vehicle fuels away from petroleum including hybrid-electric, flexible fuel vehicles, clean diesel, hydrogen internal combustion engines, hydrogen fuel cells and advanced gasoline engines.

I am proud to say that Ford produced the first American-made full hybrid electric vehicle on the road – the Ford Escape Hybrid. We have expanded our hybrid line-up to include the Mercury Mariner and Mazda Tribute hybrids and will continue to grow our offerings with the Ford Fusion and Mercury Milan hybrid electric vehicles. In addition to hybrids, we believe that greater use of renewable low carbon fuels like ethanol (E85) can help address climate change while also reducing reliance on foreign oil and providing a true fuel choice to consumers.

Ford has been building flexible fuel vehicles for over a decade and we have placed more than 2 million on America's roads. Flexible fuel vehicles are a great alternative for our customers because they provide an option to choose between E85 and gasoline as desired. Last summer, Ford, along with GM and DaimlerChrysler voluntarily committed to double the production of flexible fuel vehicles by 2010. In November, we expanded

that commitment to include half of our vehicles produced each year by 2012, provided there are sufficient amounts of ethanol and enough retail facilities to support consumers operating their vehicles on E85. To further support consumer access to ethanol, we helped open 50 new E85 stations in the nation's first ethanol corridor. This will allow flexible fuel vehicle owners to drive from Chicago to Kansas City and back – a distance of 1,700 miles – fueling exclusively with E85.

And we're not stopping there. Just a few weeks ago, we introduced the Ford Escape Hybrid Electric E85 demonstration project that combines two petroleum-saving technologies – hybrid electric power and E85 flexible-fuel capability. Though there are many technical and cost challenges to address, we believe that if just 5% of the U.S. fleet were powered by E85 HEVs, oil imports could be reduced by about 140 million barrels or 6 billion gallons of gasoline each year.

These hybrid electric and flexible fuel vehicle initiatives emphasize Ford's strong commitment to the nation's energy security and climate change efforts. But there is a limit to what we can achieve on our own. We must find a way to bring affordable and renewable low carbon fuels to the customer as well. Currently there are over 6 million flexible fuel vehicles on America's roads but only 1,100 E85 fueling stations – and that's out of over 170,000 retail gasoline stations nationwide. If all of these flexible fuel vehicles currently on the road were operated on E85 ethanol we could save a full year of gasoline consumption in a state like Missouri or Tennessee. We stand ready with the

technology and we are willing to lead the way, but we need to partner with government and fuel providers – we must have the fuel infrastructure before we can effect change.

At Ford, we are clearly excited about the role of renewable fuels. In fact, the first ethanol vehicle goes back to the days of Henry Ford and the Model T. Renewable American grown fuels have the potential to significantly reduce carbon emissions and the nation's dependence on foreign oil. Today's ethanol made from corn has the ability to reduce CO2 emissions by approximately 25 percent – tomorrow's cellulosic ethanol can increase this percentage to about 85 percent. Ford supports federal incentives that encourage the production, distribution, and use of low carbon, affordable renewable fuels and flexible fuel vehicles capable of running on renewable E85 ethanol. We can truly have an American solution to these problems.

Ford also believes the issues of energy security and climate change are directly related and must be discussed together. Ford will continue to do our part in producing flexible fuel vehicles and improving vehicle fuel efficiency. We support increasing passenger car CAFE standards to maximum feasible levels and reforming the CAFE structure, similar to the light truck reform which set standards based on size or "footprint". We also support taking the politics out of the CAFE decision. Setting CAFE standards can only be properly accomplished after a thorough analysis of the data – technical data, economic data, and safety data. We believe NHTSA has this capability.

We all agree on the same goals, reducing carbon emissions and reducing U.S. dependence on foreign oil, but we must also recognize that CAFE has been one solution but may not be the best way to achieve our shared goals. We need to focus on using less high carbon fuels like gasoline and transitioning to low carbon fuels including ethanol, new bio-fuels, bio-diesel, electricity, and eventually hydrogen. This will do more for reducing carbon emissions and our dependency on foreign petroleum than an approach focused solely on CAFE.

In order to reduce overall greenhouse gases, every sector of the economy will have to contribute to fixing the problem. We are ready to do our part, but cars and trucks produce only one-fifth of the emissions so any governmental action on our sector will have only a partial impact on the problem. For too long, each sector has wanted someone else to be the solution in order to pass the buck. This piecemeal approach will not work if we are serious about change.

Congress will have to make some tough choices. In the transportation sector alone there are a number of possible ways to limit carbon emissions. Increasing CAFE too quickly and aggressively will have serious negative consequences on the American automobile industry and could significantly reduce consumer vehicle choices. We need to have a serious dialogue with all key stakeholders including Congress to develop real solutions to these real problems. Is an upstream cap and trade approach the answer? What about a low carbon or bio-mass fuel standard? Or is increasing the cost of driving, like a higher fuel tax the answer? How can we positively influence the

consumer without negatively impacting small business and denying families their mobility? These are tough questions, and will require tough choices.

At Ford, we look forward to working with you on a comprehensive approach that will be both effective and fair without seriously impacting the U.S. economy.

I look forward to taking your questions.

HENRY A. WAXMAN, CALIFORNIA
EDWARD J. MARKEY, MASSACHUSETTS
RICK BOUCHER, VIRGINIA
EDOLPHUS TOWNS, NEW YORK
FRANK PALLONE, JR., NEW JERSEY
BART GORDON, TENNESSEE
BOBBY L. RUSH, ILLINOIS
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DENNIS B. FITZGIBBONS, CHIEF OF STAFF
GREGG A. ROTHSCHILD, CHIEF COUNSEL

ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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June 5, 2007

Mr. Alan R. Mulally
President and Chief Executive Officer
Ford Motor Company
World Headquarters
One American Road
Dearborn, MI 48126

Dear Mr. Mulally:

Thank you for appearing before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions directed to you from certain Members of the Committee. In preparing your answers to these questions, please address your response to the Member who has submitted the questions and include the text of the Member's question along with your response. In the event you have been asked questions from more than one Member of the Committee, please begin the responses to each Member on a new page.

To facilitate the printing of the hearing record, your responses to these questions should be received no later than the close of business on June 19, 2007. Your written responses should be delivered to 2125 Rayburn House Office Building and faxed to (202) 225-2899 to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at rachel.bleshman@mail.house.gov. Please send your response in a single Word or WordPerfect formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry A. Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality



Alan R. Mulally
President and Chief Executive Officer

World Headquarters
One American Road
Dearborn, MI 48126-2701 USA

June 25, 2007

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
Washington, DC 20515-6115

Dear Mr. Chairman:

Thank you for allowing Ford Motor Company the opportunity to present our testimony before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007. Recently, several Members of the Committee directed additional questions for the record. Our response is attached, including a restatement of the questions for clarity.

We look forward to working with Congress to address our nation's energy issues. Thank you again for this opportunity.

Best regards,

Alan

Questions for the Record
To Alan Mulally
Honorable Edward J. Markey

1. Some of you have recommended the integration of the automobile sector into an economy-wide cap and trade system instead of increasing fuel efficiency standards.

   a. How much of a reduction in emissions for the transportation sector are you willing to support – by 2018, 2030, and 2050? How high a percent reduction in CO2 emissions would you support applying to your sector for each of these years?

   b. Since there is a correlation between reductions in emissions and increases in fuel economy standards – how much more efficient will you need to make your fleets in order to meet those caps? Are you prepared to commit to making such an increase by altering the way in which cars and light trucks are manufactured, or would you prefer to have the option to purchase CO2 credits or participate in CO2 offset programs such as forestation in order to meet the obligation?

   c. Do you anticipate that the automobile sector would actually participate in such a system by making its vehicles meet the cap – or would you anticipate that instead, the sector would prefer to purchase credits from other industry sectors or take other measures to offset emissions (such as forestation) and thereby avoid making its vehicles more efficient?

Response to Markey Question 1:

Ford Motor Company recognizes that we have a role in addressing climate change and energy security, and we are committed to reducing greenhouse gas emissions from our products and processes. We do not support integrating the automobile sector into an economy-wide cap and trade system to avoid increasing fuel efficiency standards. On the contrary, we support reforming the passenger car CAFE structure and allowing NHTSA to increase CAFE standards over time at maximum feasible levels as required by law. We also support an upstream, economy-wide carbon trading system that gradually reduces the limits on carbon introduced into the economy. Although you asked about specific emission reductions for the transportation sector in certain years, it doesn't make sense to establish sector specific reductions in an upstream economy-wide cap-and-trade program.

We believe that a properly structured, upstream system (that requires fossil fuel producers to be covered by allowances) will allow all sectors of the economy to respond to market signals and pursue the most cost-effective

solutions to improve energy conservation and energy efficiency. From a transportation point of view, an effective system would drive the market towards gradual but dramatic changes in product and technology mix of more efficient products. Simply put, an upstream, economy-wide cap and trade system will help to support vehicles with improved fuel efficiency and that are capable of operating on low carbon fuels.

Regarding altering the way in which cars and trucks are produced, Ford has reduced emissions from our facilities by approximately 15 percent since 2001, and we are committed to further reductions; however, facility emissions are only a small percentage when compared with the CO2 emissions that result when consumers drive their vehicles. As you may already know, Ford offers U.S. customers a means of offsetting emissions from the use of their vehicles. Additionally, Ford offsets the carbon emissions from the manufacture of our hybrid vehicles. In a system in which no single player controls all inputs, changes in output – in this case GHG emissions – will require unprecedented coordination both across all sectors and within specific sectors.

The transportation sector represents a closely interdependent system characterized by the equation: fuel + vehicle + driver = GHG emissions. Each link in this chain depends on the other. Automakers can produce a range of products to use fuels with varying carbon content; however, operating those vehicles on the alternative fuels will require energy providers to bring the fuels to market and consumers to demand both the vehicle and fuel. Vehicles, fuels and fuel-use must be addressed as a system. We address each of these elements below.

VEHICLE:

According to EPA, fuel efficiency has been increasing approximately 1-2% a year, on average, for the last 30 years. In addition, since 2004, NHTSA has increased fuel economy standards for trucks by approximately 2 percent annually. This represents seven straight years of increasing standards and a nearly 15 percent improvement in fuel economy between 2004 and 2011. Beyond 2011, continued efficiency improvements on the order of 2 percent per year may be an appropriate goal over 7-10 years as part of an overall program to reduce GHG emissions; however, standard-setting can only be properly accomplished after a thorough analysis by NHTSA of technical, economic and safety data.

The most cost-effective solutions to lowering CO2 emissions during vehicle use are a combination of bio-fuels and vehicle technology advancements. Ford has committed to double our production of flexible fuel vehicles by 2010 and to make half of our vehicles flexible fuel capable by 2012 provided there are sufficient amounts of ethanol and enough retail facilities to support consumers operating their vehicles on E85.

FUEL:

Policies need to encourage the use of lower-carbon and renewable-carbon fuels and energy (e.g., bio-ethanol fuels and blends) through favorable market signals and incentives, as well as encourage energy efficiency, carbon sequestration initiatives, offsets, and credits across all phases of the energy value chain.

We all agree on the same goals of reducing carbon emissions and reducing U.S. dependence on foreign oil, and we need to focus on transitioning to low carbon fuels including ethanol, new bio-fuels, bio-diesel, electricity and eventually hydrogen. This will do more for reducing carbon emissions and our dependency on foreign petroleum than an approach focused solely on CAFE.

DRIVER:

Consumers' role in reducing GHG emissions will be an important element as well. For example, educating consumers through eco-driving programs can provide a low cost and immediate way to reduce GHGs. A person who drives in an energy-conscious way – by avoiding excessive idling, unnecessary bursts of acceleration and anticipating braking – can enjoy much better fuel consumption today. We support policies that align consumer behavior and travel demand with climate and energy goals including:

- **consumer incentives for the purchase of advanced technology vehicles;**
- **consumer incentives for the purchase of renewable fuels such as E85;**
- **improved road transport and infrastructure, reduced congestions, and eco-driving programs.**

As was previously stated, we recognize that we have a role to play; however, in order to reduce greenhouse gases in a meaningful way, every sector of the economy will have to contribute to fixing the problem. We are ready to do our part, but cars and trucks produce only one-fifth of the emissions – any government action on automobile manufacturers alone, will only have a marginal impact on the issue.

2. It has been suggested that making cars and SUVs more fuel efficient might somehow make them less safe.

   a. Do you believe that the Ford Escape hybrid, which gets 32 miles per gallon in the city and 29 mpg on the highway, is less safe than a Ford Escape, which gets 21 mpg in the city and 24 mpg on the highway?

   b. Do you believe that the Toyota Camry hybrid, which gets 40 mpg in the city and 38 mpg on the highway, is less safe than a Toyota Camry, which gets 24 mpg in the city and 33 mpg on the highway?

c. In light of your responses to the previous two questions, do you believe that it is possible to get significant increases in fuel economy WITHOUT making cars less safe?

Response to Markey Question 2:

Ford is an auto industry leader in making motor vehicles safer for drivers and passengers. Our vehicles significantly outperform the industry average on NHTSA frontal crash test performance and we have earned numerous "Top Safety Pick" awards from the Insurance Institute for Highway Safety (IIHS).

Both the Ford Escape Hybrid and the gasoline powered Ford Escape are safe vehicles that meet or exceed all applicable FMVSS requirements. Ford will continue to meet or exceed all applicable safety requirements regardless of where the CAFE standards are set.

The effect of increased fuel economy standards on safety is far more complex than simply a comparison of the safety of the Escape and the Escape Hybrid. The Escape Hybrid is a more expensive vehicle to build and, although it is priced somewhat higher than a regular Escape, Ford does not fully recover its incremental costs through the price difference. Moreover, manufacturers do not have the resources to implement hybrid technology across their fleets in a relatively short period of time, and there may not be a business case for doing so. Therefore, aggressive requirements to increase fuel efficiency would likely need to be met by means other than hybridization. One path that manufacturers may need to follow is vehicle downsizing and downweighting, which can give rise to safety concerns about smaller, lightweight vehicles. So, while it is possible in a given vehicle to improve fuel economy without compromising safety, the real question is: given limited resources and time, what actions will manufacturers be forced to take *across their fleets* in order to comply with future fuel economy standards? If the standards increase too aggressively, manufacturers could be forced to modify vehicles in ways that may reduce the safety of the vehicle population as a whole.

All things being equal, a vehicle of lower mass has better fuel economy; however, in multi-vehicle crashes a heavier vehicle will typically "win":

- **Per IIHS Status Report (April, 2003) -- "Small and lightweight vehicles provide much less protection to their occupants in crashes than larger and heavier vehicles. This is true regardless of vehicle type (SUV, pickup, or car). During 1990-91, occupant deaths per million registered vehicles 1 to 4 years old were highest in the lightest vehicles."**
- **Per IIHS Status Report (November, 2006) -- "People traveling in small, light cars are at a disadvantage, especially when they collide with bigger, heavier vehicles. The laws of physics dictate this," says Institute**

president Adrian Lund. Death rates in single-vehicle crashes also are higher in smaller vehicles than in bigger ones."

Attempts to reduce intrusion in a lower mass vehicle typically results in a higher and potentially more injurious crash pulse. NAS and NHTSA studies have also indicated that a substantial mass decrease in the fleet has an adverse effect on safety.

3. Some of you have expressed concerns that the imposition of more stringent fuel economy standards could have an adverse impact on your industry and on American jobs.

   a. If you believe that higher fuel economy means fewer jobs, then how do you explain the fact that Honda and Toyota, which made the choice to manufacture **more** efficient vehicles, have actually created MORE jobs in the US over the same timeframe fuel economy standards have stagnated, while the domestic manufacturers have been forced to lay people off and close manufacturing facilities?

   b. According to the 2002 National Academy of Sciences Report on fuel economy, "General economic conditions, and especially the globalization of the automobile industry, seem to have been far more important than fuel economy regulations in determining the profitability and employment shares of the domestic automakers and their competitors." Moreover, the report concluded that "total employment in automobile manufacturing in the United States reached its highest level ever (more than 1 million) in 1999, thanks largely to foreign companies' decisions to move manufacturing to the United States to take advantage of the most profitable market in the world." Do you agree or disagree with this statement? If so, why and based on what data?

   c. If you believe that raising CAFE standards is bad for U.S. jobs, that would logically suggest that NOT raising CAFE standards might be GOOD for U.S. jobs. However, between 1995 and 2005, employment of Americans by the foreign automobile companies went up by 52%. This was happening at the same time that the Big 3 were hemorrhaging jobs and shuttering plants all over the country. Shouldn't we conclude then that raising fuel economy standards would either be GOOD for American jobs, or neutral from a job standpoint – rather than something that would harm U.S. auto industry employment? If not, why not?

Response to Markey Question 3:

Ford Motor Company provides wages, healthcare and other benefits to over 565,000 U.S. employees, retirees and their dependents. Our U.S. dealerships employ over 195,000 people and we purchase over $50 billion in U.S. goods and services annually. Beyond Ford, the "Big 3" employ 8 out of 10

American auto workers, impact more than 7 million American jobs, purchase nearly 80% of all U.S. auto parts and have invested 6 times more than all other automakers in the U.S. combined since 1980.

The existence of fuel economy standards, in the abstract, does not inherently increase or decrease automotive jobs. The issue, as the drafters of the Energy Policy and Conservation Act recognized, is whether the rate of increase of the standards is technically feasible and economically practicable, given the starting point of the manufacturers, available resources, and existing market conditions. When NHTSA has increased truck standards in the past, it has taken these factors into account, and thus it has successfully increased standards without significant economic harm to manufacturers or loss of American automotive jobs.

We support allowing NHTSA to continue increasing CAFE standards to maximum feasible levels as it has done in the past for the truck fleet, as well as reforming the passenger car CAFE structure. We note that NHTSA recently estimated that raising the CAFE standards 4 percent annually would cost all automakers more than $114 billion during the first seven years, with Ford's "share" of those costs equaling approximately $20 billion. The costs are higher for full-line manufacturers like Ford because we have to apply the new technology across a wider array of product offerings which meet a broader range of customer requirements. The costs will be lower to non-full-line manufacturers, that don't offer as broad a range of large full-function sedans, performance vehicles, luxury vehicles, SUVs, and pick-ups.

Further, the existing "one-size-fits-all" passenger car CAFE standard requires a manufacturer's fleet to meet an average fuel economy standard regardless of the products that manufacturer produces. Whether a manufacturer produces only small cars or only large cars or vehicles of all sizes, all manufacturers must meet the same standard. The result is that full line manufacturers like Ford are constantly required to adjust sales mix in order to comply with the standard. Conversely, small car manufacturers are not required to improve the efficiency of their products and are actually afforded credits to introduce less fuel efficient vehicles. Continuing to require a single fleet average standard regardless of vehicle attributes will take away consumer's ability to choose the vehicles that they require.

We do not agree with the premise that Honda and Toyota created jobs in the U.S. because of fuel-efficient vehicles. In fact, since 1983 the fleet fuel economy of Toyota and Honda has gone down by 2.2 mpg and 5.8 mpg respectively, while the fleet fuel economy of Ford and General Motors has remained essentially constant (actually a slight increase). The increase in manufacturing jobs by Honda and Toyota has largely tracked their expansion into vehicle segments such as SUVs and pickups previously dominated by Ford, General Motors, and Daimler-Chrysler. From a CAFE standpoint, they

had room to expand into these segments because their core business in the U.S. was originally based on smaller vehicles with a higher fleet average fuel economy. The relative performance of these companies in recent years is more closely related to underlying business fundamentals rather than any perceived improvement in fuel efficiency.

Finally, we have no reason to disagree with the NAS study quotation in the question. However, if fuel economy standards are increased beyond the ability of manufacturers' ability to keep pace through product changes, given their existing product portfolios, their available resources, and market conditions, those manufacturers will ultimately be forced to restrict the sales of their lower fuel economy vehicles in order to comply. And if manufacturers are forced to restrict sales artificially, revenues will decline, excess capacity will increase, plants will be closed, and jobs will be lost as a direct result of the overly aggressive standards.

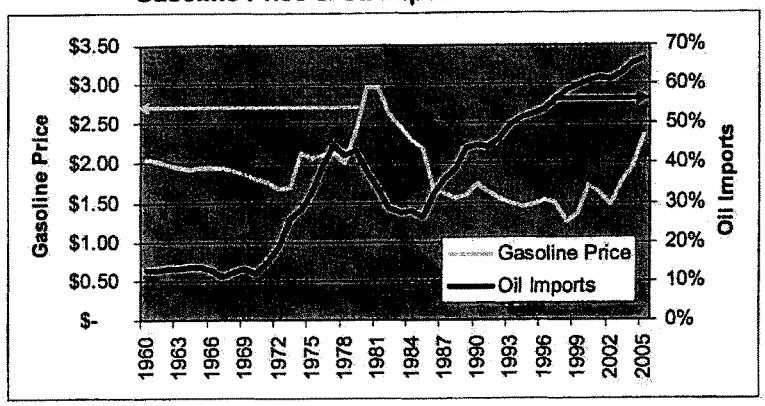
4. You state that the CAFE goal of reducing our dependence on foreign oil didn't work. Do you agree that the reason why our dependence on foreign oil dropped from 46.5% in 1977 to 27% in 1985 might have had something to do with the fact that fuel economy standards were doubled during that time and so we were using less oil? If not, why not?

Response to Markey Question 4:

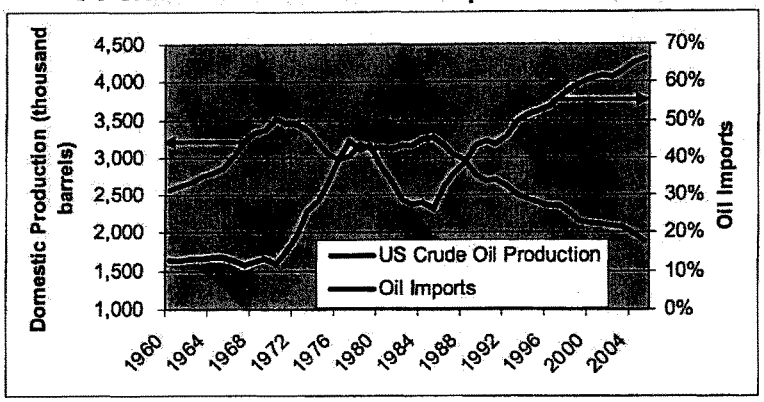
We believe the data indicate that the drop in oil imports between 1977 and 1985, and the continued rise in oil imports since that time are largely due to the price of gasoline and further influenced by the continuing reduction in the domestic production of oil, and the steady increase in annual vehicle miles traveled (see charts below).

Further, it typically takes more than 18 years for the existing vehicle fleet to be replaced by new vehicles. If CAFE were the reason for the reduction in oil imports between 1977 and 1985 (a period of just 8 years), oil imports would be expected to remain low well beyond 1985 as the newer, more efficient vehicles replaced the older less efficient vehicles on the road.

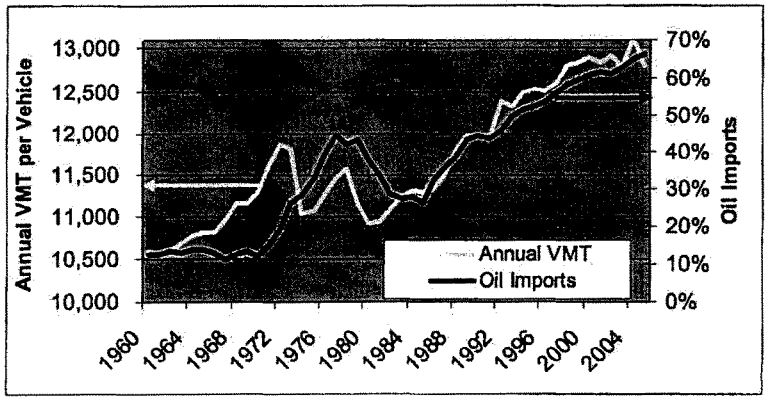
Gasoline Price & Oil Imports: 1960 to 2005



US Crude Oil Production & Oil Imports: 1960 to 2005



Annual Vehicle Miles Traveled & Oil Imports: 1960 to 2005



5. You also state that as gas prices fell, people drove more. The fact is, that the rate that vehicle miles traveled has increase has been the SAME – whether fuel economy standards were increasing or staying the same.

   a. How do you know that the steady increase in vehicle miles traveled isn't more directly attributable to the changing nature of our society – including suburbanization of the country, the increasing number of women in the workforce who drive to work outside their homes, the growth of exurbs, and the resulting longer commutes, rather than gas prices? Please provide copies of all data used to support your conclusions.

   b. Along the same lines, do you have any evidence that people who drive Ford Escape Hybrids drive more than people who drive Ford Escapes?

Response to Markey Question 5:

The data of which we are aware indicate that annual vehicle miles traveled (VMT) has not increased at the same rate over time, and that it has been responsive to increases in fuel price. From the charts shown in our response to question 4, it is clear that VMT decreased during the mid-1970s and early 1980s when gasoline prices were highest, and increased in later years when gasoline prices dropped. Between 1972 and 1981, VMT dropped by nearly 1000 miles per vehicle annually. After 1981 (the same year that gasoline prices peaked), VMT increased by nearly 2000 miles per vehicle annually.

We know from our experience in Europe that higher fuel prices cause people to drive less and that diesel vehicles travel more due to the lower relative price of diesel and the improved fuel efficiency of diesel powertrains.

While we have no data that shows hybrid drivers would drive more or less, we do know that consumers purchase hybrids because they typically drive at lower speeds and over a shorter range. The benefits of a hybrid over these driving modes help to justify the incremental purchase price of the hybrid powertrain.

Questions for the Record
To Alan Mulally
Honorable Henry A. Waxman

1. All of the witnesses at this hearing emphasized that using fuels with lower carbon intensity must be part of the solution to global warming.

   As Congress considers policies to promote the use of alternative fuels, it will be important to consider the carbon impacts of our policies. One proposal that is being strongly advocated by certain interests right now is to adopt policies to encourage conversion of coal to liquids fuels. While that technology might make some contribution on energy security, researchers and environmental groups have raised the concern that it may substantially increase carbon dioxide emissions. Studies show that absent successful sequestration of the associated carbon dioxide, fuel from coal will have almost two times greater carbon emissions that gasoline. At my request, the National Academy of Sciences is now examining technologies for alternative fuels to provide Congress with information to ensure that we do not exacerbate global warming in an effort to reduce our dependence on foreign oil.

   One concern is that if we do not reduce the carbon content of our transportation fuels, we would need to make greater cuts in greenhouse gas emissions from other entities and sectors to avoid making global warming worse.

   Please provide your view on government action to promote coal-to-liquids fuel as part of an initiative to address global warming or as part of a broader national energy policy.

Response to Waxman Question 1:

Coal gasification, followed by synthesis to liquids that are suitable for transportation fuels, is a known technology. These are large plants with substantial investment, and their long-term commercial operation must be certain. A related technology, recovery of remote natural gas with synthesis to liquid fuels (Gas-to-Liquids, GTL) is now considered economical in select cases, and several large GTL plants are now planned for Qatar, with diesel fuel to be supplied to Europe, where diesel demand now exceeds supply. Gasification of coal (Coal-to-Liquids, CTL) adds a substantial processing step compared with natural gas as the resource. So the overall efficiency of CTL will be less than GTL, with a corresponding increase in CO2 as a byproduct. The GTL path will be an issue for total CO2 emissions unless carbon capture and sequestration is implemented with the GTL plant. Carbon capture and sequestration trial projects are proceeding with good success.

The three key steps needed to proceed with commercial operation of GTL and CTL are:

1. **Economic projections that these processes will be competitive with petroleum fuels during the lifespan of the plant and will support the investment required.**
2. **Determine how carbon capture and sequestration should be implemented on a necessary scale and with reasonable economics, so that these processes have a neutral to positive impact on Greenhouse Gases.**
3. **Economic studies of CTL coupled with sequestration to ascertain the cost and potential market incentives to assure the economic viability of the approach.**

Questions for the Record
To Alan Mulally
Honorable Michael C. Burgess

1. Does the technology exist to increase fuel economy to a level greater than it is now without imposing major new costs?

Response to Burgess Question 1:

Significant fuel economy increases across vehicle fleets will clearly entail major costs, particularly if consumers continue to demand a mix of vehicles similar to today's mix in terms of size, performance, and utility. To us, the real question is whether the technology is available at a cost and with trade-offs acceptable to the American consumer. The experience in Europe certainly demonstrates that with certain policies, the vehicle fleet can be more efficient. The price of gasoline in Europe is much higher than in the U.S., as a result of taxation policies put in place to discourage gasoline consumption. While diesel fuel is also taxed significantly, the tax rates are typically lower for diesel than gasoline. This creates a diesel cost advantage (relative to gasoline) for most European consumers. When combined with less stringent emissions standards for criteria pollutants, it adds up to a much larger market share for diesel vehicles in Europe. Efficient diesel vehicles make up more than half of the vehicles on the road in Europe and more than 80 percent of the vehicles have manual transmissions or 4 cylinder engines. Conversely, in the U.S., nearly 100 percent of the vehicles use gasoline, more than 90 percent have automatic transmissions, and nearly 60 percent have 6 cylinder or 8 cylinder engines. Clearly, the American consumer demands a vehicle with a certain level of utility and may not be willing to make the trade-offs that European consumers have made.

Ford Motor Company recognizes that we have a role in addressing climate change and energy security, and we support increasing CAFE standards to maximum feasible levels as well as reforming the passenger car CAFE structure to remove competitive disparities; however, NHTSA recently estimated that raising the CAFE standards 4 percent annually would cost all automakers more than $114 billion during the first seven years and Ford more than $20 billion. The costs are higher for full-line manufacturers like Ford because we have to apply the new technology across a wider array of product offerings. The costs will be lower to non-full-line manufacturers, that don't offer larger and more full-function sedans and pick-ups.

Ford is incorporating fuel-efficient technologies such as five- and six-speed transmissions, electronic power-assisted steering, variable cam timing, greater use of light-weight materials and improvements in aerodynamics. We are also investing in new vehicle segments as a strategy to improve fuel efficiency and continue to expand our offerings of cars and "crossovers" in

North America. While these efforts will result in increased fleet average fuel economy over time, they will not support steep increases in fuel economy standards in the near term.

2. Do you think an increase in CAFE standards would subsequently increase the number of hybrids offered by American manufacturers? Do you have any new insight on market trends towards increased demand for hybrids with recent spike in gas prices?

Response to Burgess Question 2:

Ford recognizes that we must participate in a solution to climate change and energy security. We have invested significant resources into the research and development of innovative vehicle technologies that improve fuel efficiency and diversify vehicle fuels away from petroleum including hybrid electric, flexible fuel vehicles, clean diesel, hydrogen internal combustion engines and advanced gasoline engines.

Ford produced the first American-made hybrid electric vehicle on the road – the Ford Escape Hybrid – and we will continue to grow our offerings with the Ford Fusion and Mercury Milan hybrid electric vehicles. However, hybrid vehicles cost considerably more to produce than conventional gasoline-powered vehicles, and manufacturers can only recover these costs by charging more for the vehicles. While the Escape Hybrid is priced somewhat higher than a regular Escape, Ford does not fully recover its incremental costs through the price difference.

Ultimately, it is the customers that decide what vehicles to buy and how much they drive. While hybrid vehicles have made some inroads in the U.S. market, it is not clear whether the majority of American consumers are willing to pay more to obtain a hybrid vehicle. For example, a recent Ward's Automotive article announced that Honda will discontinue the sale of its Accord Hybrid: "Acceptance of the V-6 powered Accord Hybrid, which for the '06 model year begins at $30,990, has been hampered by its high sticker price and performance-oriented nature, says Dan Bonawitz, vice president-auto operations, for American Honda Motor Co. Inc."

Hybrids are certainly a piece of the puzzle, but there is no "silver bullet" solution to the quest for improved fuel efficiency. That is why Ford is investing in a broad range of innovative technologies. The fact that a given technology is available on a particular product does not mean that it can be instantly applied to all products. Some technologies, such as hybrid electric powertrains, require an enormous investment of financial and engineering resources, as well as considerable development time to integrate into a new vehicle platform. Moreover, applying technologies too fast, too soon throughout the vehicle fleet can result in poor performance and ultimately customer rejection of promising technologies.

TESTIMONY

OF

JAMES E. PRESS

PRESIDENT, TOYOTA MOTOR NORTH AMERICA, INC.

Before The

United States House of Representatives

Subcommittee on Energy and Air Quality

of the

Energy and Commerce Committee

March 14, 2007

Good afternoon Mr. Chairman and members of the subcommittee. I am Jim Press, president of Toyota Motor North America. I am honored to have this opportunity to discuss the issues of climate change and energy security with you today.

Two of Toyota's founding principles are the "elimination of waste" and "service to society." These principles permeate our products and our actions now and will into the future. They are in Toyota's DNA. These principles guide us as we address climate change and energy security.

Toyota has long been mindful of and accepts the broad scientific consensus that climate change is occurring and will continue unless there are significant and coordinated global efforts to slow the growth of man-made greenhouse gas emissions. Toyota is committed to continued action to address climate change and promote greater energy diversity by increasing the fuel efficiency of our products, developing new markets for advanced vehicle technology and alternative fuels, and reducing the greenhouse gas footprint from our vehicles, manufacturing and distribution portions of our business.

The motor vehicle industry has a responsibility to be part of the solution, but these issues cannot be addressed by this industry alone. US action on both issues must, by definition, be national in scope and involve a wide range of industries and sectors of the economy, as well as consumers.

Toyota is committed to continuously improving the fuel efficiency of our full-line fleet. The centerpiece of our efforts is hybrid technology - - a revolutionary power train system derived from our in-house research and development program. This innovative system is designed to substantially increase vehicle fuel economy and significantly reduce emissions. Toyota hybrid vehicles are over 70 percent cleaner for smog-forming emissions than the average new vehicle and can offer up to twice the fuel economy. Over and above that, hybrid technology is an essential and enabling element of future powertrains, such as plug-in hybrids and fuel cells.

2007 marks the 10th year of the Prius, our first hybrid. I am happy to say the introduction of Prius was a sound business decision. In 2006, the Prius was our third best selling passenger car in the U. S. after the Camry and Corolla. As of January 2007, we have sold almost one-half million

(472,000) hybrids in the U.S. We now offer 6 different hybrid models of vehicles -- Prius, Camry, Highlander, Lexus GS 450h, Lexus RX 400h; and soon the Lexus LS600hL. However, even with Toyota's success in hybrids, this technology accounts for only about 2% of U.S. new vehicle sales.

Hybrid technology embodies our core belief that the most effective solutions are mass market solutions. To that end, Toyota sees hybrid technology as critical to the commercialization of future drivetrains. Many of the same components found in our current hybrids are being used in the hydrogen fuel cell vehicles we are testing in the US.

The same can be said for plug-in hybrids, another technology we are aggressively pursuing. It is not a lack of will that is keeping this concept from commercialization. At the present time it is the absence of technical breakthroughs to address the issues of battery technology, weight, and cost.

While fuel cell and plug-in hybrid research continues, so too does our application of advanced technology on "conventional" gasoline engines. We employ a wide array of the technologies on our vehicles, such as

Variable Valve Timing with intelligence, 4-valves per cylinder, advanced automatic transmissions, direct injection gasoline engines, and more.

We are also aggressively pursuing clean diesel technology, as well as vehicles capable of operating on renewable fuels such as ethanol and bio-diesel.

Advanced vehicle technology must be assessed and developed in parallel with fuel infrastructure, and both must be implemented in a way and at a time that optimizes broad commercialization of the technology applied to vehicles. If the proper fuel is not available, the advanced technology will fail to achieve the desired result. We need both fully formed technology and lower-carbon fuel infrastructure to come to market together.

In addition to vehicle technology improvements, in-use impacts from the existing fleet of vehicles can be reduced through a series of measures. For example, smarter land use planning, increased reliance on mass transit and greater use of so-called "intelligent transportation systems" can all reduce traffic congestion and energy consumption.

Toyota supports the use of national performance-based regulatory programs, so long as the program is fair, technologically feasible, cost effective and does not discourage early compliance, technological innovation and safety improvement. In this context, we support increasing both the passenger car and light-duty truck fuel economy standards, and giving NHTSA the authority to reform the passenger car standard.

Toyota believes governments at all levels -- federal, state and local -- are most effective when they focus on the desired outcome instead of picking winners through mandates. Competition in the marketplace with various technologies will better determine what succeeds and what does not with consumers.

The opposite of mandates is incentives. There is clearly a role for government to create incentives that will promote technologies that reduce greenhouse gases and support energy security. A positive example of this are the tax incentives provided in the 2005 Energy Policy Act. That program has been successful, but in order to assure its continued success and stimulate greater demand for fuel saving technologies, the cap on vehicles eligible for the tax credit should be removed. This will encourage

consumer purchases, broaden acceptance and lead to more applications of advanced technologies.

The greenhouse gas impact from motor vehicles is inexorably linked to their fuel economy. With regard to Toyota's fleet in the US, we have exceeded the applicable fuel economy standards since their inception in 1978. In 2005 (the latest year for which complete public data are available), our combined car and truck fleet fuel economy was 28.9 mpg, exceeding the combined average of the rest of the industry by 4.1 mpg, or nearly 17%. We have done this while providing a full range of vehicles -- from subcompacts to the best selling passenger car -- Camry, the best selling luxury vehicle line in the U.S.-- Lexus -- as well as a full line of trucks and SUVs .

Toyota has a proven track record of bringing advanced technology to market and achieving high levels of fuel economy. Over their lifetime, the past 10 model years of Toyota vehicles sold in the U.S. will consume 11 billion fewer gallons of gasoline (nearly 265 million fewer barrels of oil) than if we had merely met fuel economy standards. These same vehicles will emit over 100 million metric tons less of CO_2.

Toyota's commitment to reducing the greenhouse gas footprint of our products does not stop there, however. Energy conservation and energy efficiency are core considerations in the full life cycle of our vehicles. For example, in 2002 we set an internal target to reduce energy consumption from our U.S. manufacturing operations by 15% per unit of production by 2005 compared to a 2000 baseline. We have not only met but exceeded that target ahead of schedule, and we have established an even more aggressive goal for the 2007-2011 time period.

Toyota also sets targets to reduce energy use and track greenhouse gas emissions generated during the distribution of vehicles and parts, as well as from sales facilities. So far we have been successful in meeting our goals ahead of schedule and we have set a goal of reducing energy consumption from these operations by 19% compared with an FY 2001 baseline.

Tackling climate change and fostering energy diversity requires careful deliberation and balancing with other national priorities. It also demands innovation, unconventional thinking and most of all, action. I

believe the time is right to enlist the immense talent and might of the auto industry to help solve some of the key issues of our time. As an industry we have an obligation to be part of the solution not the problem. Toyota pledges to do its part to lend a hand and to work with the rest of the world to help create real solutions.

I thank the subcommittee for its interest in our views and for this opportunity to share some of our current thinking with you. I will be happy to respond to your questions.

HENRY A. WAXMAN, CALIFORNIA
EDWARD J. MARKEY, MASSACHUSETTS
RICK BOUCHER, VIRGINIA
EDOLPHUS TOWNS, NEW YORK
FRANK PALLONE, JR., NEW JERSEY
BART GORDON, TENNESSEE
BOBBY L. RUSH, ILLINOIS
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DENNIS B. FITZGIBBONS, CHIEF OF STAFF
GREGG A. ROTHSCHILD, CHIEF COUNSEL

ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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June 5, 2007

Mr. Jim Press
President and Chief Operating Officer
Toyota Motor North America
9 West 57th Street, Suite 4900
New York, NY 10019

Dear Mr. Press:

Thank you for appearing before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions directed to you from certain Members of the Committee. In preparing your answers to these questions, please address your response to the Member who has submitted the questions and include the text of the Member's question along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received no later than the close of business on June 19, 2007. Your written responses should be delivered to 2125 Rayburn House Office Building, Washington, D.C., 20515 and faxed to (202) 225-2899 to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at rachel.bleshman@mail.house.gov. Please send your response in a single Word or WordPerfect formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry A. Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality

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JAMES E. PRESS
PRESIDENT

June 22, 2007

The Honorable John Dingell
U.S. House of Representatives
Committee on Energy and Commerce
Washington, D.C. 20515-6115

Dear Chairman Dingell:

Thank you for your letter of June 5, 2007 containing additional follow-up questions from your March 14 hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry". I appreciate the opportunity to respond to these questions (attached).

If you have any further questions or if I can be of further assistance as you move forward in consideration of energy legislation, please do not hesitate to contact me.

Sincerely,



Jim Press

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

Questions from The Honorable Edward J. Markey

Q1: Some of you have recommended the integration of the automobile sector into an economy-wide cap and trade system instead of increasing fuel efficiency standards.

a. How much of a reduction in emissions for the transportation sector are you willing to support - by 2018, 2030, and 2050? How high a percent reduction in C02 emissions would you support applying to your sector for each of these years?

b. Since there is a correlation between reductions in emissions and increases in fuel economy standards how much more efficient will you need to make your fleets in order to meet those caps? Are you prepared to commit to making such an increase by altering the way in which cars and light trucks are manufactured, or would you prefer to have the option to purchase C02 credits or participate in C02 offset programs such as forestation in order to meet the obligation?

c. Do you anticipate that the automobile sector would actually participate in such a system by making its vehicles meet the cap - or would you anticipate that instead, the sector would prefer to purchase credits from other industry sectors or take other measures to offset emissions (such as forestation) and thereby avoid making its vehicles more fuel efficient?

Response: Toyota has long supported increasing CAFE standards for both cars and trucks in order to address the combined goals of improved fuel economy, reduced CO2 emissions, reduced dependence on oil, and development and deployment of advanced vehicle technology. Because reducing CO2 emissions is inexorably linked to improving fuel economy, ours is the only U.S. industry currently required to control CO2 emissions from its products. Meaningful progress in lowering U.S. CO2 emissions will necessitate reductions in emissions from additional sectors of the economy, in addition to automobiles.

Recently, some have expressed the view that the current CAFE program may not be the optimal way to achieve the goals outlined above, and that a different approach encompassing a broader cross-section of the U.S. economy could be more effective – a so-called cap and trade approach.

As I testified at the March 14 hearing, Toyota is willing to work with the Committee and consider a range of approaches. At the same time, we think any alternatives must be weighed against several key principles, including overall effectiveness in reducing CO2 (or greenhouse gas) emissions, promotion of advanced technology development and deployment, promotion of efficient business growth, and certainty in future product and technology planning.

In the three months since the hearing, Toyota has been analyzing cap and trade alternatives to gain a better understanding of how an economy-wide approach might work

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

in the context of Toyota's business plan and the future of the auto industry. Based on our review to date, we are not prepared to recommend integration of the automobile sector into an economy-wide cap and trade system, for a number of reasons.

First, it is unclear to us whether targets established under a cap and trade system would result in the same level of emissions reductions that would be achieved under a more traditional regulatory approach. By definition, a cap and trade system requires both buyers and sellers of credits. Therefore, it is possible that targets established under a cap and trade system might be less stringent in order to ensure adequate liquidity of credits needed to make the trading system functional.

Second, we are concerned that regulated parties could simply purchase credits rather than employ technology as a means of compliance. In the short-term, this approach might be attractive from a cost perspective, but we question whether such a result is desirable from a long-term technology development perspective. One potential way to address this would be to limit the extent to which purchased credits could be used for compliance, thus ensuring at least some technology investment in each sector. Of course, this would also limit the flexibility inherent in the cap and trade approach.

Third, we are very concerned with the potential of a cap and trade system to penalize growing companies while rewarding shrinking companies. An absolute cap established on the basis of some prior emissions baseline would essentially penalize growing companies and could even be counterproductive, especially if a growing company's rate of emissions per unit of output is lower than that of shrinking companies.

Finally, of the various alternative approaches we have examined to date, we have not yet identified an approach that provides the necessary certainty to adequately plan a technology and compliance strategy. For example, we have serious concerns about directly capping new vehicle lifetime carbon burden and issuing allocations on this basis, as has been suggested in some of the literature. Under such an approach, each manufacturer's allocation would depend on the sales volumes, technology, and fuel economy of the entire industry. Such information cannot be known with any certainty until after the model year in question. This approach simply would not work for an industry that must develop technology plans looking 4 or 5 years in the future.

While these views are based on our study to date, we continue to evaluate various options and approaches and remain open to productive dialogue on this important issue. It is important to keep in mind that some other sectors of our economy have been discussing and evaluating cap and trade approaches for many years, but potentially incorporating vehicles into a broader scheme is still a relatively new area for the auto industry and for Toyota.

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

Q2: It has been suggested that making cars and SUVs more fuel efficient might somehow make them less safe.

a. Do you believe that the Ford Escape hybrid, which gets 32 miles per gallon in the city and 29 mpg on the highway, is less safe than a Ford Escape, which gets 21 mpg in the city and 24 mpg on the highway?

b. Do you believe that the Toyota Camry hybrid, which gets 40 mpg in the city and 38 mpg on the highway, is less safe than a Toyota Camry, which gets 24 mpg in the city and 33 mpg on the highway?

c. In light of your responses to the previous two questions, do you believe that it is possible to get significant increases in fuel economy WITHOUT making cars less safe?

Response: Toyota conducts comprehensive crash tests on all of its vehicle models, which meet or exceed all federal government requirements. Toyota hybrid models offer the same safety features found on non-hybrid models.

Each new generation of Toyota and Lexus products offers safety and advanced technology features, while at the same time improving fuel economy and performance. By the end of 2009, all Toyota and Lexus vehicles will be equipped with Vehicle Stability Control and side curtain airbags as standard equipment.

We have introduced advanced handling and stability technology on many models with our new Vehicle Dynamics Integrated Management system (VDIM) that helps to improve handling and driving pleasure, even in the most challenging conditions. We offer as standard or available options such technologies as Traction Control, Brake Assist, Anti-Lock Brakes, Electronic Throttle Control with intelligence, Electric Power Steering, Electronically Controlled Brakes, and Variable Gear Ratio Steering. These features are integrated with powerful proprietary software to help seamlessly manage the total vehicle dynamic package.

It is important to note that hybrid technology adds weight, complexity and cost to a vehicle that may come at a price that not all consumers are willing to pay. The key to keeping vehicles as safe as possible while improving fuel efficiency is how quickly the CAFE standards are raised and whether adequate lead time is provided to bring the technology to market in a way that the resulting product delivers the attributes consumers want at a price they are willing to pay.

I would also point out that the reformed attribute-based CAFE system implemented for light duty trucks and being considered for passenger cars substantially removes vehicle downsizing as a viable tool to comply with CAFE and similarly reduces the concern that CAFE increases might adversely impact safety. At the same time, the reformed CAFE structure continues to provide an incentive to reduce the weight of vehicles of a given size.

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

Q3: Some of you have expressed concerns that the imposition of more stringent fuel economy standards could have an adverse impact on your industry and on American jobs.

a. If you believe that higher fuel economy means fewer jobs, then how do you explain the fact that Honda and Toyota, which made the choice to manufacture **more** efficient vehicles, have actually created MORE jobs in the US over the same time-frame fuel economy standards have stagnated, while the domestic manufacturers have been forced to lay people off and close manufacturing facilities?

b. According to the 2002 National Academy of Sciences Report on fuel economy, "General economic conditions, and especially the globalization of the automobile industry, seem to have been far more important than fuel economy regulations in determining the profitability and employment shares of the domestic auto makers and their competitors." Moreover, the report concluded that "total employment in automobile manufacturing in the United States reached its highest level ever (more than 1 million) in 1999, thanks largely to foreign companies' decisions to move manufacturing to the United States to take advantage of the most profitable market in the world." Do you agree or disagree with this statement? If so, why and based on what data?

c. If you believe that raising CAFE standards is bad for U.S. jobs, that would logically suggest that NOT raising CAFE standards might be GOOD for U.S. jobs. However, between 1995 and 2005, employment of Americans by the foreign automobile companies went up by 52%. This was happening at the same time that the Big 3 were hemorrhaging jobs and shuttering plants all over the country. Shouldn't we conclude then that raising fuel economy standards would either be GOOD for American jobs, or neutral from a job standpoint -- rather than something that would harm U.S. auto industry employment? If not, why not?

Response: Toyota makes every effort to produce vehicles where we sell vehicles. We began our US sales operations in 1957 and began manufacturing vehicles in the US in 1986. Our cumulative direct investment in the U.S. stands at $15.6B dollars. We now directly employ over 31,000 Americans and operate 4 U.S. vehicle assembly plants producing 1.2M vehicles annually. We recently announced a 5th U.S. vehicle assembly plant in Mississippi to begin operation in 2010. In addition we operate 6 component plants in the U.S.

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

Questions from The Honorable Henry A. Waxman

Q1: All of the witnesses at this hearing emphasized that using fuels with a lower carbon intensity must be part of the solution to global warming. As Congress considers policies to promote the use of alternative fuels, it will be important to consider the carbon impacts of our policies. One proposal that is being strongly advocated by certain interests right now is to adopt policies to encourage conversion of coal to liquid fuels. While that technology might make some contribution on energy security, researchers and environmental groups have raised the concern that it may substantially increase carbon dioxide emissions. Studies show that absent successful sequestration of the associated carbon dioxide, fuel from coal will have almost two times greater carbon emissions than gasoline. At my request, the National Academy of Sciences is now examining technologies for alternative fuels to provide Congress with information to ensure that we do not exacerbate global warming in an effort to reduce our dependence on foreign oil. One concern is that if we do not reduce the carbon content of our transportation fuels, we would need to make much greater cuts in greenhouse gas emissions from other entities and sectors to avoid making global warming worse. Please provide your views on government action to promote coal-to-liquids as par of an initiative to address global warming or as part of a broader national energy policy.

Response: As an automobile manufacturer, Toyota has limited specialized knowledge of coal-to-liquids fuel production. Our understanding is that, in the absence of carbon capture and sequestration, coal-to-liquids derived fuels generally produce higher well-to-wheel lifetime CO2 emissions than conventional oil-to-fuel process. While carbon capture and sequestration is a promising technology to reduce atmospheric releases of CO2 from such processes, our understanding is that this technology requires further development before it can be widely deployed.

Response of Jim Press, Toyota Motor North America, Inc., to Follow-Up Questions from the March 14, 2007 Hearing Entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry"

Questions from The Honorable Michael C. Burgess

Q1: Does the technology exist to increase the fuel economy to a level greater than it is now without imposing major new costs?

Q2: Do you think an increase in CAFE standards would subsequently increase the number of hybrids offered by American manufacturers? Do you have any new insight on market trends towards increased demand for hybrids with recent spike in gas prices?

Response: Toyota's aim is to improve the fuel economy on each new generation of product, while meeting consumer demands at a reasonable price. Clearly, technology exists to improve fuel economy. The improvement in fuel economy varies significantly depending on the technology and the vehicle in question, and costs for various technologies vary significantly. It is critical that we maintain an appropriate balance among fuel economy improvement, cost and vehicle attributes – no technology can improve fuel economy or reduce oil consumption if consumers are not willing to purchase it.

Toyota cannot comment on the specific costs and benefits of various technologies or combinations of technologies, however the 2002 NAS study provided a reasonably balanced overall set of costs and benefits of improving fuel economy for the timeframe in which the study was conducted. As the study is now 5-years old, Toyota believes it is appropriate for NAS to update the analysis to reflect the current state of technology.

Written Testimony of G. Richard Wagoner, Jr.
Chairman and CEO, General Motors Corporation
Before the House Energy and Commerce Committee
Regarding Climate Change and Energy Security
(March 14, 2007)

Good afternoon, Mr. Chairman and members of the Committee. I'm Rick Wagoner, Chairman and Chief Executive Officer of General Motors Corporation. Thank you for the opportunity to speak today about advance technologies and the very important subjects of climate change and energy security.

These, too, are critical issues that are at the forefront of GM's business planning. In recent months, at both the Los Angeles and Detroit auto shows, I've spoken about our approach to the concerns over energy supply, energy availability, sustainable growth, the environment, and climate change.

Since 2001, a series of geopolitical, natural, and economic realities have combined to drive home the fact that we face an increasingly uncertain energy future on a global basis. For the global auto industry, this means that we must as a business necessity develop alternative sources of propulsion, based on diverse sources of energy, in order to meet the world's growing demand for our products.

At GM, we are committing massive resources to meet this challenge. We believe we have an extraordinary opportunity before us and that it is important that we are working on the right things that will really make a difference in oil consumption and CO2 emissions.

We are fully prepared to discuss all of these issues, including carbon constraints on the U.S. economy. However, before we discuss any alternatives, we believe we must first begin with a frank evaluation of the Corporate Average Fuel Economy program (CAFE).

I

The stated goals of the original CAFE program were to reduce U.S. gasoline consumption and oil imports. However, because the number of vehicles on the road has
nearly doubled since CAFE was enacted—and the total number of miles that those vehicles travel annually has also nearly doubled—U.S. gasoline consumption has increased by 60 percent since CAFE was enacted, and U.S. oil imports have increased by more than 100 percent.

These increases occurred despite the fact that, since CAFE was enacted, new vehicle fleet fuel economy has more than doubled for passenger cars and increased 60% for light trucks. GM has led the way in this effort and we do not plan to stand still. We're applying a broad range of technologies, as we have for decades, which will continue to significantly improve fuel economy in the years to come.

CAFE, however, has failed to meet its intended goals because it focuses on only one of four factors that drive U.S. light duty gasoline consumption: 1) purchasing decisions of American consumers - sales mix, 2) total vehicle miles traveled, 3) size of the overall fleet, and finally 4) individual vehicle fuel economy. Data from the government's own Energy Information Administration shows that CAFE requirements alone cannot overcome our increases in petroleum demand -- due to the continued increase in vehicle miles traveled and the increasing size of the fleet. Even so, increases in CAFE standards continue to be one of the major focuses of how to address energy security and climate changes issues.

In addition, CAFE has been particularly damaging to the domestic, full line manufacturers. Because it is based on a fleet average, CAFE is less a measure of the efficiency of vehicles than a measure of the mix of a vehicle fleet. Even if you have the most efficient vehicles in the market, if you also sell a mix of larger vehicles, your CAFE average will be lower than other manufactures of less efficient vehicles that tend to sell into the smaller vehicles segments.

2

The Administration, in setting the CAFE standards for light trucks for the 2008-2011 model years, attempted to address this competitive inequity problem by establishing size based targets for light trucks. We support this type of "reform" of the CAFE system – and urge that Congress give the National Highway Traffic Safety Administration (NHTSA) similar authority to reform the passenger car CAFE system before any fuel economy increases are imposed on these vehicles.

In addition, we urge Congress to resist the temptation to set some arbitrary level of future CAFE performance and instead let NHTSA set the appropriate targets. That way, the agency can collect and review confidential and proprietary company product plans and consider the opportunities to increase the fuel economy levels consistent with consumer needs and choices, competitive implications, vehicle and highway safety, technological and economic feasibility, and the impact on U.S. jobs. This Administration has twice undertaken such rulemakings for the light truck CAFE levels. The most recent fuel economy rule for light trucks has now set in place increases for 7 consecutive years (2005-2011) – increasing the standards by 16 percent (about 2% per year) and for the first time adding to the regulated fleet the largest SUVs in the market. These challenging increases in the CAFE requirements allow the automakers to make the progress that they can

with conventional technology vehicles, and still focus increasingly on the advanced technology systems and vehicles that can really make a difference in addressing U.S. gasoline consumption.

We understand that for our nation, the original goals of CAFE legislation remain as important as ever. As competitive automakers looking to win consumer purchases of vehicles in the marketplace, we look for opportunities to increase the fuel economy of our new products each time they are introduced. But many of the recent legislative proposals to increase CAFE requirements by 4% per year or more would be extraordinarily expensive and technically challenging to implement—all with little to show for actually reducing oil consumption or emissions.

3

According to the Administration's analysis, a 4 percent-per-year increase in CAFE standards will save 8.5 billion gallons of gasoline annually by 2017—only enough to slow the projected rate of increase. In other words, even with the proposed CAFE increase, America will still be using – and most likely importing – more oil than ever.

It is time to move away from approaches that divert resources from solutions that can actually work. Rather, we must move on to solutions that can truly address not only the legitimate and important issue of reducing gasoline consumption and oil imports, but also the critical challenges presented by CO2 emissions.

The best opportunity for addressing all of these issues over the next decade is through increased use of bio-fuels. And, the bio-fuel with the greatest potential to displace petroleum-based fuels in the U.S. is ethanol.

There are already over 6 million E-85 capable vehicles on America's roads – more than 2 million of which are GM vehicles. And last year, we joined Ford and DaimlerChrysler and committed to double our production of vehicles capable of running on renewable fuels by 2010. That's almost one million E-85 capable vehicles a year by the end of the decade. In November, we also carried our commitment a step further and said that we are prepared to make fully half of our annual vehicle production biofuel-capable by 2012 -- provided there is ample availability and distribution of E-85.

If all of the E-85 capable vehicles on the road today—along with those that GM, Ford, and DaimlerChrysler have already committed to produce over the next decade—were to run on E-85, we could displace 22 billion gallons of gasoline annually. And, if all automakers were to produce half of all new vehicles to be capable of running on E85 by 2012, we could increase the savings to 37 billion gallons of gasoline annually. That's more than quadruple the savings that a 4 percent-

per-year CAFE increase would achieve—and, very importantly, enough to actually reduce America's gasoline consumption and CO2 emissions.

4

But as you know, flex-fuel vehicles alone will not get the job done. While these vehicles are on the road or in the works, they are not fully utilizing ethanol right now because of constraints on E85 supply and distribution.

Currently, there are about 170,000 gas stations in the United States, but only slightly more than 1,100 E-85 pumps. A continued push from Congress and the
Administration can help grow bio-fuel production and distribution so that we can make a big difference very quickly. We're also doing our part to make bio-fuels more available. We are partnering with government, fuel providers, and fuel retailers across the U.S. to help grow the E-85 ethanol fueling station infrastructure. Since May of 2005, we've helped add 200 E-85 fueling stations in 13 states with more to come.

Beyond the promise of ethanol, there are other real opportunities available to us to reduce U.S. gasoline consumption and address climate change, and none holds more potential than electrically driven vehicles.

Over the last few months, GM has made several announcements related to our commitment to electrically driven vehicles. The benefits of electricity include the opportunity to diversify fuel sources "upstream" of the vehicle. In other words, the electricity that is used to drive the vehicle can be made from the best local fuel sources – natural gas, coal, nuclear, wind, hydroelectric, and so on. So before you even start your vehicle, you're working toward energy diversity. Second, electrically driven vehicles -- when operated in an all-electric mode -- are zero-emission vehicles. And when the electricity itself is made from a renewable source, the entire energy pathway is effectively greenhouse gas emissions free. Simply stated, electrically driven vehicles offer not only the opportunity to displace petroleum, but also the opportunity to reduce greenhouse gas emissions.

5

Along the continuum of the electrification of vehicles, we are working the entire range. For example, there are what most people think of as "electric vehicles" – pure battery-powered vehicles. Then there are gas-electric hybrids -- which are not, per se, electric vehicles -- but which are, in part, electrically driven.

We have several kinds of hybrid vehicles, either on the road or under development – from the heavy duty hybrid that is used in more than 550 transit buses – to the Saturn VUE and Aura Green Line models (which use our high-value "belt alternator starter" system) -- to our advanced "two-mode" hybrid system (which will begin to show up on our full-size SUVs and pickups later this year).

At the Los Angeles auto show, we announced work on another type of hybrid, the Saturn VUE "plug-in hybrid." A plug-in hybrid will be a conventional hybrid vehicle with an important difference – the battery will be much more advanced – storing significantly more energy and, of course, being able to be plugged into a standard 110 volt outlet to recharge it. The result will be significantly better "fuel economy" -- based on the petroleum consumption of the vehicle -- and the ability to use diverse energy sources.

No major OEM has built a plug-in hybrid for retail sale because the required battery technology doesn't yet exist. In fact, given what we know today, it's pretty clear that it will take several years to see if the battery technology will occur that will let us bring to market a plug-in hybrid that will meet the expectations and real-world performance that our customers expect -- things like safety, reliability, durability, driving range, recharge time, and affordability.

The Saturn VUE plug-in hybrid will use an advanced battery, like lithium-ion. Production timing will depend on battery technology development. Based on our work with EV1 and our different conventional hybrid-electric vehicles, we already have a lot of experience developing and integrating advanced battery technology into our vehicles.

We're already working with a number of battery companies to develop the technology necessary to build a plug-in hybrid. The technological hurdles are real, but we believe they are surmountable.

Earlier this year, we unveiled the Concept Chevrolet Volt at the North American International Auto Show in Detroit. The Chevrolet Volt is designed to be powered by GM's next-generation electric propulsion system, the E-flex System. The E-flex System can be configured to produce electricity for vehicle propulsion from gasoline, ethanol, biodiesel or hydrogen. The Volt uses a large high energy battery pack and a small, one liter turbo gasoline engine to produce electricity for the electric drive on the vehicle.

The Concept Chevrolet Volt can be charged by plugging it into a 110-volt outlet for approximately six hours each day. When the advanced lithium-ion battery pack is fully charged, the Volt is expected to deliver 40 city miles of pure

electric vehicle range. When the battery pack is close to depletion, the small engine spins at a constant speed to create electricity and replenish the battery pack.

One technological breakthrough required to make this concept a reality is the large lithium-ion battery pack. This type of electric car, which the technical community calls an "electric vehicle with a range-extender," would require a battery pack that weighs nearly 400 pounds.

There are other types of electrically driven vehicles that we expect to see in the future as well, including hydrogen fuel cell vehicles, such as the Chevrolet Sequel concept vehicle. A hydrogen fuel cell vehicle is, in fact, an electric vehicle. It drives on electricity that is created by the fuel cell. The fuel cell is little more than a battery that stores electricity in the form of hydrogen. The beauty of a fuel cell vehicle like the Sequel is that the electricity is generated onboard the vehicle without using petroleum-based fuel, and without emissions.

7

And like electricity, hydrogen can be made from diverse energy sources before it ever powers a vehicle. As part of a comprehensive deployment plan dubbed Project Driveway, we are building more than 100 next-generation Chevrolet Equinox Fuel Cell vehicles that will operate and refuel with hydrogen in California, New York, and Washington D.C.

GM is developing a prototype fuel cell variant of the Chevy Volt that mirrors the propulsion system in the Chevrolet Sequel (fuel cell vehicle). Instead of a big battery pack and a small engine generator used in the Volt concept vehicle, we would use a fuel cell propulsion system with a small battery to capture energy when the vehicle brakes. Because the Volt is compact and lightweight, we would need only about half of the hydrogen storage as the Sequel to get 300 miles of range. We continue to make significant progress in this area, and as a result, we continue to see fuel cells as the best long-term solution for reducing our dependence on oil.

What is driving our commitment and why are we pursuing this course now? Because it is unlikely that oil alone will be able to supply all of the world's growing automotive energy requirements. Because technology is now making it possible. And, because our customers are demanding it.

Each of these types of vehicles, and the technology they represent, has the potential to mitigate the energy and environmental challenges of the automobile. They can have a tremendous impact in the years to come if we're all prepared to make the huge investments necessary to bring them to market.

Again, this is an area where Congress can play a huge role.

- First, biofuels production and infrastructure should be significantly expanded. The market response to renewable fuels is encouraging, but it needs to reach a self sustaining level that is not lessened when gasoline prices fall. Steps to increase the availability of biofuels should help increase its use.

8

Government should continue incentives for: the manufacture of biofuel-capable flex fuel vehicles; increases in biofuels production; increases for R&D into cellulosic ethanol; and increased support for broad-based infrastructure conversion.

- Second, the government should fund a major effort to strengthen domestic advanced battery capabilities. Advanced lithium-ion batteries are a key enabler to a number of advanced vehicle technologies - including plug-in hybrids. Government funding should increase R&D in this area and develop new support for domestic manufacturing of advanced batteries.

  Government funding should also expand development and demonstration of hydrogen and fuel cells. Tremendous progress has been made this decade on fulfilling the promise of hydrogen powered fuel cells. The U.S. needs to stay the course on the President's hydrogen program and begin to prepare for the 2010-2015 transition to market phase. Funding should continue for hydrogen and fuel cell R&D and demonstration activities at DOE. The government should also commit to early purchases by government fleets and support for early refueling infrastructure in targeted locals in the 2010-2015 timeframe.

- Finally, there should be further incentives for advanced automotive technology so that these technologies may be adopted by consumers in large numbers. Well crafted tax incentives can accelerate adoption of new technologies and strengthen domestic manufacturing. Consumer tax credits should be focused on technologies that have the greatest potential to actually reduce petroleum consumption and provide support for manufacturers/suppliers to build/convert facilities that provide advanced technologies.

Government can support all three of these with their purchasing decisions. Government fleets can help lead the way to bringing new automotive technology to market and bringing down the cost of new technologies. The government should continue to purchase flex fuel vehicles; demand maximum utilization of E-85 in the government flex fuel fleets; use federal fueling to stimulate publicly accessible pumps; provide funding to permit purchase of electric, plug-in and fuel cell vehicles into federal fleets as soon as technology is available.

In summary, we at GM believe now is the time for a new, more comprehensive and forward-looking national energy strategy—again, one that ensures we are working on the right things that will really make a difference in reducing oil consumption and CO2 emissions. GM is ready and willing to play a leadership role in helping develop and implement that strategy and we urge the Congress to keep this in mind as it considers what policy initiatives should be enacted.

HENRY A. WAXMAN, CALIFORNIA
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ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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June 5, 2007

Rick Wagoner
Chairman and Chief Executive Officer
General Motors Corporation
300 Renaissance Center
Detroit, MI 48265

Dear Mr. Wagoner:

Thank you for appearing before the Subcommittee on Energy and Air Quality on Wednesday, March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions directed to you from certain Members of the Committee. In preparing your answers to these questions, please address your response to the Member who has submitted the questions and include the text of the Member's question along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received no later than the close of business on June 19, 2007. Your written responses should be delivered to 2125 Rayburn House Office Building and faxed to (202) 225-2899 to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at rachel.bleshman@mail.house.gov. Please send your response in a single Word or WordPerfect formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Rick Boucher, Chairman
Subcommittee on Energy and Air Quality

The Honorable J. Dennis Hastert, Ranking Member
Subcommittee on Energy and Air Quality

The Honorable Edward J. Markey
Subcommittee on Energy and Air Quality

The Honorable Henry A. Waxman
Subcommittee on Energy and Air Quality

The Honorable Michael C. Burgess
Subcommittee on Energy and Air Quality

June 20, 2007

The Honorable John D. Dingell
United States House of Representatives
Chairman
Committee on Energy & Commerce
Washington, DC 20515-6115

Dear Mr. Dingell:

Thank you for the opportunity for Rick Wagoner to testify before the Subcommittee on Energy and Air Quality on March 14, 2007, at the hearing entitled "Climate Change and Energy Security: Perspectives from the Automobile Industry." It was an excellent opportunity to provide our thoughts regarding GM's commitment to our advanced propulsion "energy diversity" strategy.

Enclosed you will find responses to the follow-up questions that were submitted for the record. Please contact me if you or other members of your committee have additional questions or comments.

Sincerely,



GM Response to Questions for the Record from March 14, 2007
House Subcommittee on Energy and Air Quality Hearing

The Honorable Edward J. Markey

1. **Some of you have recommended the integration of the automobile sector into an economy-wide cap and trade system instead of increasing fuel efficiency standards.**
    a. **How much of a reduction in emissions for the transportation sector are you willing to support—by 2018, 2030, and 2050? How high a percent reduction in CO2 emissions would you support applying to your sector for each of these years?**
    b. **Since there is a correlation between reductions in emissions and increases in fuel economy standards—how much more efficient will you need to make your fleets in order to meet those caps? Are you prepared to commit to making such an increase by altering the way in which cars and light trucks are manufactured, or would you prefer to have the option to purchase CO2 credits or participate in CO2 offset programs such as forestation in order to meet the obligation?**
    c. **Do you anticipate that the automobile sector would actually participate in such a system by making its vehicles meet the cap—or would you anticipate that instead, the sector would prefer to purchase credits from other industry sectors or take other measure to offset emissions (such as forestation) thereby avoid making its vehicles more fuel efficient?**

a) As stated during Mr. Wagoner's testimony, GM is fully prepared to discuss carbon constraints on the U.S. economy. We have said we are open to cap and trade approaches that are based on several principles—the program should be: economy-wide; up-stream where the number of regulated entities is less; market-based; transparent; there should also be some sort of "safety valve" to avoid unnecessary/unintended economic harm; and the tightening of controls should be done gradually. If this type of system is developed, the pricing signals transmitted throughout the economy will help create the market conditions that will encourage all consumers to value energy efficiency. Until such a system is put in place, fuel economy and/or carbon dioxide controls on the automobile industry will continue to put manufacturers at odds with their customers. In these circumstances, it is impossible for us to determine what the proper or manageable carbon dioxide emission controls are. We will continue to make investments in incremental and advanced technologies that can help address carbon dioxide emissions from vehicles, but what American consumers decide to buy and how they decide to use those vehicles for the myriad of needs that they have to fulfill will determine what actual gasoline consumption levels are and how much carbon dioxide is emitted.

b) Automakers recognize that many stakeholders impact petroleum consumption. A successful policy and program for reducing petroleum consumption should motivate as many of these stakeholders as possible. Ultimately, reducing petroleum consumption is a shared responsibility.

Automakers have strong market-driven, competitive reasons to make alternative fuel vehicles and have invested billions of dollars developing autos to run on alternative fuels like clean diesel, ethanol, hydrogen and compressed natural gas or that use hybrid technology. Alternative fuel autos are the most effective way to reduce gallons of gasoline used by directly displacing petroleum. If all of the E-85 capable vehicles on the road today—along with those that GM, Ford, and DaimlerChrysler have already committed to produce over the next decade—were to run on E-85, we could displace 22 billion gallons of gasoline annually. If all automakers were to produce half of all new vehicles to be capable of running on E-85 by 2012, we could increase the savings to 37 billion gallons of gasoline annually. That's more than quadruple the savings that a 4 percent-per-year CAFE increase would achieve—and, very importantly, enough to actually reduce America's gasoline consumption and CO2 emissions.

In addition, GM's North American facilities have reduced CO2 emissions by 23 percent in the 2000 – 2005 period. As a part of the EPA Climate Leaders Program, GM has committed to a new target from 2005-2010 of an additional 17 percent for our North American facilities – which, when achieved, will result in an overall improvement of 40 percent since 2000.

We have also doubled the fuel economy of our vehicles over the past 30 years which translates into a 50 percent reduction in fuel consumption per mile. So, we are making great progress – and we intend to continue that progress going forward.

c) Please see response to 1(a) above.

2. **It has been suggested that making cars and SUVs more fuel efficient might somehow make them less safe.**
    a. **Do you believe that the Ford Escape hybrid, which gets 32 miles per gallon in the city and 29 mpg on the highway, is less safe than a Ford Escape, which gets 21 mpg in the city and 24 mpg on the highway?**

GM Response to Questions for the Record from March 14, 2007
House Subcommittee on Energy and Air Quality Hearing

b. Do you believe that the Toyota Camry hybrid, which gets 40 mpg in the city and 38 mpg on the highway, is less safe than a Toyota Camry, which gets 24 mpg in the city and 33 mpg on the highway?
c. In light of your responses to the previous two questions, do you believe that it is possible to get significant increases in fuel economy WITHOUT making cars less safe?

The manufacturers of these models are in the best position to comment on the relative safety assessments of their models with differing powertrains. Powertrain differences can affect safety, such as by affecting the vehicle collision dynamic and by affecting vehicle mass. Clearly, it is well-established in the technical literature that the mass reductions that occurred as a result of historic CAFE standards had an adverse impact on safety.

We believe it is important to note that these examples do not reflect the only considerations in the tradeoffs between safety and fuel economy. For example, consider the diversity of advanced technology options. Clearly, hydrogen fuel cell versions of these vehicles would be even better from the standpoint of improving carbon dioxide emissions. But that technology "solution" is not cost effective today. Very few American vehicle buyers would be able to afford such vehicles. In fact, the higher initial cost of the vehicle with the advanced technology is often a deterrent to purchase for many Americans. For example, most American consumers today often do not choose the hybrid version of a vehicle over the gasoline only version because of the higher cost initial cost of the vehicle.

As a result, automakers faced with meeting increasing fuel economy requirements must consider other measures to achieve compliance with the standards. Among those measures are vehicle sizes and mass reductions – or additional new products that are smaller and lighter. These steps have been demonstrated to have adverse impacts on overall highway safety. Each vehicle offered will certainly meet the federal safety requirements, but smaller and lighter vehicles are less safe in collisions than larger, heavier vehicles. So, dramatic or steady increases in vehicle and fleet fuel economy requirements will have adverse impacts on highway safety.

Over the years, we have attempted to balance the consumer expectations for improved safety, comfort, utility, performance, etc., with improvements in energy efficiency. Simply setting arbitrary fuel economy or CO2 emission targets is not consistent with this goal of meeting American consumer needs. It is also not consistent with the technological and economic realities of vehicle design, engineering, certification and production. Instead, policies that displace petroleum with low-carbon biofuels and electricity can more effectively address the growth of energy consumption in the U.S. (which is primarily due to growing population and increased driving)—and avoid creating undue economic limitations and competitive impacts among manufacturers.

3. Some of you have expressed concerns that the imposition of more stringent fuel economy standards could have an adverse impact on your industry and on American jobs.
a. If you believe that higher fuel economy means fewer jobs, then how do you explain the fact that Honda and Toyota, which made the choice to manufacture more efficient vehicles, have actually created MORE jobs in the US over the same timeframe fuel economy standards have stagnated, which the domestic manufacturers have been forced to lay people off and close manufacturing facilities?
b. According to the 2002 National Academy of Sciences Report on fuel economy, "General economic conditions, and especially the globalization of the automobile industry, seem to have been far more important than fuel economy regulations in determining the profitability and employment shares of the domestic automakers and their competitors." Moreover, the report concluded that "total employment (more than 1 million) in 1999, thanks largely to foreign companies' decisions to move manufacturing to the United States to take advantage of the most profitable market in the world." Do you agree or disagree with this statement? If so, why and based on what data?
c. If you believe that raising CAFE standards is bad for U.S. jobs, that would logically suggest that NOT raising CAFE might be GOOD for the U.S. jobs. However, between 1995 and 2005, employment of Americans by the *foreign automobile companies* went *up* by 52%. *This was happening at the same time* that the Big 3 were hemorrhaging jobs and shuttering plants all over the country. Shouldn't we conclude then that raising fuel economy standards would either be GOOD for American jobs, or neutral from a job standpoint—rather than something that would harm U.S. auto industry employment?

a) Toyota and Honda are formidable competitors and have done well in the U.S. market. But they have not succeeded because of some strategy to offer more fuel efficient products than other manufacturers. Rather their success has come from decisions to offer more performance and luxury vehicles, to increase the size of many early vehicle offerings (e.g., the Honda Civic and Accord) and to enter the most popular vehicle segments in the U.S. market (e.g., SUVs, large minivans, full size pick-ups). Furthermore, the

products Toyota has decided to manufacture in the U.S. tend to be the larger ones in their fleets, not the smaller ones. So, the success of these companies and the jobs they have created are not due to superior fuel economy performance, but rather to other factors. The National Academy of Sciences quote cited in part (b) of this question highlights this very point.

Contrary to the assertions in parts a) and c) of the question, Detroit-based manufacturers were not hemorrhaging jobs and shuttering plants from 1995 to 2000. This period was marked by a resurgence of domestic producers and the addition of more than 70,000 domestic automotive jobs – jobs in the manufacture of motor vehicles and parts. Indeed, many Japanese auto companies were on the ropes during this period. Nissan was rescued by Renault, Mazda by Ford, and Suzuki, Isuzu, and Fuji Heavy Industries (Subaru) by General Motors.

Since 2000, as Japanese imports and transplant production have increased and production by Detroit-based producers has declined, the U.S. economy has lost more than 240,000 automotive jobs. The reversal in fortunes since 2001 has been brought about by Japan's decision to intervene heavily in foreign currency markets to weaken the yen against the dollar. Between 2000 and 2004 the Bank of Japan purchased an unprecedented more than $450 billion. Today, the yen is at its weakest level since 1985 and by many accounts is undervalued by 25% to 30% against the dollar. On average, the weak yen translates into a subsidy of over $4,000 on every imported car and truck sold in the U.S. by Japanese auto companies. The result has been growing exports of Japanese built vehicles and parts to the U.S. and a corresponding loss of U.S. manufacturing jobs.

Current legislative proposals to increase CAFE standards will impose staggering costs on the auto producers, both domestic and foreign. For example, by its own estimate, the Administration's proposal would impose $85 billion on financially troubled domestic producers, who are in no position to borrow the funds. The attendant further, severe loss of domestic market share and output would undoubtedly result in the additional loss of hundreds of thousands of jobs in domestic motor vehicles parts and production. Forcing automotive producers to sell cars and trucks that U.S. consumers do not want and are not willing to pay for is a recipe for economic disaster.

b) We are inclined to agree with the statement, but would note that fuel economy regulation of our products is a factor in the overall economic and competitive market that we face in the U.S. It is not possible or appropriate to overlook such a significant factor as vehicle regulations in assessing the environment in which we operate.

c) U.S. fuel economy requirements have certainly contributed to the opportunity for the Asian automakers to open assembly facilities in the U.S. Also contributing to these decisions was the desire for the Asian companies to have more of a U.S. appearance. But the increase in U.S. jobs they have created has not offset the reduction in U.S. jobs from GM, Ford, DCX and our suppliers. So, there has been a net loss in jobs over the years of the CAFE program. This has certainly not been solely related to the existence of CAFE standards, but the pressures for GM, Ford and DCX to modify our products to remain in compliance with CAFE has provided opportunities for the Asian automakers to gain market share and build assembly facilities.

4. You state that you do not believe that fuel economy increase alone can overcome our increases in petroleum demand—due to the continued increase in vehicle miles traveled and the increasing size of the fleet. Do you agree that the reason why our dependence of foreign oil dropped from 46.5% in 1977 to 27% in 1985 was because fuel economy standards were doubled during that time and so we were using less oil? If not, why not?

No. From 1977 through 1980, the U.S. vehicle market was largely driven by the second oil supply interruption creating an expectation that gasoline supplies would be limited in the future and prices could be expected to increase to over $3.00 per gallon. This encouraged American consumers to purchase smaller vehicles and pulled the vehicle market in the same direction as increasing fuel economy requirements. However, after 1980, when gasoline prices dropped significantly, purchases of larger vehicles resumed and miles traveled began to increase at a steady pace as well. Interestingly, this was the period of the greatest decline in U.S. oil imports. Since gasoline consumption was increasing and oil imports were decreasing, another factor must have been responsible for the significant decline in oil imports. That factor was a substantial increase in U.S. production of oil due to the removal of oil price controls. Marginal wells returned to service and U.S. oil drilling increased dramatically – adding to supply. Eventually the growth in gasoline consumption overwhelmed this U.S. supply response and declining world oil prices caused a falling off of U.S. production – resulting in a return to growing increases in oil imports.

5. You say that an increase in fuel economy standards of 4% a year would result in "little to show for actually reducing oil consumption or emissions." However, my analysis of a 4% a year approach indicates that when one takes into account

projected oil demands, on would back out 1.1 million barrels per day by 2018. By 2022, we would back out every drop of oil that we currently import from the Persian Gulf. And by 2030, that amount would grow to 4.6 million barrels per day, or 37% of our projected transportation needs. Do you really believe that this would not be a significant accomplishment?

The oil reduction estimates noted above are based on increasing the fuel economy of passenger cars and light trucks by 4% per year for over 20 years. This would more than double the fuel economy requirements for these vehicles and would require advancements in vehicle technology that are unprecedented. The costs of technologies needed (if they even exist) to achieve such increases – over such a long period of time -- will be substantial. As a result, it is unrealistic to assume that 4% increases imposed on the auto industry can be assessed as you suggest.

Regardless, the approach with the greatest potential for displacing gasoline in the U.S. market is the development of renewable fuels. Providing alternative fuel choices for American drivers will be far more effective than trying to accomplish this goal by creating vehicles that use less oil. The size of the U.S. vehicle fleet and the increase in the miles traveled each year by Americans will frustrate and overwhelm the attempts to reduce U.S. oil consumption primarily by conservation measures.

Furthermore, the 4% per year rate of increase in fuel economy requirements is far more aggressive than the auto industry has been able to accomplish over the life of the CAFE program. Historically, the rate of increase has averaged about 1.5% per year – and that includes the early years of the CAFE program when the greatest opportunities existed to reduce vehicle size and weight to help improve vehicle and fleet fuel economy levels. In addition, the two recent rules setting the light truck CAFE levels for the 2005-2011 model years only found about 2% per year rates of increase to be feasible under the criteria of the CAFE program. We are puzzled at how it is now determined that rates of increase nearly twice what was found to be reasonable for light trucks are suddenly possible for both cars and light trucks. The technology, engineering, financial resources and increases in vehicle costs associated with undertaking this extraordinary challenge are not likely to be available.

In addition, the Administration recently released its preliminary cost benefit analysis of the 4% rate of increase. Over the 2010-2017 period of time, the cost impact on the auto industry is estimated to be over $100 billion and the impact on GM, Ford and DCX alone is estimated to be about $85 billion. Further, the vehicle price increases associated with this focus only on fuel economy are estimated to average $1400 for cars and $2000 for trucks—these are huge cost impacts.

Finally, the CAFE program forces automakers to focus on near term products and technology – because we have to make sure we are in compliance with the fleet fuel economy requirements of the program. We believe that ongoing reliance on CAFE-like requirements will actually detract from and slow the development of the much greater potential advanced technologies – like the plug-in hybrids that we have shown at the recent auto shows. It would be a shame to continue to try to squeeze marginal benefits from CAFE (which in 30 years has not achieved its goals of lowering U.S. gasoline consumption or oil imports -- but which has created competitive advantages for a number of import automakers) and thus perpetuate the opportunity for companies unconstrained by CAFE to erode the market share of U.S. automakers and pursue more advanced technology vehicles.

6. When will the Volt be PRODUCTION-ready?

Regarding the Chevy Volt, one of the key enablers for plug-in hybrid vehicles is the advanced battery pack that can provide all of the energy and power needs of such vehicles. We need advanced battery packs that are proven to be durable, reliable, and cost effective, as well as providing the expected driving ranges. Battery technology is maturing quickly. Consequently, we are accelerating engineering development of the E-Flex technology, which will enable us to take advantage of advances in batteries as they occur. When the battery is ready, we plan to be too. In the meantime, we are producing a driveable version of the Volt using existing battery technology. This will allow us to gain valuable experience with the packaging of the technology in a more limited range vehicle, while we wait for the battery packs that will allow the vehicles to achieve the targets we envision for it.

Given what we know today, it will take several years to bring a plug-in hybrid to market that will meet the expectations and real-world performance standards that our customers expect. The government can help by increasing R&D in this area and developing new support for domestic manufacturing of advanced batteries.

GM Response to Questions for the Record from March 14, 2007
House Subcommittee on Energy and Air Quality Hearing

The Honorable Henry A. Waxman

1. **All of the witnesses at this hearing emphasized that using fuels with a lower carbon intensity must be part of the solution to global warming.**

   As Congress considers policies to promote the use of alternative fuels, it will be important to consider the carbon impacts of our policies. One proposal that is being strongly advocated by certain interests right now is to adopt policies to encourage conversion of coal to liquid fuels. While that technology might make some contribution on energy security, researches and environmental groups have raised the concern that it may substantially increase carbon dioxide emissions. Studies show that absent successful sequestration of the associated carbon emissions than gasoline. At my request, the National Academies of Sciences in now examining technologies for alternative fuels to provide Congress with information to ensure that we do not exacerbate global warming in an effort to reduce our dependence on foreign oil.

   One concern is that if we do not reduce the carbon content of our transportation fuels, we would need to make much greater cuts in greenhouse gas emissions from other entities and sectors to avoid making global warming worse.

   Please provide your views on government action to promote coal-to-liquids fuel as part of an initiative to address global warming or as part of a broader national energy security policy.

   GM believes the key to energy security (in the U.S. and globally) is energy diversity. As we move to expand and develop additional technologies and resources to promote the use of alternative fuels our focus is in developing alternative sources of propulsion based on alternative sources of energy.

   A key element to making this effort successful is to maintain all options available. Technological breakthroughs can come at any time and in many forms. While we understand that it is important to consider the emission impacts of future policies (e.g. GHG emissions, criteria pollutants) we should not dismiss technologies or fuel options based upon potential shortcomings that could be minimized with technology. Coal to Liquids (CTL) fuel sources do have the potential to contribute to energy security; however additional research and policy direction may be needed to ensure that any movement towards this fuel addresses the issues raised regarding the potential for increase in carbon dioxide emissions.

The Honorable Michael C. Burgess

1. **Does the technology exist to increase the fuel economy to a level greater than it is now without imposing major new costs?**

   The significant increases in fuel economy that are being proposed by many will not come without significant increases in costs – to the auto industry and eventually to the American consumer. The Administration recently released its preliminary cost benefit analysis of the 4% rate of increase that has been proposed. Over the 2010-2017 period of time, the cost impact on the auto industry is estimated to be over $100 billion and the impact on GM, Ford and DCX alone is estimated to be about $85 billion. Further, the Administration has estimated the vehicle price increases associated with these proposed increases in fuel economy to average $1400 for cars and $2000 for trucks. We believe these numbers are actually extremely low estimates. However, even at the Administration's estimated levels, they represent huge cost impacts.

   Automakers have invested billions of dollars in research and development of energy-efficient technologies. The result has been ever increasing numbers of advanced technology and alternative fuel autos. The main problem with CAFE is that it does not provide consumers with any incentives or market signals to embrace energy efficiency. CAFE is a sales-weighted average for each manufacturer, and it can put manufacturers at odds with their customers. A better policy would make consumers part of the equation through tax incentives.

2. **Do you think an increase in CAFE standards would subsequently increase the number of hybrids offered by American manufacturers? Do you have any new insight on market trends towards increased demand for hybrids with recent spike in gas prices?**

GM Response to Questions for the Record from March 14, 2007
House Subcommittee on Energy and Air Quality Hearing

CAFE might encourage some additional hybrid and other advanced technology vehicle sales, but that approach can only be successful if the CAFE standards are pushing us in the same direction that the market is pulling demand for these vehicles. Apart from that, the automakers may make more hybrids, but if the consumer is not interested in paying the extra costs for those vehicles, you really just force the automakers to sell them at a loss. This approach is not sustainable in the long term.

GM has an array of hybrid technologies on the market including hybrid car, pickup truck, and sport utility vehicle models, as well as transit buses using GM hybrid powertrains. The Saturn VUE Green Line Sport Utility and Aura Green Line mid-size sedan are exceptional values in the hybrid market. GM's hybrid portfolio will grow later this year with the introduction of the advanced 2-mode hybrid system in larger GM vehicles like the Chevrolet Tahoe and GMC Yukon, the industry's only full-size hybrid SUVs, and a Cadillac Escalade hybrid following in 2008. We have also announced plans for a future Saturn VUE plug-in hybrid production vehicle.

However, the outlook for hybrids continues to be mixed—some hybrids are enjoying good sales, while others are failing in the marketplace. In fact, even some hybrid vehicles have had incentives put on them by manufacturers to boost sales. The United States hybrid market is the only market with significant hybrid penetration; however this market penetration has been supported by automaker subsidies and governmental incentives—as well as roadway policies, such as special access to HOV lanes. In the absence of such incentives, the higher costs of these technologies can serve as a real deterrent to widespread and growing sales volumes, which is critical to achieving significant fuel savings. We urge the Committee to take this into consideration in determining what steps to take regarding increases in fuel economy requirements.

3. **You mention the advanced "two mode" hybrid system (which will begin to show up on our full-size SUVS and pickups later this year.) Can you give us more detail on the type of fuel savings this technology will achieve and how it would affect the performance?**

This year, we will debut the 2-mode hybrid system, which we are co-developing with DaimlerChrysler and BMW. It will deliver up to a 25 percent composite (city and highway combined) fuel economy improvement in our popular SUVs, the Chevrolet Tahoe and GMC Yukon, when mated with Active Fuel Management. Customers will experience the satisfaction of low fuel consumption with no compromise in either power or utility.