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CLEAN ENERGY POLICIES THAT

REDUCE OUR INDEPENDENCE ON OIL

WEDNESDAY, APRIL 28, 2010

House of Representatives,

Subcommittee on Energy and Environment,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 9:36 a.m., in Room 2123, Rayburn House Office Building, Hon. Edward J. Markey [chairman of the subcommittee] presiding.

Present: Representatives Markey, Doyle, Inslee, Melancon, Matsui, McNerney, Welch, Dingell, Pallone, Engel, Green, Capps, Matheson, Barrow, Waxman [ex officio], Upton, Stearns, Whitfield, Shimkus, Shadegg, Pitts, Bono Mack, Sullivan, Burgess, Scalise, Griffith, and Barton [ex officio].

Also Present: Representative Latta.

Staff Present: Phil Barnett, Staff Director; Bruce Wolpe, Senior Advisor; Greg Dotson, Chief Counsel, Energy and Environment; Lorie Schmidt, Senior Counsel; Alexandra Teitz, Senior Counsel; Michal Freedhof, Counsel; Alex Barron, Professional Staff Member; Melissa Cheatham, Professional Staff Member; Caitlin Haberman, Special Assistant; Karen Lightfoot, Communications Director, Senior Policy Advisor; Lindsay Vidal, Special Assistant; Mitchell Smiley, Special Assistant; Mary Neumayr, Minority Counsel; Andrea Spring, Minority Professional Staff; Aaron Cutler, Minority Counsel; and Garrett Golding, Minority Legislative Analyst.

Mr. Markey. Good morning. And welcome to the Subcommittee on Energy and the Environment.

Consumers today spend more than half a billion dollars a day on foreign oil. That is half of our trade deficit. Between 2001 and 2008, when gasoline increased from $1.46 to $3.27 a gallon, the annual household's annual energy cost increased by almost $2,000, slightly more than the average tax cut provided during the same period. These gas dollars go straight to OPEC, and some of them wind up in the hands of terrorists.

We have spent too long resisting efforts to reduce our dependence on oil. As Tom Friedman of the New York Times puts it, the price of oil and the path of freedom run in opposite directions. Some oil payments find their way to Iran to fund its nuclear program, and other payments help fund teachings that perpetuate hate against Americans. But until recently, we were on the path of ever-increasing oil dependence.

As you can see from the red line, in 2007 the Department of Energy projected increased levels of oil consumption far into the future. These are based on the Bush administration's oil-friendly policies, and these numbers were actually put together by the Bush administration Department of Energy.

With Democrats in control of Congress, we moved quickly to end this dangerous cycle, enacting the first mandated fuel economy provisions in 32 years, which was a huge first step. President

Obama accelerated their implementation with a 35.5 mile-per-gallon standard by 2016. Combined with the Renewable Fuel Standard and the Recovery Act measures, you can see from the blue line that we have frozen our levels of oil consumption for the foreseeable future. Again, that number from the Energy Information Agency.

But we can and we must do more. The EPA has modeled what is technologically possible from a range of clean energy policies like those in the Waxman-Markey bill. And you can see from the green line that we can save more than all of the oil we currently import from OPEC, as much as 4 million or 7 million barrels a day more than we have already accomplished. That is the green line.

So we must continue down the path to further reducing our oil dependence. The Waxman-Markey bill includes $20 billion and other measures to deploy plug-in hybrid and all-electric vehicles, and has other provisions to help save oil.

Now, I am sure we will be told, "No, you can't. It will cost too much. It can't be done." But let me remind you, the automobile industry delivered that very same message for nearly a decade. They said the technology didn't exist; that we would all have to drive tiny little go-carts if we raised fuel economy standards; and that the industry would suffer.

Meanwhile, other countries innovated. The U.S. bled manufacturing jobs. Some auto makers closed facilities, APTA facilities, in part because we didn't raise standards quickly enough for them to compete. A recent study found that by

transitioning to electric vehicles we could create 1.9 million new jobs by 2030 in the United States; we can improve our trade deficit by $127 billion per year; and the typical U.S. household would pocket almost $4,000 extra in gasoline saved and other benefits.

But if we do not act, we will prevent a generation of Americans from competing in the largest economic growth opportunity of the 21st century: The 2 million new clean energy jobs that would be created in America under the Waxman-Markey bill will be, unfortunately, created overseas; and we will simply trade our dependence on foreign oil for dependence on Chinese solar panels, Korean batteries, and German wind turbines.

To say that it can't be done, I say to those, look at the clean energy entrepreneurs like A123, A Better Place, and the scores of new entrepreneurial companies that have begun this process of reinventing energy technologies and who are proving that, yes, it can.

By charting this new path towards an energy-independent future, we will one day be able to tell OPEC that we don't need their oil anymore than we need their sand. That is what this hearing is all about.

The chair has completed his opening statement. We now turn to recognize the ranking minority member, the gentleman from Michigan, Mr. Upton.

[The information follows:]

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Mr. Upton. Thank you, Mr. Chairman. And I would like to welcome all of our witnesses here this morning, with a special welcome to Administrator Jackson. Ms. Jackson, we have many important issues before this subcommittee, and we would hope that this is not your last visit. We look forward to your testimony and interaction today.

Before I begin, I would like to submit for the record the June 2009 hearing testimony of Lion Oil. It is a small refiner with about 1,200 employees. It is located in Arkansas. And from that testimony regarding the Waxman-Markey cap-and-trade legislation -- which I would note is pretty much the same as the EPA regulations -- "will result in the shuttering of our refinery and the destruction of 1,200 jobs."

Yes, shuttering domestic refineries will not reduce our dependence on foreign oil. It will kill American jobs, while we import more refined oil products from countries with more lax environmental laws. EPA regulations that would result in the loss of domestic refineries would not extend to refineries in India, where we will be importing gasoline at, frankly, higher prices. We can remember the $4 gasoline in the past. These policies could send it even higher.

I agree that we must take action to reduce America's dependence on energy from unstable foreign governments and dictatorships, but we can do that by increasing domestic

production of oil and natural gas, including recovering our vast oil shale reserves while promoting unconventional fuels such as coal-to-liquid technology. We need, simply, all of the above. We cannot enact or have EPA force costly job-killing climate change policy under the so-called umbrella of energy independence.

I would agree that if we allow the EPA to take command and control of our economy that our oil imports will in fact decrease. But you know what else will decrease? American jobs. Raising the price of gasoline because of cap-and-trade by as much as perhaps 70 cents a gallon, 77 cents a gallon, will indeed increase our consumption.

We are seeing a trend to electrify the transportation sector, which I think is good, but electric cars have to plug into a baseload power source. The EPA is fighting a war on coal, where we get over 50 percent of our power today. I would be interested in hearing the administration's view on nuclear power, something that was not in cap-and-trade or, I believe, in the Administrator's testimony this morning.

It is a fact that EPA climate regulations or worldwide climate agreements thus far will not include China or India. As we suffer from double-digit unemployment, are we going to send simply more jobs abroad for no environmental benefit? Yet many in Congress and the administration continue to promote policies that will push gas and electricity prices even higher by foolishly blocking and creating disincentives for energy production here in

North America. They have also taken ill-conceived steps to block our government from using home-made fuel derived from coal and oil from our Nation's closest ally and northern neighbor, Canada. The glaring consequence of no domestic energy production is greater dependence on foreign sources of energy, coupled with higher gasoline, oil, and natural gas and electricity prices.

Our economy is in a tough time right now. And coming from Michigan, I know firsthand just how difficult things are for the folks at home. Rising energy prices will only exacerbate the economic problems that we are facing, and by law the EPA is prevented from taking economic considerations into account. I think that is wrong.

Now, before I yield back, I would just like to raise another important issue with Administrator Jackson: coal combustion waste or coal ash. For 30 years, EPA has resisted subjecting CCW to Federal hazardous waste management regulations. Doing so now, I believe, would have serious economic and environmental consequences. Coal ash has been regulated in accordance with varying requirements and programs established by the States, and unwarranted hazardous designation will eliminate the environmental benefits of reusing coal ash and only force greater disposal in landfills.

Recycling the ash falls right in line with our new green era of responsibility. Both the Green Building Initiative and the U.S. Green Building Council encourage using fly ash in concrete or

products that contain recycled materials in green buildings. That benefit would be lost if somehow we saw regulation. So I would hope that perhaps you might be able to comment on that.

At this point, I yield back the balance of my time.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. For the record, the Nuclear Energy Institute endorsed the Waxman-Markey bill.

Let me turn and recognize the chairman of the full committee, the gentleman from California, Mr. Waxman.

The Chairman. Thank you very much, Mr. Chairman.

The title for today's hearing is on Clean Energy Policies that Reduce Our Dependence on Oil. Now, I think what we have seen in this country for decades is a view that we can't do anything about this problem. We are just dependent on foreign oil to sustain our way of life, and that is it. There is not much we can do about it. Maybe drill a little bit more in the United States to get more domestic oil, but you can't replace all that oil we are bringing in; so why try?

In fact, the policies that we saw in the first part of this decade were exactly what the Republican President wanted. He had a Republican Congress, and therefore President Bush got through -- energy policy -- more than 95 percent of the policies he wanted. But what we accomplished in terms of dependence on foreign oil with regard to those policies, we were still on a trajectory to need more oil every year, year after year for as far as we could project into the future.

It seems now that each year the amount of oil that we imported has been going up, up, and up and up, and that makes us more vulnerable, vulnerable to our national security being

compromised.

However, in the last few years Congress reversed its course. In, I guess it was 2007, and 2008, the Energy Independence and Security Act was adopted, and it increased the CAFE standard, which meant that cars had to be more efficient in the use of gasoline. The beginning of last year, we passed the Recovery Act, and in that law we invested in the technology and manufacturing capability to help bring plug-in electric vehicles to market beginning this year. In that law, we helped State and local governments replace their buses, trucks, and work vehicles with natural gas-powered vehicles, all the way from New York to Texas, from California to Maryland. So we have started to do things that have actually reduced our dependence on foreign oil.

Today's hearing will explore some of the real actions we have taken already to cut our Nation's dependence on this oil. And I want to welcome Ms. Lisa Jackson to the committee. She is going to testify regarding clean energy policies that are being implemented by the EPA that are reducing our dependence on oil.

Earlier this month, EPA finalized the historic rule establishing greenhouse gas tailpipe standards for cars and trucks. The EPA has produced strong but workable standards for tailpipe emissions, harmonized with standards from the National Highway Traffic Safety Administration. These standards will cut our oil dependence by 1.8 billion barrels of oil. It will draw on the development of new technology here in the U.S., and provide

the U.S. auto industry with the certainty it desires. These standards do all this while saving American consumers $3,000 over the life of the vehicle.

So what we have is a standard that is supported by the auto companies and auto workers, States, and the environmentalists. They are all on board. These policies are already making a difference for our Nation's future. For the first time in decades, the Energy Information Administration no longer projects that the U.S. need for oil will increase year after year. We now expect that the U.S. will not need any more oil in 2030 than it did in 2007. This is a remarkable improvement for our energy security.

There is still more work to do. Administrator Jackson will brief us on an important new EPA study that reveals the dramatic oil savings that are technically feasible and can be achieved through new energy policies.

But the good news is that as we begin to solve the seemingly intractable problems of oil dependence, we also make progress on another seemingly intractable problem, the dangerous increase in our carbon pollution.

This is what we stand for: strong, pragmatic, and effective policies that face the threats to our country and find sensible ways to resolve them. These are not partisan issues. They shouldn't be looked at as partisan issues. But we did go down that partisan road in the early part of this decade, and that road

took us to greater dependence and problems that we see as intractable, rather than problems that we are now looking at as problems that we can deal with. And we can, as a result, have a safer and more efficient and more better future for our environment as well as the economy of this Nation.

Thank you, Mr. Chairman.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Kentucky, Mr. Whitfield.

Mr. Whitfield. Thank you, Mr. Chairman. And I am glad we are having this hearing today on clean energy policies that will reduce our dependence on oil. I am pleased also that we have Environmental Protection Agency Administrator Lisa Jackson with us this morning. And anytime we talk about dependence on oil, one of the innovative actions we are trying to move to is electrification of our transportation system. And I want to talk about the importance of coal in meeting the electricity demands of our country. We know today that coal produces 51 percent, 52 percent of the electricity needs in this country. We know that the demand for electricity is going to increase dramatically over the next 20 years. And I have the clear impression that this administration and this EPA has a strong bias against coal.

Now, why do I say that? Well, one, this endangerment finding that they are working on right now. We know and the EPA has admitted, itself, has acknowledged that the finding, the endangerment finding will cause job losses in the U.S., and I think that that represents a clear and present danger to our economy and all of our efforts to provide the conditions for job growth and prosperity.

In addition to the endangerment finding, this EPA is limiting coal permits. This EPA is trying to designate coal ash as a

hazardous material. This EPA, in my view, is trying to create as many obstacles as possible in using coal. And I can assure you that China is using more coal, India is using more coal, because they want to be competitive in the global marketplace, and we know that coal produces the least expensive electricity.

Now, if we are going to provide additional incentives for solar power, wind power, I feel very strongly that those alternative sources are inefficient, too expensive, use too much land, and do not produce enough electricity and cannot produce enough electricity. And I would hope that this administration would spend more time, more money on helping us perfect carbon capture and sequestration. Dr. John Hauser at MIT is one of the leaders in this regard. He is working diligently with others to do this. And I think our long-term viability and strengthening our economy depends upon developing carbon capture and sequestration and continued use of coal. Thank you.

[The information follows:]

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Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Michigan, the chairman emeritus of the committee, Mr. Dingell.

Mr. Dingell. Thank you, Mr. Chairman.

The Democratic Congress and the Obama administration have done a tremendous amount to reduce our dependence on foreign oil. Our efforts began with the Energy Independence and Security Act, which was dealt with in this very committee and which continued with the American Recovery and Reinvestment Act, and the administration's coordinated approach to deal with vehicle emissions, and, finally, the administration's proposal for increased offshore drilling.

After many years of predictions that our dependence on foreign oil would only create additional dependence on that oil, we are seeing a change in that trajectory. The news only gets better if we see the American Clean Energy and Security Act signed into law.

I would like to take a moment to commend Administrator Jackson for her work leading to a single, harmonized standard for greenhouse gas emissions and fuel efficiency for autos. Prior to this landmark agreement, our auto makers faced a patchwork of standards that would have been very nearly impossible to meet. Now that we have a single national standard for model years 2012 to 2016, it is time to begin the same approach for the post-2017

model years. The administration has been successful once, and I know that with effort, they can do the same thing again.

As much as I disagreed with the Supreme Court in the case of Massachusetts versus EPA, the decision, although erroneous, was made. EPA was required to move forward with their endangerment finding, and they have done so. That endangerment finding is the legal underpinning for a national standard for autos. The national standard is too important to our manufacturers and to our economy for us even to consider a resolution of disapproval.

Of course, it is important that we note that remarkable technologies are coming out of our auto makers. Whether we are talking about the Chevy Volt, the Ford Escape, and the Fusion hybrids, advanced transmission or advanced submission control technology, our auto makers are stepping up to the plate to provide consumers with quality, clean, and fuel-efficient technologies. GM is building the battery packs for the Chevy Volt in my district in Brownstown, Michigan, and Ford is doing the same thing at their Ypsilanti Township plant. We are busily creating 21st century jobs while we are protecting the environment.

Mr. Chairman, I thank you again. And I look forward to our witnesses and their comments.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Texas, the ranking member of the full committee, Mr. Barton.

Mr. Barton. Thank you, Chairman Markey. I want to thank you and Chairman Waxman for agreeing to hold this hearing and inviting Administrator Jackson. I want to thank you, Madam Administrator, for agreeing to come. I look forward to a productive exchange of ideas.

Mr. Chairman, I think it is no secret that I don't believe the endangerment finding that the Environmental Protection Agency put out in April has been properly done.

I guess I would start with the premise that when I was born in 1949, my life expectancy was 68 years old. My communications director and his wife had a baby girl last week; her life expectancy is 81. We are told by the Census Bureau that a baby born 10 years from now can expect or anticipate to live to 82. Neither of my grandfathers lived past the age of 67. My father died at the age of 71. My mother is alive and well at the age of 85.

So I don't see as a basic premise how the Environmental Protection Agency can say that CO2 is an endangerment to the public health of the people of the United States when our life expectancy is going up, when the models that the endangerment finding are based on show no endangerment, even in their own models in the most extreme cases, until 200 years from now. It

just doesn't wash with me, Mr. Chairman. So I am going to be asking our distinguished Administrator a number of questions about that endangerment finding when it is my opportunity to do so.

This endangerment finding, if implemented and backed up by all the regulations that the Environmental Protection Agency has indicated they plan to put upon the United States economy, would require rules to regulate CO2 from aircraft, from ocean-going vessels, nonroad engines and vehicles, all types of fuels, cement plants, petroleum refineries, nitric acid plants, utilities, oil and gas production, landfills, animal feed operations. It could be construed to even allow regulation of large public events where large numbers of people accumulate, such as the World Series, Super Bowl, Boston Red Sox at Fenway Park, because under the strictest interpretation of the Clean Air Act, enough CO2 is emitted in a large gathering to trigger the point-source standard for regulation. I know that is not the intention. I don't think the EPA would do that. But it is technically possible.

Our economy should be about economic jobs and growth, Mr. Chairman. Congress has an obligation to promote economic growth. This is the committee, the Energy and Commerce Committee, the oldest standing committee in the House of Representatives, that has the primary responsibility for authorizing legislation to create that economic growth.

The Clean Air Act originated in this committee, as you know, Mr. Chairman. The senior members of this committee voted the last

time on the reauthorization and amendments to the Clean Air Act early the 1990s under the leadership of then-Chairman John Dingell. I was a member of that committee at that time, and I voted for those amendments, Mr. Chairman. I think it was a good piece of legislation, and I have absolutely no qualms that I voted for it.

Having said that, it is my opinion, and I think the record will bear this out, that the Clean Air Act was never intended to regulate CO2. CO2 is not a pollutant under the definition of that act. And the court case in Massachusetts versus EPA doesn't say that CO2 is a pollutant. It doesn't say that the Clean Air Act requires that CO2 be regulated. It simply says that the Environmental Protection Agency has an obligation to make a decision.

It is my opinion that they have made the wrong decision. It is my opinion that the endangerment finding is, in and of itself, a threat to the economic vitality of this country. And, as I said earlier, Mr. Chairman, when it is my opportunity to ask questions of our distinguished Administrator, I will be asking her a series of questions about that endangerment finding.

With that, Mr. Chairman, I am very appreciative of the opportunity to participate in this hearing. I yield back the balance of my time, and look back to a productive hearing.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. The Chair recognizes the gentleman from Louisiana, Mr. Melancon.

Mr. Melancon. Thank you, Mr. Chairman. I would like to take a moment, first of all, to recognize the families of the 11 victims that lost their lives in the deepwater rig last week and those that were injured. I am thankful for those that survived. Those men and women are doing what so many other men and women do in Louisiana every day, working hard to provide a better life for their families and produce resources for their country. Their sacrifice is immeasurable to those that love them. And so I ask everyone to remember the human face of this tragedy and to keep them and their families in your prayers.

I also ask that we all keep in mind the safety of those brave responders and pray for their work, that it goes swiftly and without incident, as we continue to try and clean up after this horrible disaster.

I would like to also call attention to the serious environmental and economic threat posed by the disaster. The oil slicks that are spreading from the rig site could have a detrimental impact on marine life along our fragile coast, and they must be properly contained. The marshes and estuaries that line the Louisiana coast, as well as the Mississippi coast, are home to the most productive fisheries in the country, if not the entire world, and host countless species of migratory birds

throughout the year. Protecting these natural gifts and resources must be a priority for all of us.

My remarks today will be short and simple. I thank the Chairman for holding this hearing and allowing us the chance to have this very important discussion.

All of our lives are touched by the production of oil and petroleum products every day. Many of us traveled by car to be here today, and to communicate with each other, all of us will use a plastic pen or keyboard at some point today. There is no doubt oil and its byproducts play an important role in our country's history and economic development. I think our committee and our caucus should be proud of the forward-thinking energy policies that have been put in place. But I would be remiss if I didn't point out the continuing importance of oil and petroleum products in our economy.

The good-paying jobs and the affordable energy and chemical products drive our economy day in and day out. It is impossible to know exactly what the future looks like, but I think it is important today to focus on priorities, our national security, and strengthening the economy.

I think we should be talking about energy independence. Producing energy from our homegrown assets, all of them, not just some of them, makes us less reliant on hostile nations and promotes American ingenuity. For example, we shouldn't have to buy all of our patented solar equipment from foreign

manufacturers.

In Louisiana, we have proudly produced oil and gas for generations, constantly innovating and evolving the way we explore and extract. As I recognized at the beginning of my statement, there are real costs associated with production. But our State has selflessly carried on this work to ensure that the rest of the country can have some reasonable stability in energy prices and availability. We will continue to do this work and will lead the way until energy security becomes a reality for our country.

In conclusion, I wish to request again that Administrator Jackson and her Agency continue to carefully review the science associated with requiring refineries to blend E-15 in their stock. It is estimated that in just a few short years, every gallon of gasoline sold in the United States will be at least blended to E-10 levels. This blend wall, as it is called, means that refiners will no longer be able to comply with the renewable fuel standard as established by law. I ask that the Administrator use her authority to reduce the blending requirements rather than force refiners to blend higher levels of ethanol in their commercial-grade gasoline. This move could have serious consequences, such as voiding some car and green engine warranties, which in turn lead to costly legal liability battles. Also, the high organic content of E-15 is known to increase the nitrogen and sulfur oxide, the nox and sox, emissions.

Biofuels represent a strong part of the solution to our

domestic energy needs, but balancing those needs with the impact on our existing economy is critical, and I thank the Administrator for giving this due consideration. And I again thank the Chairman for his time.

Mr. Markey. The gentleman's time has expired.

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Mr. Markey. The chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. Shimkus. Thank you, Mr. Chairman.

And Administrator Jackson, welcome. We had a chance to visit about a year ago at the Illinois delegation luncheon, and I offered my assistance on an energy security approach that I think would meet some of your goals and objectives. I still offer that and look forward to working with you when you take me up on that offer.

I am glad I followed my friend, Charlie Melancon, because you have a competing view on what we have done on renewable fuels, and I am going to use the opening statement to just pose a series of questions and talk about this, because I obviously have another issue I want to talk to once we get the questions.

According to you, 65 percent of the gasoline in the United States is consumed by 2001 vehicles or newer. It has been widely reported that you are considering partially approving E-15 for 2001 model cars and newer, which I support. But there is a concern with this in that splitting the automobile population on an improved blend versus addressing the entire fleet -- because you look at the capital expense that would be incurred -- I think it is safe to say that many people would not do the expansion that is needed in infrastructure if you are only going to be able to address 65 percent of the fleet. So I will have a written

question to ask for comments on that, and I think that is an issue that needs to be considered.

The U.S. imports roughly 65 percent of petroleum today. This is an energy security hearing. Ethanol currently is about 8.4 percent of the gasoline pool. It is the only thing we have done to decrease our reliance on imported crude oil, and it has had great success. And we have displaced 12 billion gallons of imported crude oil by using renewable fuels.

Now, the interesting thing is that, because of the blend wall, we are producing ethanol and we are exporting it overseas. So if we want to continue to decrease our reliance on imported crude oil, why would we have an arbitrary limit that now forces us to export the ethanol, versus continuing to use the ethanol to decrease our reliance on imported crude oil? We are exporting to India, South Korea, and the EU, while we are still importing oil from Venezuela. This seems counterproductive.

And I know that is why we are pushing, and I do appreciate your looking at the E-15. But that is also a reason why we think that looking at E-11 or E-12 for the entire fleet versus this bifurcation aspect of the 2001 vehicles and above might be an even more credible solution to addressing and decreasing our reliance on imported crude oil. It is good for the country, it is good for our energy security, it is good for farm income, it is good for rural America, it is good for jobs.

And I thank the chairman, and I yield back the balance of my

time.

[The information follows:]

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Mr. Markey. The gentleman's time has expired. The chair recognizes the gentlelady from California, Ms. Matsui.

Ms. Matsui. Thank you, Mr. Chairman, for calling today's hearing. I would also like to thank Administrator Jackson and the rest of the witnesses for appearing before us today.

I commend the EPA for establishing a greenhouse emissions standard for cars and light trucks, and for finalizing a renewable fuels standard, which, as Administrator Jackson rightly points out in her testimony, are inextricably linked to reducing our dependence on oil and cutting emissions of greenhouse gas.

As we all know, oil provides more than 40 percent of all energy consumed and 97 percent of the energy used for transportation. However, it is crucial that we advance policies that lessen our carbon footprint, curtail harmful emissions, create jobs, and safeguard the physical and energy security of our Nation. In doing so, we will preserve and even improve upon our current way of life.

To become less reliant on fossil fuels, Americans must embrace clean technology, clean fuels, and new ways to cut emissions. If we succeed in doing that, we will improve our manufacturing base and regain our competitive advantage in the global economy.

Toward that end, I recently convened a clean technology regional summit in Sacramento and brought together clean-tech

companies, nonprofits, utilities, colleges, and businesses to discuss ways in which they are fostering cooperative relationships and strategic partnerships to deepen the region's ongoing efforts to become a clean-tech capital.

On top of Sacramento's leadership as an environmental and metropolitan planning model for the State of California, this summit demonstrated the region's vision to achieving greater energy dependence.

Our Nation must also aspire to be the world leader in producing and exporting clean technology, and the President has repeatedly expressed this goal. Unfortunately, the United States still lags behind many of our international competitors in expanding our clean-tech industry, particularly in exports abroad.

Just yesterday, I, along with Representatives Rush, Dingell, and Eshoo, introduced legislation, H.R. 5156, the Clean Energy Technology Manufacturing and Export Assistance Act, that would provide domestic manufacturing and foreign export assistance to boost the competitiveness of the U.S. clean-tech industry here at home and in the international marketplace.

It is critical that our Nation become the leader in manufacturing and exporting clean technologies, not one that becomes increasingly dependent on foreign energy products. This legislation will enhance our standing in the clean energy race.

I look forward to working closely with my colleagues, stakeholders, and other advocates to move the United States

towards a more efficient energy economy that utilizes clean-tech manufacturing and lessens our dependence on the oil.

I yield back the balance of my time.

Mr. Markey. The gentlelady's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Pennsylvania, Mr. Pitts.

Mr. Pitts. Thank you, Mr. Chairman. I would like to thank you for convening the hearing today on such an important issue.

Like all of us, I believe that we should work to decrease the amount of greenhouse gas emissions in our atmosphere and we should be good stewards of this Earth and its resources. In addition, I think it is imperative that the United States become increasingly energy independent. The United States needs to produce far more clean energy from sources that do not rely on the whims of unfriendly nations in far-off regions of the world.

Fundamentally, cutting carbon emissions through punishment, taxation, and the heavy hand of big government will only cripple our economy and send more jobs overseas; and I fear recent EPA actions and the enactment of cap-and-trade legislation would do just that.

Instead, we should be encouraging a clean energy economy through innovation and encouragement and entrepreneurship. If we want to reduce our dependence on oil, I strongly believe that our clean and green energy future is a nuclear future. And with this goal in mind, I have introduced the SAFE Nuclear Act which stands for Streamline America's Future Energy. The bill provides for a regulatory process that will encourage an increase in the production of this clean alternative energy.

Nuclear energy is a viable, clean alternative that can help strengthen America's energy infrastructure. Now, nuclear power can reduce our dependence on foreign sources of energy and reduce the emissions that come from burning fossil fuels. And my bill would provide an additional path in the regulatory process that allows for the approval of new nuclear reactors on or adjacent to an existing site without jeopardizing safety.

Though we may not all agree on issues like cap-and-trade and EPA actions, we can all agree that we need to find a way to produce the energy that fuels our lives in a way that is environmentally friendly and sustainable. Nuclear power fits that description, and the SAFE Nuclear Act will go a long way toward making that safe, clean future a reality. I thank you for the time and yield back.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Texas, Mr. Green.

Mr. Green. Thank you, Mr. Chairman, for holding the hearing today on the clean energy policies that reduce our dependence on oil. And I would also like to welcome Administrator Jackson and the other panelists to our committee this morning.

Coming from Texas, we are the Nation's leader in renewable energy production and the pioneering and developing of its own State portfolio standard. I support efforts to promote renewable energy production that meets the unique circumstances and resources of each State. However, with increases in renewable energy, the Energy Information Administration found that oil and natural gas and coal will continue to make up a large majority of U.S. energy use, even to 2030 and beyond.

If we are to reduce dependence on foreign oil, we must explore and produce more domestically, along with all our alternatives that we are investing in. We cannot drill our way out of our energy needs, but we cannot ignore the benefits that America gains with responsible domestic production. These benefits include reduced reliance on foreign imports, increased economic growth, new high-paying jobs, additional Federal and State revenues, and improved ability to meet our clean energy goals. That is why I strongly support increasing diversifying domestic production in the areas like Alaska's North Slope, the

Gulf of Mexico, Federal lands in the West and the Outer Continental Shelf.

I also supported the efforts to raise fuel economy standards in vehicles, to provide tax incentives for consumers to purchase fuel-efficient vehicles, extend tax incentives for renewable energy, increase energy efficiency standards for buildings and appliances, and promote public transit efforts. Several of these initiatives are part of last year's Recovery Act and the Energy Independent Security Act of 2007. They are working well. I will continue to support programs seeking to create cleaner energy technologies, because we all benefit from a cleaner environment.

Finally, while I have you here, Administrator Jackson, I appreciate the working relationship that we have, but also applaud the administration brokering an agreement to provide the auto industry with one national program for fuel economy and greenhouse gas emissions, which was supported by the States, environmental advocacy groups, and the auto industry.

And I would be remiss if I didn't also mention the work we are doing with EPA on the Superfund site that is in our district in East Harris County that our regional EPA is moving very fast to try to contain a problem that has been there for 40 years. I know this is not an easy feat. However, I want to emphasize my opposition to the EPA regulating greenhouse gases from large stationary sources under the endangerment finding. It is my hope that Congress will send the President legislation to set

parameters to help regulate emissions with minimal disruption to our economy.

And, Mr. Chairman, again, thank you for calling this hearing. I yield back the balance of my time.

Mr. Markey. The gentleman's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Texas, Mr. Burgess.

Mr. Burgess. Thank you, Mr. Chairman. I appreciate the Administrator being here. It is so rare we have anyone from the administration come to our committee. I will save my time for questions, and I yield back.

Mr. Markey. We thank the gentleman very much.

[The information follows:]

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Mr. Markey. The Administrator has been before our committee before. And I would just note that the Administrator of the EPA did not appear before our committee from 2001 to 2006, when the minority was then in the majority. So that was, without question, an unprecedented period of time without having the EPA Administrator appear before the committee of jurisdiction. That cannot be said about this Administrator. That was the most successful witness protection program in history.

Let me now turn and recognize the gentlelady from California, Mrs. Capps.

Mrs. Capps. Thank you, Mr. Chairman, for holding today's hearing; especially welcome again to the Administrator of the EPA. And I want to associate myself as well with the remarks of my colleague Mr. Melancon regarding the tragedy off the coast of Louisiana.

Today our economy relies on fossil fuels for energy, and every day we pay a price, many prices. And volatile prices starts instability and unnecessary pollution. We simply must change this untenable situation. The best way to beat this addiction is to reduce overall demand, promote renewables, and develop alternatives.

Putting more attention on the potential of clean energy is something that I and others on this side of the aisle have been advocating for years. And since America is not exactly awash in

natural oil and gas, reducing our dependence on them would be good not only for our environment but for our economy and perhaps, most importantly, for national security.

But, to be honest, we have to do more than talk about the potential that renewables and alternative energy has for this country. We have to put into place more funding for programs to bring these energy sources to market, and we have to make changes in energy policy to encourage their use. That is exactly what Democrats have done in the last 3 years.

We have enacted legislation, the Energy Independence and Security Act, and the Recovery Act, to provide an immediate jolt to the clean energy economy to create jobs and enhance our long-term competitiveness by reducing our oil dependence. At the same time, the House has passed legislation to establish a cap-and-trade system for global warming pollution. This bill has the potential to provide trillions of dollars in revenue that could be used, among other things, to provide money for investment in clean energy and tax relief for American families facing economic hardship.

Mr. Chairman, we know what we need to do: Accelerate our economic recovery in the short term, ensure our long-term prosperity. Developing clean power and energy-efficient technologies while combating global warming are initiatives that meet these goals.

Americans want real, meaningful solutions to our Nation's

energy challenges. Unfortunately, the leadership under the last administration was driven by a fuel desire to drill our way toward energy independence, and did that by lavishing huge tax breaks on big oil, paying much less attention to reducing demand, renewables, and alternative energy. Their great plan, 95 percent implemented, resulted in volatile energy prices, $500 billion in oil company profits, and an economy on the brink of collapse. Those of us who opposed the Bush-Cheney plan did so because we knew this was the likely result.

We do have a better idea, one that meets today's crisis and transitions us to a new future. It is time to put taxpayer funds to a more productive use, jump-start investments of energy efficiency, renewables, alternative energy, all of which will reduce our oil dependence.

Mr. Chairman, this issue will be the defining measure of our future economic standing and our international security over the next century. I believe we should all take this opportunity to work together to achieve this energy independence for our country.

Thank you. And I yield back the balance of my time.

Mr. Markey. The gentlelady's time has expired.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Alabama, Mr. Griffith.

Mr. Griffith. Mr. Chairman, I will waive my opening statement and reserve my time.

Mr. Markey. The gentleman will be able to reserve his time.

[The information follows:]

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Mr. Markey. The chair recognizes the gentleman from Florida, Mr. Stearns.

Mr. Stearns. Mr. Chairman, thank you.

The endangerment finding that many of us feel was rushed into existence by the EPA really has many of us concerned about what the economic impact of this would be. It allows, of course, the EPA to impose the first ever Federal tailpipe standards for greenhouse gases. That is estimated to cost about $52 billion and require the largest industrial sources to install the best available control technology. I mean, that term itself, "the best available control technology," I don't think Administrator Jackson, have you yet defined what this means and whether it is available?

When you look at the impact of this, it is not going to affect just the auto industry and large industrial sources; you are going to regulate greenhouse emissions from aircraft, ocean-going vessels, nonroad engines and vehicle sources, cement plants, fuels, petroleum refineries, utility boilers, oil and gas production, landfills, and even animal feed operations.

So, since 85 percent of the U.S. economy runs on fossil fuels that emit carbon dioxide, imposing a CO2 tax is equivalent to placing an economy-wide tax on energy use. I think that is what many, at least on this side of the aisle, are concerned about, the economic impact.

Now, according to the Heritage Foundation Center for Data Analysis, the economic effects of carbon dioxide regulation would result in cumulative gross domestic product losses -- and these are their figures -- of $7 trillion by the year 2029, and single-year GDP losses exceeding $600 billion.

So when you think about the impact of this, with a weak economy, with high unemployment, I think that has many of us concerned. It hit particularly hard on manufacturing, which manufacturing provides the better jobs. And so job losses in some industries could exceed 50 percent with this.

So I think, regardless of what one's view might be on carbon dioxide and global warming, I think perhaps both sides of the aisle can agree that this would have huge economic impact. And companies obviously will innovate and try to work through this, but are they going to make long-term capital investments, waiting to see what the Administrator is going to do?

And so when the EPA uses such language as "best available control technology," if I was to invest in, let's say, a cement plant or I was going to do something in oil and gas production, or I was going to do something in aircraft or even animal feed operations, I would want to know what your regulations are going to be and how am I going to be impacted, before I invest a lot of my money.

So I think you have put sort of a pale over the economy with this. And I think we need to, through this subcommittee, Mr.

Chairman, work with commonsense energy solutions that will encourage domestic energy production and create jobs, and be careful of instituting this endangerment finding.

Thank you, Mr. Chairman.

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[10:30 a.m.]

Mr. Markey. The gentleman's time that has expired.

The chair recognize the gentleman from New York, Mr. Engel.

Mr. Engel. Thank you, very much, Mr. Chairman. I want to thank you for holding this important hearing and our witnesses for contributing their expert testimony. I look forward to hearing Ms. Jackson's testimony.

We all know that we must break our addiction to oil. It has weakened our economy, it has transformed our wealth into nations and individuals who wish us harm, placed our troops in dangerous places, and damaged our environment. The U.S. consumes 25 percent of the world's oil production, yet controls less than 3 percent of an increasingly tight supply. Three-quarters of world's reserves are in OPEC Nations and in 2008 the U.S. sent roughly $440 billion overseas to pay for imported oil.

These economic and national security problems are enabled by the simple fact that oil provides more than 96 percent of the fuel for our transportation sector. It is really a transfer of wealth. Unless we act now the problem will continue to worsen.

We should be doing the following: First, we should continue to increase the efficiency of our cars and trucks. Making fuel economy improvements in our existing vehicles will not break our addiction to foreign oil, but it will reduce our overall

consumption.

Secondly, we must force petroleum to compete with other fuels. There are many ways to do this and we should use them all. T. Boone Pickens has recommended switching to natural gas for fleet vehicles such as buses and taxis and for interstate trucking. These vehicles can run on natural gas and would only require new pumps at a few central locations and interstate truck stops. We should deploy drop-in fuels produced from waste and algae. These fuels can mix freely gasoline and diesel in existing vehicles. We.

Should enact an open fuel standard that would require all new gasoline using vehicles to be flex-fuel vehicles, capable of running on gasoline, ethanol or methanol. I argued when we passed our global warming bill that that should have been in the bill, and it should have been and hopefully it will be when we get to a finished product. This cheap and simple modification uses technology that already exists. Brazil accomplished it easily several years ago. Methanol made from natural gas can be produced for around $1.20 a gallon of gasoline equivalent today.

Thirdly, we should move to electrify automotive transportation. I have worked with my friends at Better Place several years now and I am eager to hear about their progress from Mr. Wolf on the second panel today.

Basically we need to have a more balanced energy policy and a policy that relies so heavily on gas, on gasoline, is not one that

can be sustained. We can really never be totally free with our national security as long as we rely on despots like Hugo Chavez or the Saudi royal family for our energy supplies. We need to move and we need to do it quickly.

Thank you, Mr. Chairman.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Arizona, Mr. Shadegg.

Mr. Shadegg. Thank you, Mr. Chairman. And I will try to keep my remarks brief. I want to associate my comments first with Mr. Melancon. I believe it is in America's interest to pursue all energy sources and particularly to appreciate the domestic energy we have produced, including oil, natural gas, and other sources of energy as well as coal.

I am concerned about the topic that my colleague Mr. Shimkus raised, and that is the issue of increasing the ethanol blend. I have introduced legislation to require that no increase in ethanol be permitted until the safety of ethanol is studied in certain pieces of power equipment. I think that is a legitimate concern. There is a very real danger of that when ethanol blends go above 10 percent, we do not know what impact they will have on the safety of chainsaws and other pieces of equipment or on the reliability of many small motors, including outboard motors and marine engines, and it would be particularly unfair if we moved to those new blend standards and the cost of doing so is imposed on the American public either financially or in terms of safety risk

because the equipment was not designed to run on those fuels.

I do commend the EPA for its work, but I disagree with its endangerment finding. I believe it is based largely on the IPCC report, which was the result of almost 2 decades worth of research; however, tragically that research has now been very much placed in doubt. The IPCC report daily is criticized for new errors in its findings. It is found to have exaggerated the sea level rise in Bangladesh due to climate change because it failed to take into account sediment from the Himalayan rivers, it based claims on African crop year that were not peer reviewed, it erroneously claimed that the Himalayan glaciers might melt by 2035, it based claims on drought in the Amazon forest in a report that did not even study drought, and it also used as a basis for temperature predictions apparently data that does not even exist.

Most recently, a study found that 21 of 44 chapters of the IPCC report would receive an F if graded on the grading system used in American schools because the papers relied upon and included newspaper clippings, newsletters, and press releases and not peer reviewed literature.

It seems to me, and I will conclude with this, that when a nation decides to pursue massive public policy on the scale that we are talking about, it is absolutely critical for us to have the support of the American public behind us and not to impose very costly regulations on the economy that could cost jobs and damage our citizens without being sure that the science is right.

And so I would simply urge that we continue to look carefully at the science, that if we decide to draw a policy based on that science that we in fact can assure ourselves and can rely confidently on it being accurate and reliable so that we can win the support of the people. They do not want to see us enact legislation based on political will and not based on sound science.

With that, Mr. Chairman, I yield back.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from New Jersey, Mr. Pallone.

Mr. Pallone. Thank you, Chairman Markey, for having this important hearing and I am excited to have our EPA Commissioner Lisa Jackson here with us this morning. I have known Lisa from her days as Commissioner of the New Jersey Department of Environmental Protection and she has dedicated her life's work to protecting the environment and making our country a healthier place to live, and I want to welcome her here today to testify.

I also want to mention, I know you mentioned about her being available, I remember very early in her tenure when she invited us down on the TSCA reform meeting, a bipartisan meeting. I think it was the first time I had ever been in the EPA Administrator's office in my 22 years here. So she is definitely trying to reach out on a bipartisan basis, and I appreciate that.

Now we are here today to discuss the importance of developing

clean energy policies that could reduce our dependence on oil. The U.S. consumes 25 percent of the world's oil production but our country only contains 2 percent of the world's oil reserves. We waste a billion dollars a day buying foreign oil, and this money all to often winds up in the pockets of nations with hostile views of the United States. This hurts our economy, helps our enemies and puts our security at risk.

We must put an end to our addiction to oil, and the best way to do this is to pursue aggressive clean energy policies with all the tools we have available. And this includes enacting a comprehensive climate change bill into law this year and allowing our Federal agencies such as the EPA to use their authority to regulate emissions and incentivize clean energy development.

We must focus on clean energy policy such as wind power and regulation of global warming emissions rather than expanded offshore drilling that can cause tremendous harm to our environment. I am extremely troubled by the offshore oil rig which caught fire and ultimately sank off the coast of Louisiana last week. This is turning out to be one of the world's worst oil spills. And it is clear that offshore drilling cannot be done in a way that sufficiently protects America's coasts.

And I respectfully request that the President and the Interior Secretary reassess their position on offshore oil. This disaster in the Gulf of Mexico only underscores the need for comprehensive clean energy policy. We must focus our efforts on

wind and hydro power, which are some of the cleanest and safest forms of renewable energy.

I want to commend the EPA and Administrator Jackson for all the work that they are doing to regulate vehicle emissions and stationary power sources through the endangerment finding. This plan will save the U.S. 1.8 billion barrels of oil over the life the vehicles purchased between 2012 and 2016.

Once again I would like to thank the chairman for convening this hearing, especially for inviting the Administrator Lisa Jackson, who again has been out front on so many of these issues and you look forward to her testimony, thank you.

Mr. Markey. Great. The gentleman's time has expired.

The chair recognizes the gentleman from Louisiana, Mr. Scalise.

Mr. Scalise. Thank you, Mr. Chairman. I share the sentiments of my colleague from Louisiana. Our prayers are with those families of the 11 rig workers who lost their lives. I urge the U.S. Coast Guard to move swiftly and use everything in their power to contain and clean up the spill and investigate the causes of the explosion so we can prevent this terrible tragedy from happening again.

As we hear today from Administrator Jackson, I would hope that we have an opportunity to discuss the administration's plans for creating a national energy policy as well as the effects that many of the recent EPA restrictions would place on our country's

economic and national security.

I have long advocated for a comprehensive national energy policy that takes an all-of-the-above approach, incorporating efficiency measures, promotion of new energy technologies, development of renewable energies, and also making sure that we continue to expand our development of our own natural resources at home.

This administration, however, has taken a different approach with restrictive energy policies. Unfortunately, we have seen attempt after attempt by this administration to restrict our ability to invest in our own natural resources. From recent threats by EPA to regulate greenhouse gas emissions to essentially halting the major development of natural gas with restrictions on hydraulic fracturing, what we are seeing is a recipe for making our country more dependent on Middle Eastern oil while killing off millions of American jobs.

Before this administration places severe and economically devastating restrictions on domestic production of our own natural resources, it is incumbent to find ways to reduce our dependence on Middle Eastern oil. About 57 percent of the petroleum we use in America comes from foreign sources, and roughly 20 percent of those imports are from Middle Eastern countries. This not only restricts our ability to one day become energy independent, but also poses potential national security threats to our homeland.

Instead of Washington bureaucrats mandating harmful policies

that would kill key sectors of our national economy and make us more dependent on foreign nations who want to do us harm, we should instead explore policies that encourage investments in cleaner energy technologies and innovation in the private sector. The ingenuity of the American entrepreneurial spirit is what has made our country the best in the world. This Congress would be wise to encourage more of that innovation to achieve energy independence.

Thank you, and I yield back.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. Inslee. Thank you, it is an honor after the 40th anniversary of Earth Day to have a director of the Environmental Protection Agency here, and I just noted that we are kind of back to where we started, because the EPA got started when the Cuyahoga River caught fire in Ohio and people understood we had to do something about our problem. And this morning the headlines are the Coast Guard are thinking about lighting the Gulf of Mexico on fire to try to solve this problem. We are really back where we started.

I want to point out that the oil slick that we are concerned about today is really the least of our problems about oil. Because there is a giant invisible oil slick caused by carbon dioxide that comes out of our tailpipes, that goes in the

atmosphere, that falls in the oceans and goes into solution. That invisible oil slick is now causing the oceans to become acidic. The oceans today are 30 percent more acid, more acidic than they were before we started burning oil. And they will be much more acidic if we don't change our course.

I want to show members if the committee what that means. If they put up this slide over here. This slide over here shows what happens when the ocean becomes acidic. When the ocean has more acid in it the creatures in it that take calcium carbonate out of the ocean and make their bodies can't do that anymore. This is a picture from NOAA and it shows a terrapod. These are small little plankton-like creatures and they had a shell and that shell, they get the calcium out of the water to make their shell. The problem is as the water becomes more acidic they can not make that shell anymore. This is a picture of what happens when you put a terrapod in water that is as acidic as it will be in 2100 if we continue on this path, and basically what you will see over a period of 45 days it melts. On the left you see the shell is intact, it starts to melt and it basically melts into an indistinguishable blob in 45 days. The entire food chains of the ocean are in danger because of the oil and coal, because they are making our oceans more acidic. And the scientific community believes there may not be healthy corals anywhere in the world by the end of the next century because of this acidic problem.

So the oil slick we are worried about today is the least of

our problems. The fact that our oceans may be dead in 100 years or full of weeds rather than beautiful corals is a significant issue why we should be addressing this. Basically what the scientists are telling us, unless we have a sea change in energy policy we may be killing the seas.

So I think this hearing is an appropriate one to have. We know about the national security ramifications of giving $100 million a day to Iran of American money, but we have another security and that is the protein we get out of the seas, and I hope that we can come up with a policy on comprehensive basis to solve this problem.

Thank you.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentlelady from California, Mrs. Bono Mack.

Mrs. Bono Mack. Thank you, Mr. Chairman. I will waive and submit my statement for the record.

Mr. Markey. The gentlelady waives.

The gentleman from an Oklahoma, Mr. Sullivan, is recognized.

Mr. Sullivan. Thank you, Chairman Markey. I appreciate you holding this hearing today on clean energy policies that reduce our dependence on oil. I am pleased to welcome Lisa Jackson, Administrator of the EPA, today. I look forward to her testimony and any developments on the foreseeable economic impacts that EPA CO2 endangerment findings and pending regulations will have on the

U.S. economy.

If allowed to go into affect, the CO2 endangerment finding will impose a backdoor energy tax on the American people. By giving the agency unprecedented regulatory authority over almost every foreseeable aspect of our economy, burdening thousands of small businesses with unnecessary and costly compliance expenses and higher energy costs for American families while doing little to protect the environment.

With our national unemployment rate at 10 percent, this is the worst possible time for this administration and the EPA to impose unnecessary job killing energy mandates on the American people.

I am also interested in our witnesses' views on our own domestic oil resources and if they support the development of them, both on shore and off, to reduce dependence on foreign oil imports. According to the Congressional Research Service, the U.S. reserves for oil and natural gas are the largest in the world. I believe we must reduce foreign oil imports and start drilling and utilizing our oil and gas here at home.

I look forward to the hearing, hearing the testimony of our witness, and I yield back the balance of my time.

Mr. Markey. The gentleman's time has expired.

The chair regular nieces the from a from California, Mr. McNerney.

Mr. McNerney. Thank you, Mr. Chairman, for convening today's

hearing. It was almost a year ago that our committee favorably reported the America Clean Energy and Security Act, and I am grateful for this opportunity to evaluate the new policy proposals. Vigorously pursuing well crafted, clean energy policies is a matter of national security, economic and environmental concern. Investing in new energy technologies and energy efficiency improvements has tremendous potential to create high quality jobs, and I have seen this job creation potential firsthand through my experience in developing wind power and smart grid technologies.

Even during tough economic times communities in my district in California are attracting cutting edge clean energy businesses that are creating good jobs. For example, an electric vehicle manufacturing facility just opened up in Stockton, California and is hiring new workers. Similarly, the Port of Stockton is doing significant business with wind turbine parts, creating jobs at our docks. There are tremendous opportunities for further job growth in the clean energy sector, but to harness that potential we need to continue to evaluate and recalibrate Federal policies.

I would also like to note the compelling national security benefits of pursuing policies to expand America's use of domestically produced energy resources. Over the last 2 years our country has spent about a billion dollars a day overseas for oil imports, some of which will flow to countries that are unfriendly to our interests. Comprehensive international action to invest in

clean energy resources would prevent millions of dollars a day from flowing to Iran. Clearly we have a compelling security interest in aggressively pursuing energy independence.

Mr. Chairman, I thank you again for convening today's hearing and look forward to hearing from our witnesses.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

Mr. Doyle. I am waiving.

Mr. Markey. The gentleman will waive. His testimony will be added to the question period.

The chair does not see any other members seeking recognition at this time.

Mr. Upton. Mr. Chairman, I just might ask unanimous consent for those members who are not here that they might be able to put a statement into the record.

Mr. Markey. Without objection, so ordered.

We will now turn to our witness and while also making -- before that I will make a unanimous consent request that Mr. Latta and Mr. Murphy, both members of the full committee but not on the subcommittee, have asked for permission to participate in the witness questioning after each member of the subcommittee has completed their questioning. Without objection, so ordered.

Let's turn to our extremely distinguished witness, and we thank her for coming back to the Energy and Commerce Committee.

She is EPA Administrator Lisa Jackson. Before becoming EPA's Administrator, she served as Chief of Staff to the Governor of New Jersey and Commissioner of the State of New Jersey's Department of Environmental Protection. Ms. Jackson is a summa cum laude graduate of Tulane University in Louisiana and earned a Master's degree in chemical engineering from Princeton University.

We are delighted to welcome you back to the committee, Administrator Jackson. Whenever you feel comfortable, please begin.

STATEMENT OF THE HON. LISA P. JACKSON, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY

Ms. Jackson. Well, thank you. Chairman Markey and Chairman Waxman, Ranking Members Upton and Barton, Chairman Emeritus Dingell, and members of the committee, thank you for inviting me to testify about the Environmental Protection Agency's work to reduce America's oil dependence and greenhouse gas emissions. That work stems from two seminal events.

First, in April 2007, the U.S. Supreme Court concluded in Massachusetts v. EPA that the Clean Air Act's definition of air pollution includes greenhouse gases. The Court rejected then Administrator Johnson's refusal to determine whether that pollution for motor vehicles endangers public health or welfare.

In response to the Supreme Court's decision and based on the best available science and EPA's review of thousands of public comments, I found in December 2009 that motor vehicle greenhouse gas emissions do endanger Americans' health and welfare.

I am not alone in reaching that conclusion. Scientists of the 13 Federal agencies that make up the U.S. Global Change Research Program have reported that unchecked greenhouse gas emissions pose significant risk to the well-being of the American public. The National Academy of Sciences has stated that the climate is changing, that the changes are mainly caused by human

interference with the atmosphere, and that those changes will transform the environmental conditions on Earth unless countermeasures are taken.

The second pivotal event was the agreement President Obama announced in May 2009 between EPA, the Department of Transportation, the Nation's auto makers, America's auto workers and the State of California to seek harmonized, nationwide limits on the fuel consumption and greenhouse gas emissions of new cars and light trucks.

My endangerment finding in December satisfied the prerequisite in the Clean Air Act for establishing a greenhouse emission standard for cars and light trucks of model years 2012 through 2016. So I was able to issue that final standard earlier this month, on the same day that Secretary of Transportation Ray LaHood signed a final fuel efficiency standard for the same vehicles.

Using existing technologies, manufacturers can configure new cars and light trucks to satisfy both standards at the same time. And vehicles complying with the Federal standards will automatically comply with the greenhouse gas emissions standard established by California and adopted by 13 other States. This harmonized and nationally uniform program achieves the goals the President announced last May. Moreover, the EPA and DOT standards will reduce the lifetime oil use of recovered vehicles by more than 1.8 billion barrels. That will do away with more than a

billion barrels of imported oil, assuming the current ratio of domestic production to imports does not improve.

The standards also will eliminate more than 960 million metric tons of greenhouse gas pollution, but if Congress now nullified EPA's finding that greenhouse gas pollution endangers the American public, that action would remove the legal basis for a Federal greenhouse gas emissions standard for motor vehicles. Eliminating the EPA standard would forfeit one-quarter of the combined EPA, DOT program fuel savings and one-third of its greenhouse gas emissions cuts.

California and the other States that have adopted California's greenhouse gas emission standard would almost certainly respond by enforcing that standard within their jurisdictions, leaving the automobile industry without the nationwide uniformity that it has described as vital to its business.

I would like to mention one more action that EPA has taken to reduce America's oil dependence and greenhouse gas emissions.

In February I signed a final renewable fuel standard. It substantially increases the volume of renewable products, including cellulosic biofuel that refiners must blend into transportation fuel. EPA will implement the standard fully by the end of 2022. In that year alone the standard will decrease America's oil imports by $41.5 billion, and U.S. greenhouse gas emissions that year will be 138 million metric tons lower, thanks

to the standard.

EPA's recent work on vehicles and fuels shows that enhancing America's energy security and reducing America's greenhouse gas pollution are two sides of the same coin. The recent analysis by the Agency found that widespread deployment throughout the U.S. transportation sector of efficiency technologies and practices that exist today would cause the sector's oil use and greenhouse gas emissions in 2030 to be 25 to 40 percent lower than they otherwise would be. So while we have started addressing the twin challenges of oil dependence and greenhouse gas pollution, we clearly have the potential to go farther and accomplish more.

Thank you again for inviting me to testify. I would be happy to answer your questions.

[The prepared statement of Ms. Jackson follows:]

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Mr. Markey. We thank you very much for your testimony, and now we will turn to questions from the subcommittee members. The chair will recognize himself.

Isn't it true that the Supreme Court decision in Massachusetts v. EPA required the EPA to determine whether an endangerment finding should be made for global warming pollution from cars and trucks?

Ms. Jackson. Yes.

Mr. Markey. Isn't it also true that your predecessor in the Bush administration, Stephen Johnson, reviewed the science and approved a draft endangerment finding that found the global warming pollution endangers the public welfare?

Ms. Jackson. Yes, sir, that is true.

Mr. Markey. Isn't it true that the EPA's proposed endangerment finding made by Stephen Johnson was sent to the White House in December of 2007 and that the Bush administration's EPA also developed a regulatory framework for greenhouse gas emissions under the Clean Air Act?

Ms. Jackson. Yes, that has been established as true.

Mr. Markey. And isn't it true that the White House refused to even open EPA Administrator Johnson's e-mail? And isn't it true that nothing further happened until you conducted a review of the science and submitted your endangerment finding to the Obama White House, which actually opened the e-mail?

Ms. Jackson. That is true.

Mr. Markey. Now some critics have raised numerous questions about the accuracy of climate science over the last 6 months, including questions about whether the Himalayan glaciers will melt or whether the Amazon will dry out. Were any of these specific studies used to determine whether greenhouse gas pollution endangers public health and welfare in this country?

Ms. Jackson. No, because the endangerment finding was focused on impacts to this country and to the welfare and health of Americans. None of those two studies that you mentioned and the errors that were found in those reports impacted endangerment findings.

Mr. Markey. So give us a couple of key findings that you made relating to how changes and climate effect the United States that led to your decision.

Ms. Jackson. Certainly. Sea level rise, increased threats of droughts, changes in our climate that would have dramatic impacts on agriculture and productivity, increased severe weather impacts, and I think even the acidification issues that we heard earlier all factored into my determination of endangerment.

Mr. Markey. And so your decision was based upon the impact on the United America of America?

Ms. Jackson. That is correct, absolutely.

Mr. Markey. So whatever other information is out and being debated about the Himalayas or other parts of the world, that was

not what your findings relied upon?

Ms. Jackson. That is correct.

Mr. Markey. Now, could legislative efforts to overturn the endangerment finding also have the effect of overturning EPA's car and light truck standards that you just finalized with the Department of Transportation, the ones that are supported by Ford, General Motors, Chrysler, the United Auto Workers, and that also reduce the need for 2 million barrels of oil per day, could legislative efforts to overturn the endangerment finding legislatively impact that decision?

Ms. Jackson. Yes, I believe legislation that overturns the endangerment finding would certainly not only impact, but would nullify the regulations you mentioned because that finding of endangerment is the basis for those regulations.

Mr. Markey. So this agreement that you reached that everyone agreed upon would in fact be endangered by legislative action?

Ms. Jackson. Yes, I believe we would take what as we heard here many people think is a very good thing and was a victory for the environment and for our energy independence and our security and we would lose that victory, and in fact we would go back to where we were before, which was a nonuniform complex regulatory net that did not allow auto makers to move forward with certainty.

Mr. Markey. Now, let me ask one final question and that is what has been the response from the automotive industry to the merger of the provision in the 2007 law with the finding in

Massachusetts v. EPA and then this harmonization in terms of their response to their reinvention of the automobile and the competitiveness of our American auto industry? Could you talk a little bit about that and any misgivings you are hearing from the auto industry about moving in this direction?

Ms. Jackson. The auto industry has come a long way. I think they have now embraced the certainty that one national standard gives them for cars from 2012 to 2026, so much so that I am aware that they have written asking Congress not to overturn the endangerment finding because --

Mr. Markey. Can you say that again?

Ms. Jackson. They have written asking Congress to not entertain legislation to overturn the endangerment finding because it would strip them of the very regulatory certainty they now have. They have also begun pretty public ruminations about wanting to start the next phase, to do it again, to look at opportunities, and we have also seen industries outside the passenger auto sector look for the same kind of treatment, if you will.

Mr. Markey. So I think that is important for everyone to understand, that the United States automotive industry is asking that the endangerment finding not be overturned because it has created an investment environment that is making it possible for them to move forward very rapidly in creating new jobs here in America and becoming more competitive internationally.

I thank you.

Let me turn now and recognize the ranking member of the subcommittee, the gentleman from Michigan, Mr. Upton.

Mr. Upton. Thank you, Mr. Chairman. Administrator Jackson, I just want to on a different issue, just want to bring to your attention an issue that is very important to Michigan and had some attention this last week. I don't know if it is crossed your desk yet, but my district, Kalamazoo, Michigan, is home to one of the largest Superfund sites in the country, Kalamazoo River, which is the fourth largest contributor of PCBs into Lake Michigan. It was labeled a Superfund site some 20 years ago, thousands of hours of meetings and negotiations have been held between State and local folks, EPA and the two PRPs charged with funding the clean up. Last week, Friday, Lando Bassett, one of the PRPs, came to a bankruptcy settlement with DOJ that required them to pay only pennies on the dollar for their obligation of the cleanup.

I had been working very closely with Senator Levin, Senator Stabenow. We have been together shoulder to shoulder. We are preparing a letter that ought to be ready I hope by the end of the week to you trying to make sure that -- find out what timetable EPA might have to ensure that the cleanup continues as scheduled and the health and welfare of the folks in the watershed is not harmed any further.

I just want to bring that to your attention, and we look for your immediate response as quick as you can. I don't know if you

are personally aware of it or not, but it is a big issue in southwest Michigan.

Ms. Jackson. Yeah, I am happy to look into it and get back to you with an idea on cleanups there.

Mr. Upton. Great.

I just want to say we all want to reduce our reliance on foreign oil, for me particularly coming from auto State. I am a big supporter of the electric hybrids, and I have driven the new Chevy Volt. I have seen an number of different cars that are literally going to be in the showrooms this year, and I know that because of that and other reasons our electricity needs are going to grow by 30 to 40 percent in the next 20 years.

And I am a believer in basic economics, particularly supply and demand. And as we have increased demand like we are likely to have and we are going to need more supply, otherwise that price is going to go considerably up. But sadly what I see coming down the line is a reduction of supply, more regulations in lots of different ways. I don't believe that we have the science yet -- I am a big supporter of CCS, carbon capture, we will need more coal plants, clean coal, but we don't have the technology ready yet to impose that on not only existing but new power plants.

I am wondering how many -- I don't believe that EPA has approved any new coal -- has allowed any new permitting for new coal plants in the last year or two.

Ms. Jackson. The majority of the permitting actions for new

coal plants happen through the States and at the State level. I would say that the reason there has been such a bottleneck in new coal plant permitting is litigation and a shortage of capital. Those are the primary reasons. There are issues with permitting, the permits then result in litigation, and there is great uncertainty about when this country will move to price carbon. That effects the investments markets as well as --

Mr. Upton. They were also banking on this new technology, the CCS, to be in place, is that not right? Carbon capture?

Ms. Jackson. I wouldn't necessarily agree that that is the driver for the permit decisions. In fact there is absolutely no reason why a permit decision at that point would depend on CCS, although I join you in hoping that technology has great promise. I am sure you know the President has asked me to cochair a CCS task force to get 5 to 10 projects up and running in the next few years so that we can hopefully make it commercially available.

Mr. Upton. I just know as we look to try to meet these demands, 30 to 40 percent increase, and we are going to have to have more coal. We can't sit on our hands with that resource that is there. On the nuclear side I applauded the President breaking ground, I believe it was in Georgia, the two new reactors that he broke ground on back in February or early March, but I also know that we have to deal with Yucca Mountain. We have to deal with a high level of nuclear waste that has been zeroed out in their funding. And I also know as a supporter of renewables, wind and

solar we can talk a lot about it, but if we don't have the resources to hook them up to the grid it is no good, let alone to have the backup when the wind and the sun don't shine, as they say.

Ms. Jackson. Yes. The President has said that we need to invest in our traditional sources. We need to make sure that they are clean sources, so we also need to invest in the technologies like CCS that will address carbon pollution from coal, because coal is such a carbon intense fuel and has such high emissions.

But I think you are right, his actions and this administration's actions have demonstrated a willingness to embrace other forms of energy, including domestic sources. The only thing I might add is that I think just like the cars rule is really an efficiency program for passenger cars, there is a need for us to focus as we have done in the Recovery Act and other places on energy efficiency, on making sure that the average American becomes a miser for power because we will be competing for power in a world marketplace that also --

Mr. Markey. The gentleman's time has expired.

The chair recognizes the chairman of the full committee, Mr. Waxman.

The Chairman. Administrator Jackson, as I understand it, this tailpipe rule that you have issued earlier this month would save 1.8 billion barrels of oil; is that correct?

Ms. Jackson. That is right.

The Chairman. And I am thinking back over the last 30 years and I can't think of any law or regulation that has saved that much oil. Are you aware of any law or regulation that does so much to address our dependence on oil?

Ms. Jackson. No, not off the top of my head, sir.

The Chairman. My understanding is that permit requirements for stationary sources are triggered when a pollutant is subject to regulation under the Clean Air Act. So according to that interpretation you issued on March 29, 2010, this will occur for greenhouse gases on January 20, 2011, when the control requirements of the motor vehicle rule take effect and then they are binding on manufacturers; is that correct?

Ms. Jackson. That is correct.

The Chairman. Once motor vehicle rules are in effect next January, absent any action by the EPA, the Clean Air Act would require new or modified sources that emit more than 250 times of carbon dioxide per year to obtain a permit.

Ms. Jackson. Right, absent any action by EPA.

The Chairman. So in effect because of the Clean Air Act when you deal with the mobile sources, which is what the Supreme Court decision addressed, that would trigger requirements for stationary sources for carbon pollution. I believe we all agree that if EPA did not take further action and these requirements went into effect as is, it would be a significant problem. 250 tons is a reasonable threshold that generally captures only large industrial

and commercial sources, but when you are talking about greenhouse gases it would be numerous smaller sources that are not regulated now and I think shouldn't be regulated. I think this would be an unacceptable situation, but thanks to your actions, we don't actually face that situation.

Last fall you proposed a tailoring ruling to significantly narrow application of the permitting requirements to stationary sources of carbon pollution that would exclude these smaller sources. Can you update the committee on the status of that rulemaking?

Ms. Jackson. Yes, Mr. Chairman, the rule went through public comment. We received a large number of public comments and are in the process of finalizing a rule. As you mentioned, it is important for us to do that in order to give assurance to smaller, and I would go as far as to say mid-sized sources, that they are not, come next January, going to be subject to immediate regulation and in fact we have said just the opposite.

The Chairman. What would the tailoring rule require? What would you do?

Ms. Jackson. Right, it is not final. As we proposed it, it was a phase-in, it is a gradual phase-in of the larger sources, and I have given some hints as to what I believe will be in the final rule and I feel fairly comfortable saying that the final rule will include, come January, only those sources that are currently subject to Title 5 permitting for another pollutant to

look at greenhouse gas pollution and then later in the year perhaps an additional number of sources would be phased in, a small number of very large sources. We haven't given the threshold as to what that would be, but it is orders of magnitude higher than 250 tons, the idea being that this is a very slow, deliberate, measured approach with a regulatory community quite frankly that is quite used to.

The Chairman. Is it fair to say EPA does not intend to second the smaller sources to Clean Air Act permitting for greenhouse gases any sooner than 2016?

Ms. Jackson. That is absolutely true.

The Chairman. And just to be clear, these requirements can only apply to smaller sources in the future after EPA completed an additional rulemaking; isn't that correct?

Ms. Jackson. That is correct.

The Chairman. Now some argue that tailoring rule may be overturned in court with disastrous consequences. Is your general counsel comfortable with the legal status for this tailoring rule?

Ms. Jackson. Yes, sir.

The Chairman. Now even in the worse case scenario where the rule is overturned in court, wouldn't it take years before we could expect a final decision in the court?

Ms. Jackson. Yes, I am not a lawyer, but I think --

The Chairman. Clean Air Act cases typically take 3 to 5 years before a decision becomes final. It also seems highly

unlikely that the rule would remain in effect during any litigation. There would be a higher court to issue a stay. Petitioner would have to show a strong showing that he is likely to succeed on the merits and he would suffer irreparable injury absent a stay. It would be difficult to make this showing for a rule such as this that relieves burdens rather than imposing them. Is that what your lawyer has been saying?

Ms. Jackson. That is absolutely right.

The Chairman. And Mr. Chairman, in my view they are taking a common sense approach, it is an effective approach that will avoid scenarios that none of us want. If Congress enacts comprehensive energy and climate legislation this year as I hope we will do, it will resolve the issue, and there is ample time for Congress to act on this issue in the future if and when it becomes necessary.

Thank you, Mr. Chairman.

Mr. Markey. The chairman's time has expired.

The chair recognizes the ranking member of the full committee, Mr. Barton.

Mr. Barton. Thank you. Thank you, Mr. Chairman. We are trying to convert centimeters to inches down here.

Administrator Jackson, again thank you for being here. Are you familiar with the report that one of your employees Dr. Allen Karlin issued on the endangerment finding at the EPA?

Ms. Jackson. I am familiar with the work and his desire to have that put into the record.

Mr. Barton. Okay. Did you read his report or a summary of his report?

Ms. Jackson. I read some summaries of his report and ensured that my staff considered it as part of the comments.

Mr. Barton. So you are aware that at least one person at the EPA is scathing the concerns about whether at that time was a proposed endangerment finding. One of his concerns was that EPA didn't do any independent analysis of some of these studies that were used to justify the endangerment finding. Why not, why didn't the EPA try to verify some of this information that the finding is based upon?

Ms. Jackson. The majority of our work at EPA is done by looking at -- I am sorry, let me start again. The endangerment finding work primarily relied on peer review, our standard was that we wanted to look at peer reviewed work and we had in addition to external peer reviewers a Federal team of reviewers who were reviewing our work.

Mr. Barton. Some of the material apparently used were press releases. Is it standard operating procedure for the EPA to issue major findings based on a press release?

Ms. Jackson. I believe what you are referring to, Mr. Barton, is that subsequent we have come to find out that there have been some allegations made that there were press release information in studies. What we did was whenever someone raised any questions about either the IPCC data or any of the underlying

data, I made it clear to myself that we had obligation to investigate whether or not it changed the basis of the finding.

Mr. Barton. I am sure you are aware that there are e-mails between Dr. Karlin and his superior in which Dr. Karlin is asking his study be considered. One of the e-mail responses is you don't understand, the White House has already made its decision, stop sending -- stop working on this report. Are you aware of that e-mail?

Ms. Jackson. Yes, sir, we discussed that, remember, a while ago on a phone call, we talked about it.

Mr. Barton. So what is your response? He certainly was of the opinion that the conclusion had already been made that there really wasn't any real effort to do an analysis of the endangerment finding. And you have admitted -- or your agency didn't do any independent studies, that you took at face value the material that was basically put out by the advocates were man-made greenhouse gases causing climate change.

Ms. Jackson. No, sir, I don't agree with that assertion. The Agency's endangerment finding was based on thoroughly reviewed material by a number of scientific organizations. Mr. Karlin's and the e-mail changes we discussed. I don't know why his supervisor wrote what he wrote. He has been counseled, I did not personally do it.

Mr. Barton. Counseled not to tell the truth, he has been counseled to keep his mouth shut? What has he been counseled to

do?

Ms. Jackson. He has been counseled not to make assertions that aren't factual. The endangerment finding that was begun under the Bush administration -- this was years and years of work inside the Agency and Dr. Karlin's advocacy extended back into those days as well. The fact that he had an opinion should not have been shut down because someone asserted that the White House wanted --

Mr. Barton. Dr. Karlin's opinion was that the EPA should actually do what it is supposed to do, which is try to independently evaluate, which has not happened.

Now you mentioned in response to a question from Chairman Markey that one of the reasons that the endangerment finding was put forward was because of a rise in sea level. Do you know what the sea level rise has been in the last 100 years in the United States?

Ms. Jackson. I am sure you have it, sir.

Mr. Barton. I do. Would you want to make a guess?

Ms. Jackson. I don't see a reason to guess.

Mr. Barton. It is 20 centimeters. 20 centimeters. Do you know what the EPA estimates the reduction in sea level rise is going to be in the next 90 years because of your tailpipe standard that you have been talking about with Mr. Waxman and Mr. Markey? Do you have any idea what --

Ms. Jackson. I actually never thought of it in terms of a

reduction in sea level rise. We talk about it in terms of greenhouse gas emissions.

Mr. Barton. Well, you said one of the reasons you issued an endangerment finding was because of rising sea level, where according to your own EPA scientists this tailpipe standard that you all talked about is going to reduce sea level rise over the next 9 years between 600ths to 1400ths of a centimeter. Now how in the world can sea level rise be used as an excuse for an endangerment to public health?

Ms. Jackson. I am afraid that --

Mr. Barton. I am just going on what you said, Madam Administrator.

Ms. Jackson. Yes, but what we did in the rule that you are referring to is come up with a rule that reduces our dependence on oil, that says we can drive cars that are more fuel efficient and that put out less greenhouse gas pollution. That is what the law requires.

Mr. Barton. My time has expired. Mr. Markey is being very gracious. Let me ask one more question, Mr. Chairman.

If in fact the endangerment finding is shown to be flawed and is thrown out, is it not true that you cannot regulate CO2 under the Clean Air Act if you don't have the endangerment finding to give you the authority to do so?

Ms. Jackson. There were a lot of nots in there, so let me make sure that I understand the question. If the endangerment

finding is thrown out or in some way nullified, then the basis for the automobile rule --

Mr. Barton. No, ma'am, the endangerment finding to regulate CO2 as a pollutant is -- the EPA does not have the authority unless you have an endangerment finding giving you that authority.

Ms. Jackson. Right, the endangerment finding is not a regulation but it is the basis for regulation of automobiles.

Mr. Barton. Yes, ma'am. And if we don't have the endangerment finding -- not you but the EPA does not have the authority to regulate CO2 as a pollutant, do you agree with that?

Ms. Jackson. Right. If we don't have the endangerment finding, we lose the clean car rule, so it is gone, we lose any authority to regulate greenhouse gas emissions from motor vehicles.

Mr. Barton. Thank you, Mr. Chairman. We will have a number of questions for the record.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Michigan, the chairman emeritus.

Mr. Dingell. Thank you, Mr. Chairman. Thank you, Administrator, welcome to the committee.

Am I correct in understanding that the endangerment finding is a legal underpinning for the national standard for automobile emissions?

Ms. Jackson. Yes.

Mr. Dingell. Now, what would happen to the national standard for autos if the Congress passed a resolution of disapproval of the endangerment finding?

Ms. Jackson. The legal underpinning would then be gone and so I think that there would be no way to withstand any challenge to the legality of those regulations.

Mr. Dingell. Now, what would be the practical consequences of that with regard to moving sources and what would be the practical consequence of that with regard to stationary sources?

Ms. Jackson. With regard to moving sources the regulation would then be void. So we would go back to a situation where California would have the authority along with other States who opted in to regulate emissions from automobiles, and the Department of Transportation and NHTSA would do CAFE standards probably in accordance with ISSA and as far as stationary sources there would be no EPA authority to regulate stationary sources.

Mr. Dingell. There would be none.

Ms. Jackson. I believe.

Mr. Dingell. Is there authority now to regulate stationary sources or is there not?

Ms. Jackson. There is actually an obligation to -- our reading of the Clean Air Act says there is an obligation to regulate stationary sources.

Mr. Dingell. With regard to CO2?

Ms. Jackson. Yes. Once it became a pollutant and was

regulated and found to endanger public health and welfare, the Clean Air Act says now other portions of the Clean Air Act apply.

Mr. Dingell. Now this is a result also of the Supreme Court's decision in finding an endangerment; is that right?

Ms. Jackson. Yeah, the Supreme Court's order that the EPA make a determination.

Mr. Dingell. Now what is the practical result to stationary sources if this resolution disapproval passes the Congress?

Ms. Jackson. The practical result to stationary sources, sir, would be that EPA regular -- I believe, I am not a lawyer, I believe EPA would not be able to regular -- would not be able to regulate stationary sources any more than mobile sources.

Mr. Dingell. So how many different regulatory standards would be imposed on, first of all, stationary sources, but under what requirements of law?

Ms. Jackson. Well, certainly and again not being a lawyer, but certainly we have already seen individual States who in some way are regulating greenhouse gas emissions --

Mr. Dingell. Would they be regulated under which provisions of the law, would they be regulated under the State implementation plans, would they be regulated under some other section? What would be the practical effect in terms of the number of different regulations of the State rather than the stationary sources would have to meet?

Ms. Jackson. With the caveat that I will make sure I get an

answer from my lawyers, I am aware that States right now have their own State laws.

Mr. Dingell. But the potential is for how many different -- how many different sets of regulations that they would have to correspond to, it would have to do State implementation?

Ms. Jackson. Uh-huh.

Mr. Dingell. Would there be other requirements that the States under the Clean Air Act would have to meet?

Ms. Jackson. There could be individual State level -- we are assuming the endangerment finding is gone. So the Clean Air Act authorities for CO2 may not be available, but many States are already regulating under their own laws and other entities are feeling the effects of litigation under nuisance laws, under common law.

Mr. Dingell. How many regulations would the auto industry have to meet in the moving sources?

Ms. Jackson. Oh, potentially 50 or more. Right now 13 States had joined with California to have their own regulations.

Mr. Dingell. Now the agreements with California and the other States that are there now held by the administration expires just prior to 2017; is that right?

Ms. Jackson. That is right, it is through model year 20 --

Mr. Dingell. Are there any negotiations going to see to it that we have the same national standard approach going forward for post 2017?

Ms. Jackson. I think it would be a stretch to say they are in at this time, but there has been expressions of interest from auto makers to begin having discussions.

Mr. Dingell. You are telling us that there are no negotiations going on under the auspices of the administration or EPA? And can you tell us why that is not taking place? You have to look forward to 2017, which is just a few years off.

Ms. Jackson. Yes. I think it is probably just a matter of time that we have not yet.

Mr. Dingell. Well, let me remind you that the law -- rather, the automobiles are manufactured with a 3, 4 and 5-year lead time. So if I seek correct you only have a year or so before you are running into a serious collision with that lead time. When do you propose to start these things?

Ms. Jackson. I think we need to do it soon, sir. So I will get back to you with when we can commit to looking at 2017.

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[11:28 a.m.]

Mr. Dingell. So are you telling me that you propose to go back on down to EPA and to start looking into that and see what you can do about getting these negotiations going.

Ms. Jackson. Yes, sir.

Mr. Dingell. Thank you.

Thank you, Mr. Chairman.

Mr. Markey. The gentleman's time has expired.

The chair has three letters from the Alliance of Auto Manufactures, the International Auto Alliance, and the United Auto Workers, all saying they do not want the endangerment finding to be overturned. I ask unanimous consent that these letters be submitted for the record.

Without objection, so ordered.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Markey. The chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. Shimkus. Thank you, Mr. Chairman.

Welcome, Administrator. A couple things.

Let's be clear: When we say price carbon, we mean energy costs increase, correct? If 50 percent of our electricity portfolio is coal, we are adding an additional cost to electricity if we price carbon, correct?

Ms. Jackson. And it depends how it is done, as to whether or not that is a small --

Mr. Shimkus. Well, if we try to manage it, we have capital expenses, which then will incur millions of dollars of new equipment. Or we go to carbon capture sequestration, which is 10 years down the road. That is all addition of cost. So let's be clear: When people say price carbon, they mean increased cost.

Let me refer to this poster here. I have used it many times. My colleagues can all name these individuals. This is what happened under the last Clean Air Act amendments, which I think you can credibly argue had toxic emissions. Fourteen thousand jobs in Illinois, coal miner jobs, were lost, in Illinois alone, not including what happened in Ohio and Pennsylvania or across this country. Pricing carbon destroys jobs, not just in the coal mining industry, in the electricity industry and in the manufacturing industry, because you will increase cost of doing

goods.

That is why we are now segueing from the climate debate to energy and security, because with the failed IPCC rulings, with climate-gate, with the fact that scientists are not using the scientific method to replicate these tests, when we are talking about the Supreme Court ruling, the endangerment finding cannot stand on factual evidence.

In fact, my colleague, Mr. Inslee, is just a perfect example of using tests that can't be replicated in the natural environment, because the test that he is quoting is a test that is a synthetic reproduction using unnatural factors and variables. In fact, CO2 was not even the substance to lower the pH in these samples. What was used was hydrochloric acid.

So what would help the world address climate is that we would agree to use real science, real data that the public can perceive that can be replicated in a real-world environment. We are not using the scientific method. That is why now the public is skeptical on this whole issue of climate change.

Administrator, what is the percent of the Earth's atmosphere that greenhouse gases make up?

Ms. Jackson. It depends on how you define "greenhouse gases," sir.

Mr. Shimkus. Well, okay, you define it.

Ms. Jackson. Well, EPA's endangerment finding includes six gases.

Mr. Shimkus. Well, what is the percentage?

Ms. Jackson. You know, I have some --

Mr. Shimkus. It is 2. Two percent of the entire Earth's atmosphere is greenhouse gases.

Now, you know what is the major percentage of what makes up greenhouse gases in the Earth's atmosphere?

Ms. Jackson. I am thinking --

Mr. Shimkus. Water vapor.

Ms. Jackson. -- water vapor.

Mr. Shimkus. Do you know what percentage?

Ms. Jackson. Thirty percent maybe?

Mr. Shimkus. A little higher.

Ms. Jackson. No, I am not going to guess. Why don't you tell me?

Mr. Shimkus. Ninety-five percent, 95 percent.

So, of the 2 percent of greenhouse gases that are in the atmosphere, do you know how much is man-made greenhouse gases, which is what we are trying to say is endangering the public health?

Mr. Doyle. Will the gentleman yield?

Mr. Shimkus. It is 2 -- no, I will not. It is 2 percent of 2 percent. It is 0.28 percent of the entire Earth's atmosphere is what we are debating here.

Now, let me ask you another question. The endangerment finding says "endangering public health." At what concentration

does carbon dioxide endanger individual public health?

Ms. Jackson. Well, we are not talking about what you breathe in that makes you sick. We are talking about concentrations of anthropogenic carbon dioxide.

Mr. Shimkus. And define "anthropogenic."

Ms. Jackson. Man-made.

Mr. Shimkus. And that is 0.28 of the Earth's atmosphere?

Ms. Jackson. But we are talking --

Mr. Shimkus. Yes or no? Is that 0.28 percent of the Earth's atmosphere?

Ms. Jackson. I don't know. I will certainly verify. It is a very low number volumetrically, but --

Mr. Shimkus. It is extremely low.

Ms. Jackson. -- it is not low from a global warming perspective.

Mr. Shimkus. Do you know the frustrating thing about this debate? We keep using tonnage to say -- and people think of tons, and they say, "Oh, we are overwhelmed by the tons." And we are talking about 0.28 percent of the atmosphere.

Ms. Jackson. What we are talking about --

Mr. Shimkus. OSHA has a standard where parts per million affects public health. Do you know what that standard is?

Ms. Jackson. It has to be fairly high.

Mr. Shimkus. Five thousand parts per million. What is the parts per million in the Earth's atmosphere of greenhouse gases?

Ms. Jackson. It is 300 or so.

Mr. Shimkus. Three hundred forty-eight percent.

This is a fraud being perpetrated on the world that is going to destroy jobs on a false premise that carbon dioxide is going to wipe out the Earth's planet. And the public is on to this, and I am embarrassed by this administration to continue to push it.

Mr. Doyle. Will the gentleman yield?

Mr. Shimkus. I will not. I yield back the balance of my time.

Mr. Markey. The gentleman's time --

Ms. Jackson. Could I respond, Mr. Chairman?

Mr. Markey. Yes, you may.

Ms. Jackson. Thank you.

I disagree with the premise of your analysis, sir. I am certainly not a climate scientist by training, but the volume of material in the atmosphere is a misleading statistic. What we are talking about is balance, is the simplest way I can explain it. That the atmosphere -- may I finish, please?

Mr. Shimkus. I haven't intervened yet, but --

Ms. Jackson. -- the atmosphere is in balance. And we keep putting these gases, which have the potential to act as they do in a greenhouse -- CO2 is very warming. It may not be much of the volume of the atmosphere, but its potential to warm the atmosphere, to change our climate is much, much higher than its volume in the atmosphere, probably 25 or 30 percent.

And so, the analysis you are talking about is -- to look at the volume and simply say it is not there is to ignore its effect. And it is not simply EPA or Lisa Jackson who is saying that. I mean, you know, the scientists in our country -- we have to work by consensus. It doesn't mean there might not be some disagreement, but the overwhelming consensus is that climate change is happening, and it is due to man's impact through the fact that we are burning fossil fuels and we are accumulating vast amounts of greenhouse gas potentials.

Mr. Shimkus. So you agree with the hockey stick calculation of the tipping point of greenhouse gases?

Mr. Markey. The gentleman's time has expired.

Mr. Shimkus. Can she follow up? You gave her time to respond to me. Can she follow up to my question?

Mr. Markey. She was answering your question, and I felt --

Mr. Shimkus. Does she subscribe to the hockey stick?

Mr. Markey. -- I felt that I would provide her --

Mr. Shimkus. The one that you brought out here numerous times, this hockey stick graph? Is that valid science?

Mr. Markey. To the gentleman, you asked her a question.

Mr. Shimkus. She responded.

Mr. Markey. The time expired. She asked if she could respond to your question.

Mr. Shimkus. All right. Thank you, Mr. Chairman.

Mr. Markey. I was only doing it really as a courtesy to

you so that --

Mr. Shimkus. I am just asking if she still supports the hockey stick graph.

Mr. Markey. -- so that your answer to the question --

Mr. Shimkus. Do you support the hockey stick graph?

Mr. Markey. It is obviously --

Mr. Shimkus. Do you know what the hockey stick graph is?

Mr. Markey. I guess what the gentleman is trying to say is, how can only a 2 percent addition to the atmosphere cause such a huge change? And it would be like saying, how can -- what if subprime loans were only 2 percent?

Mr. Shimkus. What I am trying to say is the science is flawed, and we are going to destroy jobs. That is what I am saying.

Mr. Markey. If subprime loans were only 2 percent of the total financial products in the world, could they cause a global financial meltdown?

Mr. Shimkus. Two percent of 2 percent of 2 percent.

Mr. Markey. Yet that is a financial reality, as is this a scientific reality.

The gentleman's time has expired.

The chair recognizes the -- I know the gentleman from Pennsylvania would like to be recognized as this time, but that could only happen with the generosity and beneficence of the gentlemen from Texas and California.

I recognize the gentleman from Texas.

Mr. Green. Okay. Thank you, Mr. Chairman. And I will try and be as quick as we can.

Madam Administrator, I want to thank you again for appearing this morning.

And I have always believed that a balanced energy policy must have three basic points: energy conservation and efficiency, research and development in new and clean energy technologies, and environmentally responsible domestic energy production.

However, Administrator, even with these measures to increase efficiency that we in Congress push and your agency works to promote on a daily basis, do you believe it is still necessary to increase the environmentally responsive production of domestic natural gas supplies in order to meet short-term carbon reduction targets called for in any climate and to keep our manufacturing jobs here in the United States?

Ms. Jackson. It is not my job to set that kind of policy; obviously, it is all of you. But I can say that, certainly, natural gas has a lower carbon emission factor intensity and could certainly be very helpful, especially now that we are finding that we have more of a supply than we knew we had.

Mr. Green. I appreciate that. In fact, in the last few years, because you and I have talked about the kind of area I represent where we produce and refine and have chemical industries, and we have seen such a difference because of the

success in expanding our long-term ability to produce domestic natural gas.

On a similar subject, the Energy Information Administration estimates that there is 1,744 trillion cubic feet of technically recoverable natural gas in the U.S., or enough to supply our country for 90 years at current rates of production, according to the industry. Much of it can only be recovered when we use hydrofracking for wells.

In 2004, an EPA study found no evidence that fracking threatens drinking water. And now, for the first time, the EPA has undertaken its own water analysis in response to complaints of contamination in drilling areas. I look forward to the results of your study. And I am confident hopefully you will reach the same conclusion as 2004, and hope that we can come back to discussion your findings in 2012.

In the meantime, can you assure me that the EPA will not make any moves to regulate hydrofracking until you have completed your study?

Ms. Jackson. As I understand it, sir, we couldn't because it would probably require a change in law of some type.

Mr. Green. Okay. Thank you.

Mr. Chairman, my last question, and I will give you some time back, I hope.

The EPA recently finalized a rule to implement the long-term renewable fuel standard by Congress under the Energy Independence

and Security Act. The renewable fuel standard requires biofuels production to grow from 11.1 billion gallons in 2008 to 36 billion gallons in 2022. However, it is my understanding that refiners are having difficulty meeting these targets due to various factors, but mainly the feasibility of reaching target X by X time.

Please discuss how the EPA plans to work with refiners to be able to resolve these issues. I have long advocated for, rather than setting these targets for years, to instead have the EPA study the issue for a few years and ensure that the targets are feasible and realistic. Does EPA have a plan, since we can't meet that target, on how we can actually still produce fuel to run our vehicles?

Ms. Jackson. Right. So, under the Energy Independence and Security Act, EPA has many responsibilities. One of them is to set the target numbers based on supply that is actually out there. I think you are referring to cellulosic ethanol and the fact that this year, in setting the target, EPA lowered it dramatically because there really isn't supply out there. So it would be unfair to ask refiners to try to meet it.

Mr. Green. Yeah.

Ms. Jackson. We are closely monitoring that. That is what the law requires us to do, to set those targets as production increases. And we work with sort of a cross-section of the industry on both sides, the refinery side and the producing side,

to try to -- and of course we work with the Department of Energy to set those numbers. And we will continue to do that, sir.

Mr. Green. Okay. Well, and I support expansion of research in cellulosic. In fact, one of my frustrations, Mr. Chairman, is we don't have the jurisdiction over the tax incentives for biofuels. But if we ever do that extender, I actually have biofuel refineries that are shut down because they can't economically do it without those tax extenders. And so I appreciate the -- we will continue to work on that to help get that product there for us.

Mr. Markey. Will the gentleman yield?

Mr. Green. I will be glad to yield to my colleague from Pennsylvania.

Mr. Doyle. Thank you.

And, Mr. Chairman, I was trying to engage my good friend, Mr. Shimkus.

I was just wondering, Mr. Chairman, if you know what percent of your blood is made of platelets.

Mr. Markey. No, I don't.

Mr. Doyle. About 3 to 7 percent of all our blood cells. Yet, you know, without that 3 percent, a small cut would cause you to bleed to death. Did you know that, Mr. Chairman?

Mr. Markey. I know I could bleed to death, but I didn't realize it was from such a small percentage of my body could cause such a dramatic change in my overall wellbeing.

Mr. Doyle. Mr. Chairman, did you know that each member of the Energy and Commerce Committee represents only 2 percent of our collective wisdom?

Mr. Markey. That is a very high number, though.

Mr. Doyle. That is a very high number, yeah.

I yield back, Mr. Chairman.

Mr. Markey. I thank the gentleman.

The chair recognizes the gentleman from Texas, Mr. Burgess.

Mr. Burgess. Administrator Jackson, I think in response to some questions from Ranking Member Barton you cited the criteria used in the endangerment finding of acidification of the oceans, agriculture production, and increased weather. Do I recall that correctly?

Ms. Jackson. Those are some of the criteria I listed.

Mr. Burgess. But really, for an endangerment finding, aren't we required to see an effect on human health?

Ms. Jackson. It is public health and welfare. There were two standards.

Mr. Burgess. Can you give me an idea of the number of deaths in this country, either last year or the year before, the outsize number, that would occur because of the increased acidification of the oceans in those years?

Ms. Jackson. Well, I don't think we made an assertion that there were deaths associated with increased ocean acidification last year, so I shouldn't have to defend a number. We never --

Mr. Burgess. But for there to be an endangerment finding, though, there should be human endangerment.

Ms. Jackson. But that is not the only criteria by which to make that determination, sir.

Mr. Burgess. Well, what is the amount of carbon dioxide that is safe?

Ms. Jackson. Well, it depends on what you mean by "safe," sir. People have talked about a level in the atmosphere; I have heard 350 parts per million, I have heard 400, 450. Scientists use very complex models to try to determine, as that percentage of CO2 increases and CO2 equivalents increases, what that would mean for rising sea levels, what that might mean for changes in our climate. So they try to work backwards to project what level --

Mr. Burgess. If I could just stop you there for a minute. OSHA has a level of 5,000 parts per million, or half of 1 percent, as being an acceptable level. NIOSH says 30 parts per million, though I don't know that anyone actually recommends that. So there is a wide degree of latitude amongst the Federal agencies of the level of carbon dioxide which actually causes damage to human health.

Ms. Jackson. Well, that is apples and oranges, sir. I think the ocean numbers you are looking at are what you could breathe in if you are being occupationally exposed on a short-term basis. Those are probably cell numbers that would make you not able to breathe and, therefore, might harm you permanently and might kill

you. Whereas, what I was referring to when we deal with climate change is what numbers would try to stop the trajectory in the changes in our atmosphere.

Mr. Burgess. Well, maybe then you could help us by saying what does the EPA use to assess the health impacts of, say, carbon dioxide -- and any of the other greenhouse gases, but carbon dioxide since that is the one we are talking about.

Ms. Jackson. Right. EPA did not set a health level per se or an ambient air quality standard. What EPA did was look at what projections of the changing climate would mean on things like diseases that are carried by insects that might now be able to thrive in an environment where once there was winter weather that might kill them off, or exacerbation of impacts that are weather-dependent. So a great example is smog or ground-level ozone, which on warmer days is much, much worse for you and your lungs and causes increased morbidity and --

Mr. Burgess. Okay. Well, let's go to the vector-borne diseases, since you brought that up. Does the EPA have any peer-reviewed procedures that it uses for assessing the threat from vector-borne diseases?

Ms. Jackson. What EPA did was use the studies, peer-reviewed studies, by those who for a living study vector-borne diseases and the incidence and potential incidence of those increasing.

Mr. Burgess. And from a numbers standpoint, what is the impact on human health that we are likely to see?

Ms. Jackson. Yeah, so I think maybe -- the endangerment finding is -- think of it as a weight of evidence, that all these things move together, but there are no numbers of people who are going to die from vector-borne. There is a belief that it will increase, and that will endanger public health, endanger public welfare.

Mr. Burgess. Well, let me ask you this. What if the Earth were warming but it wasn't humans that were causing it, it wasn't human-made carbon dioxide, but the Earth were warming and these diseases would increase because of the increase in the vector-borne component? Would there be anything we could do about that? Would there be mitigating factors that we could bring into play?

And the answer is, of course we could. I mean, none of this stuff happens in a vacuum. The fact that we might have more mosquitos because the weather is warmer doesn't mean that we don't have anything else to use to impact that event. Is that correct?

Ms. Jackson. Certainly. But that wasn't the question we were answering in the endangerment finding. We were asked whether the pollution from greenhouse gases would change our climate; and, if so, whether those changes endanger public health and welfare.

Mr. Burgess. Okay, good.

Ms. Jackson. And the answer was an affirmative yes. And --

Mr. Burgess. Great. Well, then how many people have died from the effects of elevated carbon dioxide in the last decade?

Ms. Jackson. Again, you don't have to have a number of people who have died in order to make a finding of endangerment. If I tell you that it is dangerous to jump off a cliff, you don't have to actually do it to know that that is a dangerous thing. It was a finding --

Mr. Burgess. No, because somebody else has already done the experiment and proved the theorem. But can you tell how many additional cardiovascular asthma deaths are linked to carbon dioxide increases of 100 parts per million in the atmosphere?

Ms. Jackson. I think I have explained to you why that is not the analytical approach that was taken. We took the weight of evidence approach, as scientists have done.

Mr. Burgess. Are you at the EPA doing research on this front currently?

Ms. Jackson. We do some of our own research. EPA's Office of Research and Development has contributed three reports to the U.S. Global Change program. But we also rely on our partners and on the peer-reviewed work of scientists.

Mr. Burgess. And what are the results of those?

Ms. Jackson. The endangerment finding is based on that work, sir.

Mr. Burgess. But you cannot provide us with numbers of how many people have actually been endangered.

What about how many people died as a result of a 1 degree Fahrenheit temperature rise over the last 100 years?

Ms. Jackson. I understand your point, but I think we are talking past each other at this point. You know, I can probably quote what other scientists say: that the evidence is that ongoing climate change will have broad impacts on society, including the global economy and the environment.

For the United States, climate change impacts include sea level rise for coastal States, greater threats of extreme weather events, increased risks of water scarcity, urban heatwaves, western wildfires, disturbance of biological systems throughout the country.

And I would add to that the issue of ocean acidification, which is certainly not --

Mr. Burgess. Can you quantity the number of human deaths, then, from any one of those instances that you just cited?

Ms. Jackson. The endangerment finding is based on the premise and the belief and, I believe, the scientific fact that the severity of climate change impacts will impact negatively public health and welfare. And scientists agree that that severity is going to increase over time.

Mr. Burgess. Then how can you be convinced, as a matter of science, that you will be able to reduce the public health risks, and hence the number of deaths, from carbon dioxide when you can't quantify those specific impacts?

Ms. Jackson. Well, I am convinced of the inverse, which is that, as the models show that increasing amounts of emissions of

greenhouse gases are going to change the climate, that mitigation is one method, mitigation of those emissions is one method of addressing --

Mr. Burgess. Mr. Chairman, I have several more questions along this line. I would just like to submit those in writing for the record, if the chairman will permit.

Mr. Markey. The questions will be submitted in writing, and we would ask the administrator to respond in writing to the gentleman from Texas.

Mr. Burgess. Thank you.

Mr. Markey. We thank the administrator.

The chair recognizes the gentlelady from California, Mrs. Capps.

Mrs. Capps. Thank you, Mr. Chairman.

Administrator Jackson, thank you for your patience.

And we have heard some of our colleagues today question whether the science of global warming is sound. In particular, some of my colleagues allege that e-mails hacked from the Climate Research Unit at East Anglia University cast doubt on the entire scientific field.

I want to ask you if you have seen the report by the British House of Commons Science and Technology Committee, which, and I quote, "found no reason in this unfortunate episode to challenge the scientific consensus that global warming is happening and that it is induced by human activity," end quote; and the report of the

independent Scientific Assessment Panel, which concluded that, and I quote, "We saw no evidence of any deliberate scientific malpractice in any of the work of the Climate Research Unit, and, had it been there, we believe that it is likely that we would have detected it"; and, also, the Penn State report clearing Michael Mann, one of its scientists, of any misconduct.

Ms. Jackson. I have seen both.

Mrs. Capps. Thank you.

Mr. Chairman, I would like to put all of these reports into the record, if I may.

Mr. Markey. Without objection, so ordered.

Mr. Burgess. Mr. Chairman?

Mrs. Capps. I have them right here, the scientific reports.

Mr. Markey. Okay, we will withhold. I will make the unanimous consent request, if the gentleman from Texas would like to look at them, and we could then make the unanimous consent request subsequent.

Why don't we just hold right now? If you could continue with your questions, and we will add back 30 seconds.

Mrs. Capps. All right. Thank you very much.

My next question: Have you seen the statements by Working Group One of the Intergovernmental Panel on Climate Change, the University Corporation on Atmospheric Research, the American Geophysical Union, the American Association for the Advancement of Science, the American Meteorological Society, and the Geological

Society of America, all of which were issued after the hacked e-mails and all of which reaffirm the scientific basis for the threat of climate change? Have you seen these?

Ms. Jackson. I believe have seen them.

Mrs. Capps. Thank you.

I would like to enter all of those statements, as well, into the record. And, unfortunately, I don't have copies of them today.

Mr. Chairman, may I have your consent to enter these records that I have just mentioned into the record today?

Mr. Markey. The chair was distracted. Would the gentlelady make her inquiry again?

Mrs. Capps. I asked the Secretary -- and I don't want to belabor her time. The various statements which I have just enunciated, if they could be entered into the record in the same way.

Mr. Markey. Great. Without objection, so ordered.

[The information follows:]

******** COMMITTEE INSERT ********

Mrs. Capps. So, Administrator Jackson, in light of all of these statements from independent assessments and scientific societies, do you believe that it is safe to say that these e-mails do not in any way undermine the scientific basis of global climate change?

Ms. Jackson. Yes.

Mrs. Capps. Thank you.

And now that we have made the facts on the science clear, I would like to ask some questions about public health and climate change. And, as you know, I am a public health nurse, and the connection between our health and climate change is a subject I care deeply about.

I have introduced legislation that would help the American public adapt to the public health impacts of climate change, and it was included in the House-passed energy bill.

I wondered if you would list briefly, if you can, some of the most important investments that you are considering which would ensure that we promote and protect public health by reducing oil dependence.

Ms. Jackson. Well, certainly. You know, cars and the burning of oil create pollution, not only climate pollution but certainly pollution as well. In fact, one of the, you know, greatest legacies of the Clean Air Act are the reduction in NOX and SO2 pollution and particulate pollution through the Clean Air

Act. And huge impacts on public health -- in fact, 13 to 1, $13 of benefits in terms of public health to $1 spent.

So my belief is that, while I am certainly not arguing that any one action can achieve all we need, we can see tremendous improvement in public health.

Mrs. Capps. And so there are the monitoring and planning and infrastructure education opportunities that have already been in the Clean Air Act that you can adapt and use again, continuously use. Is that what your Department is doing?

Ms. Jackson. Yes. And we are not using all the pieces of the Clean Air Act, but certainly bringing Clean Air Act regulations to bear.

Mrs. Capps. Thank you.

I just have a couple seconds left. Let me ask you how EPA is working with other Federal agencies to align policies in order to reduce oil dependence.

Ms. Jackson. Well, all of our work -- the work on the cars rule was, you know, closely coordinated with the Department of Transportation. But we work very closely with the Department of Energy, with NOAA, with Interior and Agriculture -- all of them, by the way, who sat and agreed on the endangerment finding. So all of the work we do is through an interagency process that coordinates our work together.

Mrs. Capps. Thank you very much.

I yield back.

Mr. Markey. The gentlelady's time has expired.

And we will ensure that the gentleman from Texas sees the scientific data that the gentlelady has. As a matter of course --

Mr. Burgess. Mr. Chairman, if I might, just with the stipulation and the understanding that in the record that is a limited and provisional report and not the final report that has been prepared, as I understand it. I am okay with it being inserted as long as there is the captioning that it is a preliminary and limited report.

Mr. Markey. I think that is how -- would the gentlelady from California -- is that described as a provisional report? It is not a final report?

Well, let me just say, in general, let's just -- on the second panel, there is a witness whose conclusions I do not agree with. And I am sure that that witness is going to make a unanimous consent request that all of his analysis be put in the record. I will accede to that. It will go into the record, but it will be associated with that witness, as any of these reports are identified with the Member who is asking them to be inserted in the record at that point.

So it is not an endorsement by the committee of any of the materials which are put in the record. It is just a further extension of the remarks and the information which that Member wishes to have included in the record. And that is just something that we do and we honor as a matter of course on this committee as

part of a courtesy to any Member that has information which they would like to have included. But it is then up to each individual Member to make their determination as to what weight they wish to attach to it.

Mr. Burgess. Thank you, Mr. Chairman. With that clear and coherent description, I will withdraw my objection. But thank you for providing the information.

Mr. Markey. No, I thank the gentleman.

And, without objection, the gentlelady's information will be included in the record.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Markey. And the chair will recognize the gentleman from Louisiana, Mr. Scalise.

Mr. Scalise. Thank you, Mr. Chairman.

Administrator Jackson, a couple of weeks ago, I think you were in New Orleans talking to a group and were talking about how regulations and rules that your agency issues help create jobs. Can you expand upon what you meant with that?

Ms. Jackson. I am happy to, but first I have to say "Who Dat," right?

Mr. Scalise. "Who Dat."

Ms. Jackson. All right.

What I was explaining is that the Clean Air Act -- and cars are a perfect example. The catalytic converter is a home-grown technology, a home-manufactured technology -- we exported it to the world -- to deal with pollution, non-CO2 pollution but pollution from car exhaust. It is true of scrubbers or flue gas desulfurization units.

So what I said was that we have a whole sector of our economy that is built around making sure we have clean air and clean water and our public health is protected and environmental health is protected.

Mr. Scalise. Right. Is there an acknowledgement that some of those rules actually cost us jobs? Many companies who are operating by all the rules and doing things the right way, every

time rules come out, it changes the way that they have to do business; people who aren't doing anything to hurt public health, but just people who then become burdened with new Federal rules and regulations that cost them money or, in some cases, have caused them to shift jobs overseas, lots of jobs over seas.

So, while you might think that the rules create jobs, I would hope you recognize that some of those rules cost our country jobs at the same time.

Ms. Jackson. I would certainly stipulate that rules are not free, that they have a cost to them, that we have to invest in having clean air, that we have to invest in having clean water. And that one of the things the laws of our country have said is that the American people demand that, that we could grow without any restrictions on pollution. And, certainly, I consider it a part of my job to ensure that the rules we put in place are --

Mr. Scalise. But some of this goes beyond pollution, and hopefully I can have time to get into some of that. But right now your agency has a contest going on where, on your Web site, you claim that you are going to award $2,500 to somebody who makes a YouTube video explaining why rules are important.

Do you really think, in the times that we are facing right now in our country economically, but also with the debt that our country is facing, that it is a wise use of taxpayer money to be giving $2,500 of taxpayer money away to somebody to make a video on YouTube about why rules are important?

Ms. Jackson. Well, I am happy to take a look at that specific concern. I didn't prepare to look at it for this hearing. But if you would like --

Mr. Scalise. It is on your Web site.

Ms. Jackson. I am not disputing that, sir. I am not disputing that at all. What I am saying is that there are lot of things on our Web site that are designed to engage the public in the work that we do. And so --

Mr. Scalise. Right. Engaging is one thing, but giving away 2,500 taxpayer dollars is a different story.

Ms. Jackson. I am happy to take a look at it for you, sir.

Mr. Scalise. So you would consider withdrawing that $2,500 reward.

Ms. Jackson. I am happy to take a look at it. That is what I --

Mr. Scalise. Maybe using it to help pay down debt. I would appreciate that.

When we talk about the hydraulic fracturing process -- and Congressman Green had asked you a similar question. I just want to make sure that we are correct on this. It is my understanding that you had said that you cannot regulate the fracking process without a change in law?

Ms. Jackson. My understanding is that we can regulate only, I believe it is, hydrocarbons or diesel fluid injections right now.

Mr. Scalise. Do you know of any examples -- and we have a 2004 report that says that fracking does not contaminate groundwater. Do you have any kind of findings that you have done that disputes that?

Ms. Jackson. Well, I think there has been some important information that has come out lately. States are doing more and more investigation of complaints by their citizens that their water is being impacted. I think the --

Mr. Scalise. And the States do regulate that right now.

Ms. Jackson. Sir, I am not disputing who regulates it. You are asking if I am aware.

Mr. Scalise. But do you have any reports of --

Ms. Jackson. I am aware of concerns that there has been misleading information about what is going down wells. That might actually have come out of investigations by this committee. I have right now complaints before me from folks who say they are concerned and want --

Mr. Scalise. If you can do this, because my time is running out, if you can get me a copy of anything you have that would purport to dispute that. Because you are doing a -- your agency is putting a report together right now which -- I would hope this Congress doesn't try to do anything to limit the fracking process, especially when there is no finding and no report from your office. So if you can get me that.

On climate-gate and Himalaya-gate and Amazon-gate, you have

not changed any of your conclusions on which EPA has based endangerment findings. What analysis has EPA done that caused you to reach that conclusion in light of these scandals that have erupted over falsified scientific data?

Ms. Jackson. EPA reviewed the allegations as they were made, and they dribbled out over a period of time. And, in each case, my direction to staff was clear: to review whatever allegations were being made to determine whether they change the foundation for the endangerment finding. Certainly, that is our obligation to do.

And, as I said in response to one of the earlier questions, we have made a determination, and it turns out that others now agree with that --

Mr. Scalise. When did you conduct that analysis?

Ms. Jackson. I am sorry?

Mr. Scalise. When did you conduct that analysis?

Ms. Jackson. As part of the endangerment finding and as the information became available, because some of this has dribbled out since.

Mr. Scalise. And if you can get me any information you have on analyses you have done on climate-gate, Himalaya-gate, and Amazon-gate.

Mr. Markey. The gentleman's time has expired.

Mr. Scalise. Thank you. I yield back.

Mr. Markey. The chair will recognize the gentleman from

Washington State, Mr. Inslee.

Mr. Inslee. Thank you.

I wonder if our friends could put up that slide I had earlier that talked about this issue of ocean acidification.

It has been astounding to me that we still hear debate about the existence of climate change. And I wanted to ask about what Janet Napolitano, who is the leader of NOAA, calls the evil twin -- sorry, Jane Lubchenco. Excuse me. Thank you. I appreciate that. What she calls the evil twin of global warming, which is ocean acidification.

We used to think it was a good thing that when we burned the oil and the carbon dioxide goes into the atmosphere and then it goes into solution and the oceans, we used to think that was a good thing because it got it out of the atmosphere so it would reduce the climate impact.

But the scientific community is now telling me and the rest of Congress that it is an undisputed certainty, with no scientific debate whatsoever, that the carbon dioxide pollution from burning oil is now going into the ocean and creating more acidic conditions.

And it is a scientific fact, I believe beyond dispute -- in fact, I have never heard anyone in this room dispute the fact -- that the oceans are now about 30 percent more acidic than they were before we started to burn fossil fuels, and that this happens because the pollution goes up, goes in the air, falls out of the

sky, goes into the solution of the ocean and creates acid.

Now, the scientists that I am talking about, we have some neuroscientists in Seattle and they have been doing research, they tell me that this is a certainty. There is just no doubt about this, there is no debate about this. No one has really ever challenged this conclusion that we are acidifying the oceans because we are burning fossil fuels.

Is that a fair characterization of the science?

Ms. Jackson. Yes. I am going to of course yield to Dr. Lubchenco. But we have talked about this, and I know it is exactly as you describe it, sir.

Mr. Inslee. So if I can refer to this photograph, this is a photograph demonstrating what the future looks like. And it is a photograph, again, of a terrapod. These are small plankton, and these are the base of the food chain. These are what everything -- not everything, but much of what life depends on in the ocean, because small fish eat these terrapods by the gazillions, larger fish eat them, and eventually the largest fish eat those fish. The whales depend, essentially, on the presence of these terrapods. So these are the basis of the entire food chain in the ocean.

And what the scientists are telling me is that, as the oceans become more acidic, the very basis of the food chain is threatened because these terrapods and many other creatures will not be able to exist. For instance, we have not been able to grow an oyster

crop in the State of Washington for 2 years, probably because of the acidification of the ocean. That is not totally clear yet, but probably because of that.

So we have evidence before our own eyes that carbon pollution from burning oil has the capacity to actually melt the very basis of the food chain. Because what this experiment shows -- and, actually, Dr. Lubchenco showed us this experiment in another committee hearing -- that if you expose these shells to water that is as acidic as it will be in 2100, that the shells actually melt.

And this has the fishermen concerned where I live in the State of Washington, because if you destroy the basis of the food chain -- this is what salmon eat when they are in the Pacific Ocean. When these things are gone, there is no food for the salmon.

So I guess the question is, is ocean acidification something legitimately to be concerned about from a human health standpoint? Because we get about 15 percent of our protein from the oceans, and the food chain appears to be at risk. Is that something legitimately to be concerned about, in your role?

Ms. Jackson. I do think that it is a legitimate concern and one on which the science, like much of climate science, continues to just emerge and one that cannot be ignored.

Mr. Inslee. And if you were going to -- maybe this is getting to the personal a little bit, but let me just ask you. When you think of the human impacts of carbon pollution, what

personally is most troublesome to you?

Ms. Jackson. Well, you know, I could cite the $2 trillion in global damages that are estimated to occur from a changing climate. I think you know, we have talked about the fact that, although I do not attribute Hurricane Katrina to climate change, per se, I have seen what it requires of this country and its citizens, who all pulled together to help my hometown after the kind of catastrophe that happened when you saw a very, very severe flood.

And to think about our economy, instead of being a productive economy, constantly having to respond to catastrophes that are induced by a changing climate over time; when I think of my children or my grandchildren spending all their time doing that instead of making new things, innovating, and building a better life, I worry. And I am very, very concerned. And I think -- I know that we have an obligation to follow science and do that.

And the good news of it, which I hoped we would talk about more in this hearing, is that we can do it in a way that decreases our dependence on foreign oil. It is something no one seems to want. I can't imagine they would.

Mr. Inslee. Thank you.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Alabama, Mr. Griffith.

Mr. Griffith. Thank you, Mr. Chairman.

Thank you for being here. I looked at the clock, and it is 10 after 12:00, and I know that we would probably prefer to be on the St. Charles Avenue trolly headed to the Camellia Grill for some chili cheese fries.

Ms. Jackson. All right.

Mr. Griffith. But anyway.

Ms. Jackson. Did you go to Tulane?

Mr. Griffith. Yeah, I was there.

Anyway, did the EPA do its own analysis of the challenge to the endangerment reviews? And, if so, I don't need to know the result, but we would like for you to provide us with that.

Ms. Jackson. Yeah, I did mention that we would provide it. So I am happy to get you a copy.

Mr. Griffith. Okay. My other point -- and so many of the questions have already been asked -- is that we, as Americans, represent 5 percent of the world's population, maybe 4.5 percent. Does the EPA have any responsibility when it regulates to know the economic impact that it has on our economy as it relates to our global competition? Or are we regulating ourselves in a vacuum and, as you mentioned, children and grandchildren, jobs, economy, recognizing the population of China and the fact that they are probably not having this discussion right now?

So does the EPA have a responsibility to do a global economic impact as it relates to our competitiveness?

Ms. Jackson. In general, we do economic impacts on our

regulations, but they tend to look at our domestic businesses.

It is not true to say we don't care about economic impacts. That has been out there for a while. That is not a true statement. But we don't generally look specifically at a foreign business. So many businesses now are multinational, that we just look at what the impact would be, the cost to our business community.

Mr. Griffith. I yield back the balance of my time, Mr. Chairman.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from California, Mr. McNerney.

Mr. McNerney. Thank you, Mr. Chairman.

Administrator Jackson, I want to thank you for coming today. You knew it wasn't going to be an easy hearing, and you have been graceful, and I appreciate that.

My understanding is that the endangerment finding was based on a preponderance of evidence supported by recognized scientific-based agencies and organizations. Is that correct?

Ms. Jackson. That is a fair statement.

Mr. McNerney. Could you name a couple of those agencies or organizations?

Ms. Jackson. I am happy to.

In the U.S. Government, the U.S. Global Change program is composed of NOAA and NASA and DOD and Agriculture and

Transportation, so all of the folks who are watching these issues from various aspects of how they would impact us.

And then, of course, there are the international efforts. The IPCC is named, but the IPCC is really made up of several boards that look at various aspects of these issues.

And then there are additional studies, as well. The National Academies did a study that was one that we relied heavily on that brought together much of the science, as well.

Mr. McNerney. Thank you.

I am also thankful to my friend, Mr. Shimkus, for giving us perspective of global warming deniers, and that perspective believes that small changes in chemical composition of a solution couldn't possibly change the physical nature of that solution. So I am thankful for the other side for that perspective.

I have another related question. I represent the Central Valley of California, part of it anyway, and it is a great agricultural region. We have terrific crops and export to the entire world. But we have air quality problems that cause asthma and other health-related issues.

I was wondering what impact the endangerment finding and the subsequent policy rulings by the EPA might have on public health.

Ms. Jackson. The effort to mitigate greenhouse gas pollution -- which, I should just say for the record one time, I believe is best done through legislation, so, obviously, this body has already dealt with that question -- would, by mitigating and

stopping greenhouse gas emissions, start to put us on a trajectory to see climate change level off.

There would certainly be some need for adaptation, telling populations that are already seeing changes, as well. So it is a system as we level off and stop the increase in changing climate, the heating in the Central Valley and increased droughts, we would -- I am sorry, and increased impacts on water -- we would start to see a change. But it is not an instantaneous thing. It is not --

Mr. McNerney. But wouldn't that also have a spin-off of protecting public health, in your opinion?

Ms. Jackson. Absolutely. Absolutely, sir. Yes.

Mr. McNerney. Thank you.

And I am just going to follow up on what you said. Wouldn't it be true that comprehensive energy legislation would be preferable and a superior approach to national security, health, and the economic challenges we are now facing?

Ms. Jackson. Absolutely. I join the President in that call.

Mr. McNerney. All right.

And thank you. I will yield back.

Mr. Markey. We thank the gentleman very much.

And to our audience, we just would like to let you know that 27 members of the subcommittee have come today, which is just about every member of the subcommittee, which is a reflection of the importance of this issue but, you know, has contributed to the

length of the hearing. And so we apologize to Members for that, although the information that we are receiving is invaluable.

So the chair now recognizes the gentleman from Oklahoma, Mr. Sullivan.

Mr. Sullivan. Thank you, Mr. Chairman. I think that is because of you, that we have so many here.

Mr. Markey. I would not want to know how many came if it was just me.

Mr. Sullivan. Well, again, thank you for being here. I am from Oklahoma --

Mr. Markey. Oh, I apologize to the gentleman. I actually went out of order there.

Mr. Sullivan. Oh.

Mr. Markey. The gentlelady from California, with the indulgence of the gentleman from Oklahoma, is recognized.

Mrs. Bono Mack. Well, I thank both the chair and my colleague. I hate to have that false start, but also glad to know that I am not last and least at the same time.

But I want to welcome the administrator, as well, and thank her for her patience and say that I have an issue that I am hoping that you can look into further that is specific, at least now, to southern California.

As you know, southern California has faced extremely challenging air quality issues, and, over time, the region established air quality standards in the issuance of permits for

those who wish to construct or expand infrastructure projects. Those who seek these permits include everyone from hospitals, schools, fire, police stations, water projects, small businesses, and the list goes on and on.

Recently, the EPA was petitioned to try to halt the issuance of new permits, even though the State acted with overwhelming bipartisan support on legislation to ensure that these could move forward.

Given the nearly 15 percent -- I am sure much higher, actually -- but the 15 percent unemployment rate in much of California's Inland Empire, the importance of providing new job opportunities is crucial. In fact, holding up the existing permits being requested in parts of southern California will impede the progress of $10 billion in projects that will provide tens of thousands of jobs.

It is my hope that the EPA will reject this petition, as we have had the permit program serving areas throughout L.A. and surrounding counties for decades. Our businesses need the certainties that they can invest, and our public entities like hospitals must expand to meet the growing needs. Again, it is my firm belief that this petition should be rejected, given the high stakes it represents for our regional economy.

Are you able to respond specifically on this matter today, if you know personally about it? And if you don't know, are you willing to work with me to ensure the effects of this petition are

seriously considered?

Ms. Jackson. I am aware of the petition. I don't have a full briefing. I would be happy to meet with you and discuss it further. Obviously, staff have to review the petition on its merits, but we are happy to work with you on that.

Mrs. Bono Mack. All right. Thank you. It is very, very important.

But changing back now to the issue at hand, in February you testified in the Senate that you would prefer climate legislation over regulation of carbon dioxide emissions under the existing Clean Air Act. I happen to feel the same way, which is one of the primary reasons that I supported the House legislation, as it ensured that the EPA would not move forward unilaterally on a number of fronts, or at least temporarily.

I recognize that there is a proposed enforcement delay being considered for various sources, but that still doesn't solve the problem that moving forward with regulations under existing statutes will be harmful to our economy, whether that is now, in 2011, or in 2020.

As you know, California has its own regulatory regime that is moving forward, as provided by AB-32. And this leads me to my question: Would you support a complete preemption of EPA regulation of greenhouse gases under the Clean Air Act or other existing statutes and comprehensive climate legislation? As you know, the issue is one of the more clear interstate commerce

issues we are considering in this committee. And if you don't support this preemption, can you explain why not?

Ms. Jackson. Well, I haven't seen preemption language from the U.S. Senate. There is certainly a bill that passed this body that included some preemption.

I certainly support the fact that legislation is going to have to deal with the tricky question of how to deal with competing State and Federal standards and try to harmonize all that, which is why I believe we have to have a legislative solution.

But I also have to say that, in the interim, I believe I have to follow the law. And I believe very strongly that the Supreme Court decision wasn't an "if you feel like it." It was, "EPA must make a finding." And everything we have done since making that finding and, in fact, even leading up to it has been about trying to ensure that the Clean Air Act unintended consequences are minimized, so that you can have a rule for cars that is a good-news story without immediately having to regulate other sources that you don't want to.

Mrs. Bono Mack. Can I just narrow this down? And I don't know that the clock necessarily started when I started, but I appreciate that I still have 3 1/2 minutes.

Regulate or legislate? I mean, it is not yes or no, but it is close.

Ms. Jackson. New legislation that puts a market incentive on

clean energy is the way to go. What that legislation says is the job of Congress and will be, I am sure --

Mrs. Bono Mack. But you are saying you prefer that route? I mean, that is all I am asking is a simple -- that is what -- you said it before, and I am just asking you to reiterate it right now.

Ms. Jackson. Yes, ma'am. Yes, ma'am.

Mrs. Bono Mack. Okay.

Ms. Jackson. I prefer legislation.

Mrs. Bono Mack. Thank you. And would you support Federal preemption of State greenhouse gas regulations?

Ms. Jackson. All I can say is I prefer legislation. And the details of legislation are to be discussed.

Mrs. Bono Mack. But this is very simple, especially in your capacity, a very simple question. Would you support Federal preemption of State greenhouse gas regulations? What do you support? It is very simple.

Ms. Jackson. The administration, the Obama administration, has said over and over that we need legislation, that we prefer it. But that I do not have the luxury of ignoring the law. And so I, as I do my job at EPA --

Mrs. Bono Mack. This is a second question from the first. Would you support Federal preemption of States? It is not regulate or legislate; it is now Federal or State preemption.

Ms. Jackson. I support legislation. And I believe that that

is one of the issues that good legislation is going to have to deal with. And, in the interim, I think I should do my job, which is to uphold the Clean Air Act as the Supreme Court has interpreted it.

Mrs. Bono Mack. All right. Well, I don't think that is much of an answer for me.

Ms. Jackson. Well, I also don't believe that it is an either/or question entirely. I also believe very strongly that the Clean Air Act can be used to do good things that are entirely consistent with legislation. And I think the clean cars rule is a perfect example of that.

Mrs. Bono Mack. Well, it is a simple question, though. In fact, if California continues to move the bar, then where does that leave Federal legislation or regulation? If California -- and as a proud Californian, but not necessarily agreeing and not necessarily agreeing that what California does is good for the rest of the country -- but if California changes their standards, are you saying that we should then once again meet California standards?

Ms. Jackson. I think the cars rule was a great example of a way to make sound and smart legislation. And, in fact, much of what happened in the bill that passed this committee and the House talks about how to meld the Clean Air Act authorities in with the new authorities that would come under legislation.

So, again, I don't think I can simply say one or the other,

because I think the trick of legislation will be to figure out how to put those two authorities together in a way that gets you things like the clean car rule. And, yes, California may look at even cleaner cars. And I think, when I spoke to the chairman emeritus, he asked me to go back and start thinking about what we are going to do for 2017 and beyond. And I think that is a fair question.

Mrs. Bono Mack. Thank you.

I yield back. Thank you.

Mr. Markey. Okay. The gentlelady's time has expired.

The chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

Mr. Doyle. Thank you, Mr. Chairman.

Administrator Jackson, you have been most generous with your time, and we have covered a lot of ground, so I really just have one question. I want to follow up on something that Representative Green talked to you about.

In my State of Pennsylvania, we are sitting on a vast supply of natural gas in the Marcellus Shale. Geologists estimate it could be somewhere between 168 and 516 trillion cubic feet. And I get asked every day -- I know that Representative Green referenced the EPA study on the effects of hydraulic fracking on drinking water. And we are starting to see a lot of wells go up in southwestern Pennsylvania and throughout our State. So we hear from our constituents every day about that.

So we know there is a study, but could you give us an idea about the scope of this study? What all is the EPA looking into with regard to fracking? And when might we anticipate this study being made available?

Ms. Jackson. EPA recently held a meeting of its Scientific Advisory Board. It is the Federal FACA that advises the EPA administrator on the scope of the study, how best to design a study of hydraulic fracking, primarily to look at potential impacts on drinking water, on water. And, of course, that would be, in this case, groundwater for the most part.

And that study, I believe, is now scheduled to not have any results until either late in 2011 or early in 2012. I will double-check on the date. I mean, we haven't quite finished scoping it, so we haven't begun the actual study yet.

We are designing it to be transparent, to use information that is being collected. Many States and localities are getting information and complaints on potential issues with respect to contamination. And it is being done primarily to serve as a resource to EPA but, of course, also to Congress and others, the States, in terms of what we know.

One of the concerns is that there was a 2004 literature review. There were no samples taken. That study is widely cited as saying, "See, that proves it is safe." And I don't think that is a fair or accurate summation of that study. I think that is an overbroad reading. And so I have said I believe we need to take

some more data.

Mr. Doyle. Having said that and given the fact that we might not have the study until 2011 or 2012, do you think it is wise for Congress to consider legislation to regulate hydraulic fracking in advance of the completion of this study?

Ms. Jackson. Certainly, I would leave the legislative decisions to you. And I would certainly say that we will be happy to provide information, as we get it, to Congress in helping to inform your deliberations.

Mr. Doyle. Thank you.

Thank you, Mr. Chairman.

Mr. Markey. Great. The gentleman's time has expired.

And all time for -- oh, I am sorry. I apologize again to the gentleman from Oklahoma. Mr. Sullivan --

Mr. Sullivan. That is okay. I am used to it, Mr. Chairman.

Mr. Markey. -- is recognized.

Mr. Sullivan. Thank you, again, for being here.

And, you know, the economy is not doing so well right now. I guess we can all agree to that. And unemployment levels are pretty high. And why did the administration choose to embark on the endangerment finding amidst all this?

Ms. Jackson. The Supreme Court ruling, which mandated that EPA make a finding one way or the other, was in 2007. As you heard, the work had been done under the Bush administration, but the White House didn't open the e-mails. And that really didn't

comport with the way I saw my responsibilities as the EPA administrator and, frankly, as the White House, you know, wanted us to do our jobs. And so we have moved affirmatively in response to a Supreme Court decision that is now 3 years old.

Mr. Sullivan. Well, what analyses were performed to determine whether a positive endangerment finding would be beneficial for the economy or energy security? Did you do any?

Ms. Jackson. That isn't what the Clean Air Act requires us to do. The Clean Air Act requires us to make a determination as to whether pollutants -- in this case, greenhouse gases -- endanger public health and welfare.

Mr. Sullivan. Whether we lose jobs or people --

Ms. Jackson. Well, let me be very clear. Any regulation of a pollutant is certainly done only after an economic analysis. So I do not want anyone to think that means we don't look at the economy. No one is more sensitive to the economic impacts of our rules than me; I have to sign off on them.

But I think the clean car rule is a perfect example of the kind of smart regulation we can make under the Clean Air Act that reduces our dependence on oil, reduces pollution, and actually helps in job growth because the automakers want it so that they can get back to making cars.

Mr. Sullivan. Congressman Doyle talked about hydraulic fracking. And I think that is a really good method to use. That is how we have been able to get over 120-year reserves of natural

gas. He talked about the Marcellus in his area. That is why they have been able to get so much. And I think that helps us from a national security perspective but also jobs. And it is American-made energy, and we can use it in vehicles, and it burns clean and all of that.

But are you aware of how many hydraulic fracks have occurred in this country since it has been implemented over decades and decades and decades?

Ms. Jackson. I know it has been used in the oil industry for all that period of time. I don't know --

Mr. Sullivan. Well, if you are involved in something like that, don't you think you should know, though?

Ms. Jackson. Well, we are doing a study specifically because citizens and their representatives have said that they are concerned that, as this Marcellus Shale, which is a tighter formation than we have been producing natural gas from and which could potentially impact groundwater in areas that are quite densely populated, they want to know it is safe. And I think that is a fair question.

Mr. Sullivan. You know that much. But also, there have been a million hydraulic fracks, over a million hydraulic fracks in the United States. Are you aware, since you do know a lot about that, are you aware of any instance where it has ever gotten in the groundwater?

Ms. Jackson. Well, we have several allegations and concerns

raised in places like --

Mr. Sullivan. No, I mean concrete evidence.

Ms. Jackson. -- Wyoming and Colorado and Pennsylvania.

Mr. Sullivan. As the EPA director, administrator --

Ms. Jackson. But that is why we are doing the study, Mr. Sullivan.

Mr. Sullivan. I know. But, over the decades, has there ever been in your research -- I am sure you do research and put information together to determine this as you move forward with this study. Have you seen any instance in the past, any court case, anyone suing someone, any verifiable evidence -- that is what I think you have to go back towards -- to see if there is any precedent that shows that this could be a problem? I have never seen one; I have looked. Have you?

RPTS DEAN

DCMN NORMAN

[12:30 p.m.]

Ms. Jackson. [No,] but I would say that we have seen cases where people have raised concerns and we haven't been able to say conclusively "absolutely not." And that is why, rather than saying, "Take our word for it," we are saying, "Let's do a study; we will involve the industry in it, but --

Mr. Sullivan. What if I raise concerns I think that this endangerment finding could be detrimental to our economy, sending jobs overseas, losing jobs overseas; would you address my concern in that?

Ms. Jackson. We did an 11-volume copy to address concerns.

Mr. Sullivan. There are a lot of Americans concerned about this legislation, this endangerment finding, and that they will lose their jobs. I mean they are concerned about that, especially my district where I have 100,000, 300,000 some-odd people working in the energy industry. They are scared to death. This is, I believe, an attempt to curtail that business. But I think that if we have a million of these facts and they are willing to list all the things that are used, mainly water and sand, but any chemical that is used listed, what is the problem? A million; I mean, that is pretty good data to use in your study.

Ms. Jackson. Well, we have already seen a couple of cases where we can't get the data because it is confidential. So we

don't have all the chemicals that are being injected in the wells.

Mr. Markey. The gentleman's time has expired.

Mr. Sullivan. Thank you, I do appreciate being here.

Mr. Markey. All members of the subcommittee have asked questions, and I am sure everyone remembers vividly the unanimous consent request which I made 3 hours ago that Mr. Latta, if he appeared as a member of the full committee, would be allowed to ask questions of our witness.

The gentleman from Ohio is recognized for that purpose.

Mr. Latta. I appreciate the chairman's graciousness and unanimous consent and for being around to participate here today. Thank you very much. And also to our ranking member, thank you very much for allowing me to be here. And I appreciate the opportunity, Administrator, to -- I think last time we had a discussion was on transportation infrastructure.

But kind of to give a background again, I represent the largest manufacturing district in the State of Ohio and also the largest agricultural district. It is kind of an interesting vein that I run on. And Ohio, with our neighbors just to my west Indiana, we get 87 percent of our energy is coal- based, and Indiana 94 percent coal-based. And the reason I always bring up Indiana because I run halfway down the State of Ohio, along the Indiana line, so I have a lot of people working in Indiana and vice versa.

As we are talking about the cap-and-trade legislation,

especially as it is being renewed over in the Senate, as we are looking at it, how would this legislation benefit the farmers and the manufacturers and the citizens of my district? Because, again, when we look at the cost that is being associated with coal, what do I tell my folks back home? Because, again, I also have areas in my district that had over 18 percent unemployment because it is on the manufacturing sector.

Ms. Jackson. Well, I am not going to speculate what the legislation in the Senate says because I haven't seen it yet. I can very briefly answer the question with respect to the legislation, for example, that passed this committee in the full House. And that is that because agriculture was exempt from much of the regulated activities, the activities, the agricultural industry would be able to use many actions like no-till farming as credits, as offsets. So there was actually an opportunity for farmers to make money off of decisions they would make about whether to keep acreage in agriculture or forests or how they tilled. I am certainly not an agricultural expert, but the opportunities were certainly there, I have heard Secretary Vilsack speak of them.

Mr. Latta. Now briefly, no-till -- a lot of our folks back home had gone to no-till, but a lot of them now are going out of no-till, because it is different ways of crop production that they are in right now. In some areas they find it is not conducive; they will always be in the no-till situation. So on a situation

with credits there wouldn't be a lot of benefit.

But we are looking at the unemployment rates, like I said, we have in our district. It is very, very difficult to attract jobs at this stage of the game out there to our area. Now, we have had some good news in the last week with some companies that are going to be expanding right now, but our fear out there as, I talk to people, there is a lot of angst especially on the business sector, small business or large business. It is kind of interesting, my businesses I have in my district go from either very, very large, from stamping plants all the way down to your mom and pop and tool and die jobs. A lot of folks out there I have talked to are very, very fearful about getting into increasing production or hiring people right now, because they just are very fearful of what could happen on the legislation right now.

Again, as we do this and talk about this, it is folks back home that we talk to. But again it is highly, highly manufacture, again, in my district and folks are just very, very concerned.

Ms. Jackson. Thank you. And I do appreciate that concern. I want you and them to know that that is something that I think certainly all of us as policymakers have to be quite sensitive to, the state of our economy. I certainly am. I do believe that to replace those manufacturing jobs, you need sectors to put them in. The ones that have gone, and gone overseas, when you ask yourself what we can be manufacturing, I think the clean cars of the future, clean energy, renewable energy. The President has talked

about huge investments in nuclear power, and he also certainly talked about domestic energy resources. All of those are opportunities to replace those jobs. All of those are the kind of clean energy jobs that so many of us believe are part and parcel of this revolution.

Mr. Latta. Let me ask, we were talking about on the manufacturing side, again, with the Chinese and Indians out there right now, because there is a lot of talk that they are not going to go down this path, and that is who our competitors are going to be. Again, the fear out there is that they will put us at an unfair disadvantage on the manufacturing side.

But just coming off of the Budget Committee one of the things we have out there -- thank you very much, Mr. Chairman, I yield back.

Mr. Markey. No, I appreciate the gentleman. Thank you for your patience as well in waiting for the end of the hearing.

Actually in the legislation, the Waxman-Markey bill, we exempt the agricultural sector from regulation, while providing opportunities are offset income; that is, it could be generated by practices engaged in by the farming community. So the exemption from being covered, combined with the economic opportunity of these new agricultural practices being adopted, we think makes it something that should be viewed by the farming community as a great opportunity.

But we thank the gentleman for coming, and we also note that

Ohio is now in the lead as a new solar technology manufacturing base for America. They have taken over the lead, so we are grateful for that as well.

So we thank you, Madam Administrator. You did a marvelous job here with our committee today, and I think all members will say that they are impressed with your comprehensive knowledge of this subject.

And again, I just want to restate the Supreme Court of the United States mandated that the EPA had to make a determination on this endangerment issue and that the Bush ERA sent arguably the most important climate e-mail of all time to the Bush White House, making this finding of endangerment, but that Dick Cheney was in denial and refused to accept the e-mail; which then necessitated you and the Obama administration having to go through that whole process again in order to make a determination, which we are now dealing with, but it is legally mandated by the Supreme Court of the United States.

So it is I think it is helpful for us to know that, and to also know that on the decisions which are already made in conjunction with the White House, that any reversal of that would be objected to by the United Auto Workers and by the automotive manufacturers of the United States. And I think it is important for all of that to be out here and on the record.

But we can't tell you how much we thank you for your appearance, how much we admire the work that you do, and we look

forward to seeing you and your work here in the future. Thank you so much.

Again, we apologize to the second panel. It was an incredibly distinguished panel. It actually should have its own day at 9:30 in the morning, with all the members here. Nonetheless, we are going to go right to it, and we know that members will return to participate in this hearing as well.

STATEMENTS OF FRED SMITH, CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FedEx CORPORATION; JASON WOLF, VICE PRESIDENT FOR NORTH AMERICA BETTER PLACE; ROBERT DIAMOND, FORMER LIEUTENANT, U.S. NAVY, SECURITY FELLOW, TRUMAN NATIONAL SECURITY PROJECT

Mr. Markey. If the witnesses could take their seats we will begin by hearing from Mr. Fred Smith. Fred Smith is the Chairman, President, and CEO of Federal Express. He founded FedEx in 1971 and he has recently become one of our Nation's most important advocates for vehicle efficiency standards and for a national energy policy.

Mr. Smith also serves as a member of the Electrification Coalition and as cochairman of the Energy Security Leadership Council. The Council brings together business and military leaders in support of a comprehensive long-term policy to reduce U.S. oil dependence and improve energy security.

Mr. Smith, we are honored to have you here today and we welcome your testimony.

STATEMENT OF FRED SMITH

Mr. Smith. Well, thank you very much, Mr. Chairman. I submitted testimony for the record. I am just make a few summary remarks.

Mr. Markey. Without objection, so ordered. Your written

testimony will be included in the record. I think you might have to turn on your microphone.

Mr. Smith. Oh, sorry. Excuse me.

As you mentioned, Mr. Chairman, I am the CEO of FedEx Corporation, which employs about 300,000 people in our four major operating units: Federal Express, FedEx Ground, FedEx Freight, and FedEx Office. We operate 670 airplanes, over 70,000 vehicles. We deliver through our networks almost 8 million shipments a day. So we have been extremely interested in the issue of energy consumption and energy independence. And as you mentioned I cochaired, with General P.X. Kelley, the Energy Security Leadership Council, which produced a series of recommendations, many of which were incorporated in the 2007 act. And from that work came the Electrification Coalition, which is a group of companies which have significant interest in the matter of electrifying short-haul transportation in the United States.

The reason that we got involved with the Electrification Coalition after the work that the Energy Security Leadership Council did is because we came to the conclusion that it was the most promising single area to reduce United States dependence on imported petroleum, and has been widely discussed here in this committee.

We use about 20 million barrels of oil a day. We import now almost 60 percent of our oil. It was 30 percent when the first air embargo took place in 1973. And absent some significant

change in our energy profile, we will continue to be subject to highly volatile energy prices like we experienced in the summer of 2008 when a barrel of oil went for $147 a barrel. And though it has come down today, it is still over $80 a barrel, and the potential for economic and national security challenges are very great because of that.

We are very confident that the electrification of short-haul transportation, including in our industry sector, is very real, not the least reason of which I came over here today in a new FedEx Express, zero-emissions, electric-powered vehicle. It was made by JD of Modec, a European company which has supplied us 15 of these vehicles in Europe; and Navistar in Illinois; and the batteries are produced by A123 in Michigan. The vehicle has about a 100-mile range, has very low operating economics.

The issue is simply the capital cost of the vehicle relative to conventional vehicles. We feel very strongly that the price of these batteries, contrary to some other people who have looked at the matter, are going to come down. And in fact we believe in the next 2 to 5 years, the price of these lithium ion batteries will be at least be halved, and significantly more energy production per unit of density as well.

So we think for the industrial sector in which we operate, as well as personal short-haul transportation where the vast majority of it is conducted with less than 40 miles of utilization per vehicle per day, should be a national goal.

We have laid out a series of recommendations in the report of the Electrification Coalition which we commend to the committee. It has an enormous payback for the Nation. It significantly reduces our need to import petroleum by millions of barrels per day.

The scholarship has been verified by the University of Maryland, and we believe that it is a very promising area. And I think I will stop there, if it is acceptable to you, and answer questions or wait until after the other testimony.

Mr. Markey. Thank you, sir, very much.

[The prepared statement of Mr. Smith follows:]

******** INSERT 4-1 ********

Mr. Markey. Our next witness is Jason Wolf. He is the Vice President of North America, Better Place. Mr. Wolf is responsible for overseeing the company's electric vehicle efforts in California, Hawaii, Ontario, and other developing North American markets. We thank you, sir.

From 1986 to 1993 he served as an officer in the Israeli military, a country notable for having no oil. And so, obviously, there is an imperative from the national security perspective to find a solution to that problem, and technology is the answer.

So we welcome you, Mr. Wolf. Whenever you are ready, please begin.

STATEMENT OF JASON WOLF

Mr. Wolf. Thank you. And my text says good morning, but I guess we ran a little late. So good afternoon, Chairman Markey, Ranking Member Upton and committee members, whoever is left.

My name is Jason Wolf. As you said, I lead Better Place, North America.

Mr. Markey. Mr. Wolf,you still have your C-SPAN audience, so do not assume that --

Mr. Upton. Twenty-five million people.

Mr. Wolf. No pressure.

So Better Place is the global leader in electric vehicle

networks and services, and our mission is to end dependence on oil.

Thank you for the opportunity today to come and speak about how we can solve the U.S.'s dependence on oil by leading a global transition to electric vehicles and why it is imperative to do so right now.

Two years ago our founder, Shai Agassi, was here; came before Congress, and described a choice for our country between continued reliance on a single strategically vulnerable source of energy that fuels, as people said to you, more than 95 percent of our transportation and an imminently feasible alternative path of rapid transition to electric vehicles.

Sadly, 2 years later, the U.S. remains paralyzed at the same juncture, while the rest of the world in many places are making tremendous progress towards electrification. For example, as you mentioned, Israel 2 years ago made a national commitment to end its commitment on oil. And since, there have been more charge spots installed for electric vehicles in Israel, a small country, as there are in the entire U.S. over these 2 years.

China plans to leap-frog the combustion engine directly to electric vehicles, and what we are seeing is that electrification is not only a solution, it is the only plausibly possible solution that is accepted across the board. But even more importantly, electrification is now globally inevitable.

The question before you today is will the U.S. lead this

inevitable transition or will we land behind China, France, Japan and other committees in capitalizing on this commercial opportunity.

Better Place's business model really enables mass production of electric vehicles by removing the three key barriers of high cost: limited range and compromised convenience. As a validation of that business model -- and it is not the only one -- we have raised over $700 million in the last 2 years from private investment. We partnered with Renault to deliver at least 100,000 vehicles in major markets around the world; and we have established operations in countries around the world, not only Israel, Denmark, but also Australia, the U.S., Canada, Japan and, recently, China and France.

Just this last week we announced collaboration with Cherry Automotive, which is the largest auto independent manufacturer and exporter. This past Monday, we launched a taxi demonstration in Tokyo with switchable EVs that are working around the clock. What this shows us is that this inevitable transition to EVs means for the automotive industry that their future is settled. The next vehicle will be driven by electricity.

So the question is no longer if, but how fast will this transition to EVs take, and who will lead the transition? What is critical to understand and what we are seeing around the world is that governments have made a conscious choice towards electrification. The primary motivations for each country differ,

from oil independence, to automotive industry leadership, to integrating renewable electricity into the grid. But the conclusion is the same. Electrification enables all these benefits if done correctly at scale.

Let's talk about how the U.S. can lead. If the U.S. was able to reflect the true cost of gasoline, private capital would no doubt flow to mass transportation solutions as were seen elsewhere. But we have not been able to do so as a country, so the only way forward is to make clear national commitment to electrification.

First, set an explicit national electrification policy to signal the market and provide clear direction towards the massive option of EVs.

Second, invest in regional EV ecosystems with the goal of catalyzing mass market deployments that address the three barriers I mentioned.

Finally, continue to fund consumer and fleet EV purchases. And these should be done through the year 2015. As a country, we can wean ourselves off oil dependency at a fraction of the 440 billion we export every year.

I thank you and look forward to working with you to put the U.S. in the lead on what we think is an inevitable transition to electric vehicles.

Mr. Markey. Thank you, Mr. Wolf, very much.

[The prepared statement of Mr. Wolf follows:]

******** INSERT 4-2 ********

Mr. Markey. Our next witness is Mr. Robert Diamond, a Security Fellow at the Truman National Security Project. He is a former lieutenant in the United States Navy, and completed deployments in support of Operation Iraqi Freedom and Operation Enduring Freedom. We welcome you, sir.

STATEMENT OF ROBERT DIAMOND

Mr. Diamond. Thank you, Mr. Chairman. And I respectfully request to submit my written testimony for the record.

Mr. Markey. Without objection, so ordered.

Mr. Diamond. Chairman Markey, Ranking Member Upton, members of the committee, I am deeply honored to have the opportunity to appear before this panel to discuss the critically important topic of promoting clean energy policies that will reduce America's dependence on oil and the impact that dependence is having on our national security.

America's reliance on oil is our Achilles heel. I fundamentally believe that a comprehensive strategy, one that cuts our addiction to fossil fuels, boosts clean energy technology, and moves our Nation dramatically towards energy independence is vital to our national security, the safety of our men and women in uniform, and to the fight against terrorism. The bottom line is this: We must put America in control of the energy future.

I make these arguments before you today as a fellow citizen, deeply concerned about ensuring the future prosperity and security our country.

I am a Security Fellow with the Truman National Security Project and have been deeply engaged in the debate about our energy security. And I am a veteran in the United States military, having served as an officer in the Navy for 7 years.

In 2004, I deployed to the northern Arabian Gulf. My ship, a guided missile destroyer, was assigned a mission of defending two Iraqi oil terminals just off the southern coast of that country. These two terminals are the economic crown jewels of that country, with 90-plus percent of Iraq's oil flowing through them onto supertankers to take that oil to the global market.

It was no secret that these terminals would be prime targets for an insurgent attack. In April 2004, the attack came in the form of the wave of two suicide boats. We lost two U.S. Navy sailors and one U.S. coastguardsman, as well as four other service members who sustained serious injuries. The oil terminals, however, were safely defended.

I tell this story because it speaks directly to why we are here today. At the very core of my wartime deployment was an energy security mission. Brave sailors and coastguardsmen gave their lives defending a global oil infrastructure half a world away. My experience is just a recent chapter in the U.S. military's decade-long role of defending our global oil supplies,

and I am not alone in feeling this way.

Over the course of the last year, I have been part of a national coalition of hundreds of veterans, called Operation Free. These veterans have criss-crossed the country by biodiesel powered bus, over 25,000 miles, with one simple message: Secure America with clean energy.

Retired Vice Admiral Dennis McGinn captured the national security dangers of our addiction to oil in testimony he gave before the Senate last year. He said in 2008 we sent $386 billion overseas for oil, much of it going to nations that wish us harm.

This is an unprecedented and unsustainable transfer of wealth to other nations. It puts us in the untenable position of funding both sides of the conflict and directly undermines our fight against terror.

Former CIA director Jim Woolsey explains it this way: Except for our own Civil War, this is the only war that we have fought where we are paying for both sides. We pay Saudi Arabia $160 billion a year for its oil, and 3- to 4 billion of that goes to Wahabbis who teach their children to hate. We are paying for these terrorists with our SUVs.

A Truman project colleague of mine conducted an analysis which concluded that for every $5 rise in price of crude oil, Putin's Russia receives more than $18 billion annually; Ahmadinejad, Iran, an additional $7.9 billion annually; and Chavez's Venezuela an additional $4.7 billion annually.

This is clearly not in our national interest. No one is more acutely aware of this problem than the Department of Defense, and they were actually leading the efforts on breaking our dependency on oil. DOD is the largest energy consumer in the Nation, and our Nation is the largest energy consumer in the world.

For example, the Navy has set ambitious goals for shifting the fleet to renewable energy sources. Just last week on Earth Day, the Navy successfully conducted the first flight test of the Green Hornet, an SA-18 Super Hornet fighter jet that is still using a 50/50 blend of conventional fuel and biofuels. This test was the first step in achieving Secretary Mabus's goal of sailing by 2012 the Great Green Fleet, a carrier battle group entirely powered by sustainable renewable fuel sources, including nuclear power. But that is just the military.

When it comes to the rest of our Nation, frankly we are simply not doing enough. Congress must act. Without legislation from Congress too many sectors of our economy and our country will continue to stagger along, using the dirty fuels of our past. This is not a problem that can wait for future generations to solve. It is imperative that you, our elected officials, solve this problem now and enact comprehensive clean energy legislation that will put American power back to work.

Part of that solution also involves making sure that our regulatory agencies like EPA continue to have the tools and authority necessary to drive this transition to a clean energy

economy. It makes no sense to me to deny these agencies the robust regulatory authority they need. Doing so is the equivalent of pulling your troops off the battlefield before the reinforcements arrive; in other words, it is surrendering the fight.

I close with this simple request: Help us build a new clean energy economy. It will make our country more prosperous, it will help make us more secure, and, once and for all, put America back in control of the energy future. Thank you, Mr. Chairman.

Mr. Markey. Thank you.

[The prepared statement of Mr. Diamond follows:]

******** INSERT 4-3 ********

Mr. Markey. Our final witness is Mr. Charles Drevna, the President of the National Petrochemical and Refiners Association. He has served as its president since 2007. We welcome you, sir.

STATEMENT OF CHARLES T. DREVNA

Mr. Drevna. Good afternoon, Chairman Markey, Ranking Member Upton, and the rest of the committee. I really appreciate the opportunity to be here to testimony on such critical issues. While the title of this hearing is "Clean Energy Policies that Reduce our Dependence on Oil," I respectfully suggest that you focus on affordable and economically sensible clean energy policies.

Such policies should favor getting more energy of all types from the United States and from reliable sources abroad. With the level playing field, the best, most efficient, and most effective forms in energy will triumph in the marketplace. That means the form of energy that delivers the BTU at the lowest economic cost will win.

Most economists believe that oil and oil-based products provide the winning form of energy for many of our needs today, particularly for transportation. We and the rest of the globe will continue to rely on petroleum-based transportation for much of this century.

We rely on petrochemicals that are the vital ingredients in thousands of products today and far into the future. Some people believe we can end our reliance on oil by simply saying that is what we want to do. They embrace our energy sources like starry-eyed lovers seeing perfection and ignoring the flaws. Unfortunately, there is no miracle source of energy that is clean, affordable, and abundant with no downsize. If such a source existed, our Nation would have embraced it long ago and we would all be using it today.

Those who say the United States must show leadership on climate change and related issues are absolutely correct. But we have to lead intelligently to find the way of a bright and prosperous energy and economic future. Leading recklessly in the wrong direction, based on homes and dreams rather than reality, is a plan for failure. We don't want to make a headlong rush into disaster modeled after Pickett's Charge.

America is the land of ideas and freedom and has long been the world's leader in innovation. The government has oftentimes served as a catalyst to stimulate new inventions and new processes. But government leaders have been wise enough to step aside to give private sector entrepreneurs the freedom to transform these good ideas into reality. When governments have tried to pick economic winners by handing out ill-advised and usually expensive subsidies funded by taxpayers, the kind of subsidies some forms of energy depend upon today, the cost has far

outweighed the benefits to their citizens.

Thomas Edison literally electrified the world because of the tremendous benefit his light bulbs brought, not because he got funding on a tax on oil lamps, candles, or fireplaces. Alexander Graham Bell succeeded because his telephone revolutionized communications, not because government gave him cash generated by a stamp tax or tax on telegrams. And companies and the Internet have been able to transform our lives without relying on government subsidies paid for by taxes on telephones, typewriters, pens or other printed publications

NPRA members embrace a future where the best ideas and the best products triumph in a free and fair competition and they embrace change. They are not against green jobs. They want to continue to provide jobs that are well-paying, long-lasting, and strengthen our Nation's economy.

The operators of refineries and petrochemical plants want to keep their U.S. manufacturing operations and manufacturing by others in our country strong and thriving. In addition, we recognize a global climate change must be addressed globally. If the Environmental Protection Agency tries to regulate greenhouse gasses in our Nation through the Clean Air Act, it risks inflicting a crippling blow to our economy. Many American manufacturers will take your jobs and move to foreign nations to escape carbon limits that limit their growth, their productivity, and their profitability. Those foreign facilities, many with

emission controls far less stringent than ours, will generate greenhouse gasses that go into the atmosphere shared by every Nation on Earth. The end result: No reduction in global carbon emissions and all gain, no pain, for the American people.

For the refining and petrochemical industries, the question that Congress must now ask itself: Do we want gasoline, diesel fuel, and plastics and other products to continue being manufactured in the United States, or do we want this manufacturing outsourced so that we increase reliance on foreign sources of supply.

I don't believe Congress wants to overtax and overregulate the domestic refining and petrochemical industry, or any other industry, into extinction. But overzealous policies could lead to disastrous effects and become a self-inflicted wound as our country tries to struggle to climb out of this recession. That would be an American tragedy that I ask you help avert.

Thank you for allowing me the opportunity to testify today, and I look forward to any questions that you may have.

Mr. Markey. Okay, the gentleman's time has expired.

[The prepared statement of Mr. Drevna follows:]

******** INSERT 4-4 ********

Mr. Markey. The chair now recognizes the gentleman from Washington State, Mr. Inslee.

Mr. Inslee. Thank you, Mr. Drevna. What I want is the electric cars to be built here and not just in China. I am overjoyed to see the opening of the first manufacturing plant of lithium ion batteries in Holland, Michigan, which is going to open with Johnson Controls this fall, due to the Federal policy that we adopted in the stimulus bill this February.

I am also overjoyed to tell you that on Earth Day, the 40th anniversary, I got to drive the first production model of the Chevrolet Volt which we manufactured in America. It is a plug-in car. You plug it in, you go 40 miles on total electricity, which would cover 60 percent of all our trips on an average American day.

The Ford Focus under Alan Mulally's leadership is coming out in a while. Having driven that car, tremendous acceleration. If you want to drive a rocket, drive the Tesla. And if you want a car that is on the market right now, the Renault Leaf. There are great things happening. We just have to make sure it happens here and not in China.

Mr. Wolf and Mr. Smith, I want to ask you about sort of what you see as the slope of technology and cost associated with electric drivetrains. We know every technology has a path it goes on where we get better technology and decreasing costs. And I

would just like to address what you foresee in electric drivetrains in the next couple of decades as far as costs. Mr. Wolf -- you guys decide who starts.

Mr. Wolf. I will start, actually. Mr. Smith mentioned one thing in his remarks about the cost of the batteries. The cost of the battery in the electric vehicle is the most expensive component, 30 percent; 50 to 60 percent in the higher, bigger truck-type deployment. But what we are seeing today is, if a year ago or 2 years ago people were talking about $1,000 per kilowatt hour -- that is how they measured the density of the energy -- those prices are already, 2 or 3 years later, in half. And the projection by DOE, not ourselves, is to $350 and below.

Mr. Inslee. Mr. Smith, you are a hard-headed businessman. What do you think of those projections?

Mr. Smith. We concur. The vehicle that I drove over here today, and which is all electric, as I mentioned built, by Navistar with the 123 battery, about 70 percent -- is that right -- about 70 percent of the cost is the battery. It is a very sturdy industrialized vehicle so there is no issue with the vehicle. We have been operating similar vehicles in Europe for a couple of years.

We also operate 300 hybrids which we develop. It is just simply a cost of the batteries, and our guess is that in the next 2 to 5 years the cost of the batteries will come down, just as Mr. Wolf said. And at that point in time, that vehicle will be very

cost-effective on a straight ROI basis. In other words, you will be able to afford it without any other incentive other than the fact that the reduction in fossil fuel consumption and the low maintenance cost of the vehicle will drive you to buy it.

Mr. Inslee. Thank you for your leadership. Mr. Drevna, I wondered if you could put up the picture of the Terrapods again. I appreciate it.

I want to ask an issue of Mr. Drevna about ocean acidification. Mr. Drevna, you represent the National Petrochemical and Refiners Association. There are a lot of great people who work in your organization; hardworking, diligent Americans. We respect their work.

But I want to ask you about the consequences of our burning of oil, for our oceans specifically. The scientific community that I am talking to are telling me that when you burn oil, carbon dioxide goes out of your tailpipe; it goes into the atmosphere and into the oceans and into solution in the oceans. And when it goes into solution in the oceans it makes acid. And the scientific community that I have talked to said it is scientifically, absolutely clear, with zero doubt, that our oceans are 30 percent more acidic than they were before we started to burn fossil fuels, and that there is a likelihood of disruption in certain critters of the sea that could be very, very significant.

We had a picture I showed earlier of what happens when you expose the very base of the food chain. It melts, because the

waters are becoming so acidic by the year 2100. I guess the question is: Does your industry recognize ocean acidification as a problem, and do you agree that the science is clear in this regard that carbon dioxide does acidify the ocean, and it comes in part from your industry?

Mr. Drevna. Mr. Inslee, I am not a climate scientist and never portrayed myself as one. What I am discussing today is what we have to do in, I believe, a systematic approach on energy policy. I think the question has to be asked. And I could maybe categorically state if this were a Lower 48 climate problem, perhaps some of these things that we are talking about today would be beneficial. It is a global -- my understanding is it is global climate.

My understanding also is that in EIA projections between now and the next 4, 5, 6 decades, the globe is going to continue to be dependent upon fossil fuels, including petroleum, to a great extent. Our position is, let's look at what makes economic sense for the country.

I have described our energy policy here in the United States as a children's soccer team. We look at the energy source de jour, and we all gather around that. And 5 or 6 years ago, it was hydrogen; then it was ethanol.

Hey, the electric vehicle, all these things have benefits; but let's do it in a systemic, economically viable way and not rush to get ourselves off on something the rest of the world is

going to do, to our economic detriment.

Mr. Inslee. Thank you. If you hear anything different than all the best of the world scientists, let me know because I think we have got a problem. Thanks.

Mr. Markey. The gentleman's time has expired.

The chair recognizes the gentleman from Michigan, Mr. Upton.

Mr. Upton. Thank you. Mr. Smith welcome, nice to see you again. I am cochair of the Auto Caucus, second largest caucus, a bipartisan caucus, and I am a very strong supporter of electric hybrids. And for me -- I stepped out briefly to talk to the president of Western Michigan University. He was in town, really on this issue to a degree, but one of the things that I have seen Western Michigan University do is they have begun to transform their utility fleet in fact to electric vehicles. They have their own power plant in Kalamazoo, they charge them up at night. They are perfectly quiet. I think they operate, as I recall, at about 2 cents a mile versus the old costs. Obviously they are perfectly quiet; they are able to do all of the activities within the campus, and it is a sizable campus. And the cost for these new vehicles was almost the same -- meaning the initial cost, purchase price -- as the older vehicles that they replaced.

I am also very fortunate to have Eaton in my district, a very large truck engineering firm in Galesburgh, Michigan, just outside of Kalamazoo. I have gone to see their electric hybrids and what they want to do with the utilities, so you don't have to have the

vehicle with the arm up as they are fixing the wires -- or whatever it is that they are doing -- running on that diesel all the time. It has got the hybrids and it is significant savings, but the cost is higher per vehicle.

Mr. Smith, you have indicated about, what, 15 vehicles, electric hybrids, that are now within your operation?

Mr. Smith. We have 15 all-electric, but --

Mr. Upton. I know you have a zillion vehicles.

Mr. Smith. We do have over 70,000 in our operation. But I am not sure you are aware of this; that the hybrid that you mentioned in Eaton was developed in partnership with FedEx.

Mr. Upton. I have seen them.

Mr. Smith. We have about 300 of those in service. We have one of our express pick-up and delivery locations in the New York City area which is completely hybrid. They are very --

Mr. Upton. The range is 100 miles; is that right?

Mr. Smith. The all-electric is a hundred miles. The hybrid electric is the same as the conventional powered vehicle. We get about 40 or 50 miles on the electrical charge, and then you use the conventional engine. The problem with the hybrid that we are just discussing is the capital costs, because you in essence have two power plants reciprocating. I mean, internal combustion and electric make the capital cost very difficult to overcome unless the price of diesel is up in the $5-1/2 area.

The all electric, on the other hand, which would be obviously

shorter range, the one I came over in here today, has about a 100-mile range. But presumably if the battery cost performance goes down on a curve, Mr. Wolf and I think that it -- I should say, in my case, our experts think; he probably has real knowledge. I am just telling you what our people think. Then in about someplace between 2 to 4 years, the all-electric pick-up and delivery vehicle, utilized in an environment where its range is not an issue to us, would have a positive return on investment and be competitive pricewise when you take operating and capital costs. So the hybrid, like the Eaton FedEx truck, has a capital cost barrier that is hard to reach.

Now, there is a third iteration, of course, which is the approach that Chevrolet has taken with the Volt. There you have the electric power as the primary engine, and you have a small internal combustion engine you use as a generator. I personally think that has an enormous amount of promise. And some combination of all-electrics and the Chevy Volt approach --

Mr. Upton. They actually think the Volt will be a good number of them. Because of the range, it will never use an ounce of gasoline, and it will always be on the electricity because it uses the backup --

Mr. Smith. Right.

Mr. Upton. The question I wanted to get to, even with the Volt, 50,000 vehicles will be sold this year, particularly on the east and west coast and here Washington as well. They still

predict that by the end of this decade, they are not going to -- with all the electric hybrids -- not be able to penetrate more than a 15 or 20 percent market share. And so we will still rely significantly then on the petroleum-based vehicle. So it is going to take some time to get where maybe a lot of us want to go.

Last question, Mr. Drevna, and then I am out of time. We had this testimony last year from Lion Oil, that if the clean air bill goes through, 1,200 jobs that are going to be moving out to a new refinery in India. We all care about the planet, we all do. What is the cost of the regulation per unit of fuel in this country versus someplace else that won't have these regulations, that one of those jobs might go? Do you know?

Mr. Drevna. I could hope to get that back to you in writing. I don't have that with me today. I can tell you, though, that the market is won and lost on pennies, and just driving up the cost of domestic production, given the state that the domestic refinery and petrochemical industries economic state we find ourselves in today, and for the foreseeable future, that it is no secret that India, with their plant in Reliance, are looking at the United States to export vast quantities of fuel at the domestic refiner's expense.

Mr. Markey. The gentleman's time has expired. The gentleman from Vermont, Mr. Welsh.

Mr. Welsh. Thank you very much, Mr. Chairman. A few questions, Mr. Drevna. I am sorry I wasn't here for your

testimony, but had a chance to review it. I want to make sure I understand it.

You did testify that the best energy policy is one that creates a level playing field; is that more or less right?

Mr. Drevna. Absolutely, sir.

Mr. Welsh. It allows the most cost-competitive form of energy to win out.

Mr. Drevna. Correct.

Mr. Welsh. Page 5 in your testimony stated: NPRA members paid billions of dollars in taxes rather than consume billions of taxpayers subsidies. Correct?

Mr. Drevna. That is correct, sir.

Mr. Welsh. So here is a question that I think a lot of us struggle with. I want to ask if NPRA would support the removing of several subsidies in the Tax Code which some folks think would provide a level playing field.

Let me go through these. My understanding is that section 199 of the domestic production incentive provides a tax rate reduction on refinery income; and that subsidy is, according to CBO, expected to cost taxpayers about 14.8 billion for 10 years for the oil and gas industry. Would your association support repeal of that tax subsidy as it applies to energy companies?

Mr. Drevna. Absolutely not, sir. And let me tell you, if you recall the genesis of the section 199 credit, there was going to be a WTO charge against the United States on the subsidizing

unfairly domestic manufacturing, of which refining is, all manufacturers, whether you are producing gasoline or loaves of bread. So in the Jobs Act --

Mr. Welsh. Let me interrupt you, and welcome back. I just want to go down some of these. What I understand you saying is you think there is a reason --

Mr. Drevna. There is a very valid reason.

Mr. Welsh. So you oppose repeal?

Mr. Drevna. Yes.

Mr. Welsh. The Tax code, as you know, includes a bonus depreciation provision for oil refineries, and it allows refiners to immediately write off 50 percent of the capital cost of certain refinery expansions. That is the benefit that the CBO estimates will cost taxpayers 3.5 billion over the next 5 years. Would your association support repeal of that energy tax subsidy?

Mr. Drevna. No, sir. And the history of that was the EPAC 05, in the negotiations in this very room on the best path forward to continue to provide domestic --

Mr. Welsh. So you not only oppose repeal but you defend extension?

Mr. Drevna. Yes, sir.

Mr. Welsh. Finally, I understand that until recently a tax credit was available for complying with EPA's low-sulfur diesel requirements, and an extension of this credit is included in a pending Senate tax extenders bill, which I am sure you are aware

of. That is estimated to be a $20 million cost to the taxpayers. Does your association oppose the extension of this energy tax subsidy?

Mr. Drevna. Oppose the extension? No, sir.

Mr. Welsh. So you like that one, too?

Mr. Drevna. Again, sir, in a vacuum you look at each one of these things and say, what are they? But when you look at the history of them --

Mr. Welsh. Well, I get it; you are here doing your job and you have a case to make for why these tax subsidies should be extended to your industry. And you are representing the refiners, and it is your job to help them look out for their viability and bottom line.

Obviously, we in Congress, both sides of the aisle, have a broader set of concerns. The energy policies have to factor in the things you raise -- national security, environmental protection and consumer protection. So what is one person's subsidy is a competitor's disadvantage.

So the question that I think is begging is whether there is a level playing field when there are taxpayer subsidies that apply to one form of energy but are denied to another form of energy.

Mr. Chairman, I yield back.

Mr. Markey. The gentleman's time has expired. The chair recognizes the gentleman from Texas, Mr. Burgess.

Dr. Burgess. Thank you. Mr. Smith, if I understood the

figures you gave us a few minutes ago correctly, you have 70,000 vehicles in your overall fleet and, of that, 300 hybrids; is that correct?

Mr. Smith. [Nonverbal response.]

Dr. Burgess. Peterbilt Company in Denton, Texas makes a great hybrid. I would encourage you to look at that. They get great mileage, and they are quiet, and low-emission vehicles, which is critical in our part of the world, because we do have some air quality issues. Did you give us a figure on the number of total electric vehicles you currently have in your fleet?

Mr. Smith. We have, I think, 15 in Europe that we are running experiments on in prototype, and we have four that we just put out in Los Angeles which we will be running the experiments on. Again, they are definitely not cost-effective from a capital standpoint at this point.

Dr. Burgess. Out of curiosity, what is the cost currently of an all-electric vehicle for your purposes?

Mr. Smith. I think we have a non-disclosure with the manufacturer, but let me put it this way. If you take an equivalent size van, which is roughly a Freightliner or Sprinter, and you take the all-electric vehicle, it is about 2-1/2 times the capital cost; but 70 percent, perhaps more, of all-electric is the battery cost. So if it comes down the price performance curve that we projected, you get out about 4 or 5 years and you have a positive return from the all-electric.

Dr. Burgess. Sure. The cost of chassis and the frame is not going to be any different.

Mr. Smith. No, it is not any different.

Dr. Burgess. And with electric vehicles, ultimately, at least in my part of the world, you are charging that with electricity; but the electricity is not a gift, it is generated by burning natural gas and coal in most Texas power plants.

We have one nuclear plant in Comanche Peak which I understand is going to be expanded, and I am grateful for that. But we have lost 25 or 30 years of nuclear technology by taking ourselves out of that. And it would seem to me that a power grid, supplied by a nuclear plant which was providing the baseload, really would be -- if we were talking about a carbon-neutral environment and a fleet that is of electric vehicles for the type of deliveries that you do, that would be the almost ideal situation, would it not?

Mr. Smith. Well, in the Energy Security Leadership Council report that I referenced, we strongly endorse nuclear power. And you are completely correct that that would be a zero-emissions production of power and a zero-emissions from the vehicle that was powered by the nuclear power plant.

But it is also important, which is in the Electrification Coalition's report that I mentioned, we have the capability in this country to power many, many millions of electric and hybrid electric vehicles with the off-peak power production that we already produce with the coal plants or natural gas plants or what

have you. And the reason for that is that the power can't be stored during the night, so it is just a matter of relatively. And I don't mean to minimize the complexity of it. But it is relatively easy to modify the infrastructure and the charging stations at the homes or the apartment to do it.

Dr. Burgess. Let me move on quickly now. Have you looked at those in your business -- have you looked at the use of natural gas for your heavy vehicles, your cross-country vehicles?

Mr. Smith. We have. And our belief is that the best use of natural gas is for heavy, centrally fueled vehicles, like garbage trucks, buses, and so forth, or for the generation of electric power. Long-haul truck transportation, whether it is fine products or Peterbilt or Freightliner or so forth, are probably better served, in our opinion, by the advanced diesel technologies because of the infrastructure problems.

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DCMN BURRELL

[1:30 p.m.]

Mr. Burgess. But of course the infrastructure problem is something that, regardless of the fuel of the future and recognizing that hydrocarbons are going to be the transitional fuel for a while, but the fuel of the future is going to require an infrastructure investment. And whether we call it investment or subsidy, it is going to be required.

But I do agree that we, in Congress, really should not try to pick winners and losers. That ultimately should be decisions based, just as you are doing it right now, based upon what is economically viable for your company. It is hard enough to make a living today without us complicating it for you.

If I could just ask you one quick question. And we understand the problem with climate change is a global problem. And I certainly appreciate your service and appreciate the wisdom that you have brought for us today.

When I visited with the Iraqi oil minister, I believe his name is Dr. Shahirstani, he is a Harvard-educated petroleum engineer, he assured me that none of Iraq's oil was going to be -- was involved -- there were no Chinese contracts involved with Iraq oil. And yet I hear from individuals like yourself coming back that the Chinese were all over Basra in 2005, 2006, looking to tie up oil contracts.

Do you have any insight for us as to what is going on there?

Lieutenant Diamond. I don't have any firsthand knowledge of Chinese presence on the ground in my time in the country, sir.

Mr. Burgess. And, again, I appreciate the problem. We want to produce American energy for a security standpoint. But on a global standpoint, from the carbon production and the pollution, we do have to be mindful of what is happening in those other countries.

Lieutenant Diamond. Absolutely. You see a Chinese Navy now that is looking to make a global presence and building itself aircraft carriers and submarines that are defending their own energy, free flow of energy around the world. Yes, sir.

Mr. Burgess. Thank you, Mr. Chairman. I yield back.

Mr. Markey. Great. The gentleman's time has expired. The chair recognizes himself for a round of questions.

Let me ask you this, Mr. Smith. And I think it is important for us to say because the gentleman from Texas and the gentleman from Louisiana who are here obviously want to protect the oil industry and Texas and Louisiana. We don't have any problem with the 8 million barrels of oil a day that are produced here in the United States. Do we?

Mr. Smith. No, Mr. Chairman. In the Energy Security Leadership Council report, which we produced -- and, remember, there were 10 four-star generals and admirals who had spent a great percentage of their careers protecting the oil trade, as the

Lieutenant exemplifies in more recent times, and the businesses were large energy consumers like us and Southwest Airlines, Royal Caribbean. The basis of the recommendations we made were, number one, maximize U.S. domestic production of oil and gas for sure. So it is definitely not in conflict with that at all.

Mr. Markey. You support President Obama's decision to begin to open up additional parts of the Outer Continental Shelf?

Mr. Smith. Absolutely.

Mr. Markey. So your problem is with the OPEC oil.

Mr. Smith. Our problem is that the oil market is not a free market. It is managed by OPEC in a manner which, if it were done in the United States, would be illegal with supplies withheld and the market price -- with their attempt to set the market price. The problem is it then becomes a social geopolitical weapon or an issue between us and China. And, by the way, we have huge operations in China. Been there 25 years, fly many 777 flights there every day.

So this oil problem for the first time is different, because it is being driven by demand increase and not just by supplies being withheld. And those are the seeds of a future confrontation among the nations of the world and why we need to minimize the importation of petroleum and fossil fuels in this country from potentially unfriendly regimes.

Mr. Markey. So could you talk a little bit as a result about the economic impact on the United States of having the price of

oil set overseas in terms of its equivalence from being attacks on individual Americans. Because I think that is an important translation for the American people to hear. They are economically impacted by having this price of oil set overseas.

Mr. Smith. Well, the costs are incredible, really. The Department of Energy did a study, and the estimate in real dollars between 1970 and 2008 of our dependence on foreign petroleum was over $5 trillion. In 2008, when the price of oil ran up to $147 per barrel in the summer, the price that year was about $600 billion total to our economy, and it was $388 billion in terms of adverse balance of trade and it was about 56 percent of our total trade deficit. It was enormous.

Mr. Markey. So this oil that we import -- again, and this is just for the members from Louisiana or Texas or other oil producing States. We are not talking about that oil. None of this discussion is about Louisiana or about Texas. It is about Saudi Arabia, it is about other countries that we import the oil from. That is the strategy that we are trying to construct that deals with that issue. So we are not in any way trying to deal with this domestic industry.

So talk a little bit, if you could, about what that balance of payments issue means in terms of the American economy as well. What is the economic impact on our country?

Mr. Smith. Well, in the summer of 2008 -- people forget this, at their peril -- while the great financial meltdown was

because of the subprime mortgage situation, and that was the bonfire that almost consumed us, the match that lit it off was the run-up in fuel prices, where the subprime borrowers of these mortgages literally had to make the choice between making the mortgage payment or paying for the gas to go to and from work.

It is also important to recognize that each of the four other major recessions that the United States has experienced from 1973 forward was precipitated by a significant run-up in oil prices.

Mr. Markey. And you believe that the recession that we are still in was precipitated by that run-up to $147 a barrel?

Mr. Smith. No question that that was, as I said, the match that lit off the financial meltdown in the summer of 2008.

Mr. Markey. And, again, that didn't have anything to do with Louisiana or Texas or Arkansas' oil production. That had to do with what was going on overseas that put us at the mercy of OPEC.

Mr. Smith. No question.

Mr. Markey. So I just think that is important going forward, that we continually divide this question between the 8 million barrels of oil that we produce here and the 11 or 12 million barrels of oils a day that we import, again, as Lieutenant Diamond said, from places that we probably should not be importing them from.

Lieutenant Diamond, would you care to comment?

Lieutenant Diamond. Just a fact, Mr. Chairman, when you talk about cost, for every $5 increase in the price of a barrel of oil,

that costs the Department of Defense $1.7 billion. That is larger than the procurement budget of the United States Marine Corps. So when you talk about the scope of price impact on the Department of Defense, it is tremendous.

Mr. Markey. So repeat that again. And that goes right down to the American taxpayers.

Lieutenant Diamond. Exactly.

Mr. Markey. So explain that a little bit more.

Lieutenant Diamond. So for every $5 increase in the price of a barrel of oil, that costs the Department of Defense an additional $1.7 billion in energy costs. That is more money just spent on energy costs than we actually are spending on procuring equipment and bullets and tanks for the Marine Corps.

Mr. Markey. So that comes right out of our defense budget?

Lieutenant Diamond. Right out of our troops' pockets, is what I am trying to say, sir.

Mr. Markey. So that is terrible. So there is no question that we need a plan that we put in place to have a different pathway for our consumption of oil from a national security perspective.

And, Mr. Wolf, Israel has made that decision: They do not want to import oil.

Mr. Wolf. Israel has made the decision that, by 2020, to be oil independent, which doesn't mean that their local production, which someone said is zero, they have some production. It doesn't

mean that they are going to stop producing locally.

And one point to just clarify the linkage between economics and oil, in the last 12 months we have seen the most nascence of economic recoveries, and the price of oil has recovered 70 percent in the last 12 months. So we have to see that linkage and ask ourselves, what is the size of the next stimulus that we have to put if we reach those heights that we did in 2008.

Mr. Markey. My time has expired. Let me turn and recognize the gentleman from Louisiana, Mr. Scalise.

Mr. Scalise. Thank you, Mr. Chairman. I am glad we are talking about this issue, because in fact many of the policies that are being proposed by this administration that are threatening America's energy security. And when we talk about wanting to reduce our dependence on foreign oil, and especially Middle Eastern oil, I strongly agree with that. The problem is, many of these policies, like cap-and-trade, this energy tax, like the removal of tax incentives to explore in America, are going to make us more dependent on foreign oil. And so some of the same people who keep saying, because it sounds good to them, I guess, that they want to reduce our dependence on foreign oil, are proposing policies that would make us more dependent on foreign oil. And so we have got to be clear about how the policies adversely affect our energy security. And we are seeing some of those things play out right now.

And I want to ask Mr. Drevna, when we talk about this EPA

finding -- and we had EPA Administrator Jackson here earlier today -- as they try to regulate greenhouse gases, what kind of impact does that have on American energy exploration?

Mr. Drevna. Well, I can talk about what impact it will have on American domestic refinery production. What the -- and the tailoring rule will do is naturally it will exempt for a while a lot of sources, and it will focus on larger sources. And we can debate whether that is legal or not and whether it is congressional intent or whatever.

However, just to simply have a greenhouse gas CO2 requirement will automatically -- on these resources and refineries and petrochemical facilities, it will automatically make you go through a PSD review. Now, PSDs are going to say, well, whatever you increase, whatever it is above that threshold, you have got to put the best available control technology on. Well, in a refinery or petrochemical facility, what is best available control technology for CO2?

At the same time, where we are making cleaner and cleaner fuels that require more and more robust kinds of processes, hydro-treaters, that actually increase CO2.

So we are caught in this vicious circle that says, okay, we are going to put back on a refinery that doesn't exist -- that the back doesn't exist. But you are going to have to increase your CO2 emissions because we want you to make cleaner and cleaner fuels. There is only one way of doing it, and you are going to

have to reduce production. And the question --

Mr. Scalise. And if we reduce production, where would that go?

Mr. Drevna. Well, it is going to go overseas.

Mr. Scalise. What countries would be primarily the beneficiaries of a cap-and-trade energy tax?

Mr. Drevna. As I said before, India and that Reliance Refinery there is a massive, massive facility with a target on the United States.

Mr. Scalise. And so, in walking all the way through this, as countries like China and India take more of our jobs from these reckless policies, what are the environmental regulations that a country like India has on refining? Would they be refining with these same kind of emission standards?

Mr. Drevna. Not when it comes to CO2 or not when it comes to the other myriad of environmental rules that we have here.

Now, I am not saying that these plants aren't efficient and clean. But they don't have the myriad of rules that we do. And this is a good hearing to talk about this, because we are talking about reducing our reliance on foreign oil, but a lot of these policies are going to increase our reliance on foreign imported products, finished product, not crude oil, but the gasoline and the components that make up gasoline.

Mr. Scalise. And the irony is the jobs that would go to those countries, I mean, we have seen numbers. National

Association of Manufacturers says cap-and-trade energy tax or similarly some kind of EPA ruling would cost millions of jobs just in the first year that would leave our country. But the irony is, for the folks who say they want to go and reduce greenhouse gas emissions because that is destroying the planet with global warming, you would have increased greenhouse gas emissions, because when China gets those jobs, when India gets that refinery, they are actually going to be emitting more greenhouse gases than if that was done here in the United States.

So we lose jobs and we lose billions of dollars in our economy, surely at a time when we want to be doing the opposite; we should be creating jobs. But what is worse is we have an increase in greenhouse gas emissions. So the folks that are running around saying man is destroying the earth, we need to have cap-and-trade, what they are going to do in effect is increase greenhouse gas emissions through their policies.

And I know you have talked about it. We have other companies and industries that have come and laid it out, and we are seeing it. We are seeing companies already pull back and start moving operations overseas.

In south Louisiana there is a steel plant that is going to go one of two places, they are going to go in south Louisiana or they are going to go to Brazil. And the irony is, in Brazil they would get over 700 good high-paying jobs that we otherwise would have had, $2 billion, with a B, $2 billion of private investment, not

government bailouts, private investments. And it takes four times the amount of carbon -- four times the amount of carbon -- to produce steel in Brazil than it would in the United States under our current rules. And so you would actually increase emissions.

And one last thing. The National Highway Traffic Safety Administration, they have said that they have the authority to establish their own CAFE standards without the EPA doing their own thing. I have got a letter from the National Automobile Dealers Association talking about that that I would like to have unanimous consent to enter it into the record. I know we don't have time to talk about it.

Mr. Markey. Without objection, it will be included in the record.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Scalise. Thank you. And I yield back.

Mr. Markey. The chair recognizes the chairman of the full committee, the gentleman from California, Mr. Waxman.

Mr. Waxman. Thank you very much, Mr. Chairman.

I am trying to think through the cost to this country of ever increasing oil prices. Between 2001 and 2008, the average household doubled its spending on gasoline. That is 7 years. And many of us remember the soaring costs that we had in the fall of 2008 when gasoline prices reached more than $4 a gallon, and may be coming back as our economy improves.

Now, there are companies that rely on oil in the course of their everyday business, and they certainly feel the impact. If these companies feel the impact, they have to figure out how to deal with it and may have to close up. That is a loss of jobs.

Now, there is a cost not just to the individuals and the businesses, but to the taxpayers. For instance, the RAND Corporation estimated that the cost to American taxpayers of protecting oil interests abroad at between $67 billion and $83 billion per year. That is a lot of money.

So, Mr. Smith, let me start with you. You testified that while oil prices are lower today than they were last summer, many of the fundamentals that pushed oil prices up are still present today. Can you tell us how important fuel costs are to a company like yours and why it is in the Nation's economic interest to

adopt a clean energy policy?

Mr. Smith. Well, Mr. Chairman, FedEx Corporation is about a $36 billion corporation, and we are one of the largest fuel users in the country. I think combined jet fuel, obviously our express company is an enormous user of that. It is the biggest air transportation system in the world and certainly the biggest all-cargo network in the world. So we burn in excess of 1.5 billion gallons of fuel every year, and the cost is a major consideration for us.

But the consideration is much greater in the damage that it does when prices run up to the overall economy than to just our company, because what we do is we have an established fuel price and then we adjust it each month based on the run-up or the run-down on fuel prices. Now, over the years we have had to vastly increase that base price.

But as I mentioned a moment ago, the difference this go-round compared to the other major oil crises since 1973 -- and I have lived through all of them. It is for the first time this is a demand-driven situation, where the rise of China and India and the other developing nations and geopolitical considerations mean that there is likely to be significant spikes in the price of oil like we experienced in 2008, right before the financial meltdown, or military confrontations over the issue. People forget at their peril that World War II for this country was triggered by the United States embargoing oil to the empire of Japan. That is what

caused -- the proximate cause of the war.

So we need as a country to reduce our dependence on petroleum imported from unstable and unfriendly regimes in parts of the world. And with that, not only do you get increased national security, better economic productivity, but as far as we can see, the technologies that can do that will vastly improve the environment as well. So you get a troika there.

Mr. Waxman. It is a win-win.

Mr. Smith. It should be a win-win.

Mr. Waxman. Do you buy this argument that Mr. Drevna is making that the oil companies will have to go overseas, they will have to locate overseas, we will lose domestic jobs?

Mr. Smith. Well, I am not an expert on his sector. I think it is the chemical processing companies that are probably, and the refineries, that are most at risk.

What we have advocated is maximization of U.S. oil and gas, as well as nuclear power, battery power, wind, solar. In fact, we have I think with our installation in New Jersey at our Woodbridge FedEx ground hub, I believe that is the largest solar industrial location in the country at present.

So we have got to do all of those things. I just don't know enough to speak authoritatively about his sector.

Mr. Waxman. Well, you are looking at it from the impact on your company and the economy and Mr. Wolf is looking at what it will cost consumers if we move away from oil, and it would be a

huge benefit. And, Mr. Diamond, you have firsthand experience in the military guarding Iraqi oil terminals. And I want to commend you for your service to this country. I guess your salary was part of that what RAND estimates $83 billion per year protecting our access to oil. And I think, if we reduced our dependence on oil, that can mean a lot in terms of savings for the Armed Services and limiting our involvement in places where we will not need to be. Is that right?

Lieutenant Diamond. Absolutely, Mr. Chairman. And also, not to sound over dramatic, but the military also measures its cost in human lives when you are talking about our involvement overseas, not just dollars or jobs.

Mr. Waxman. Well, clean energy legislation would deprive Iran of $100 million a day in oil revenues. And what are they using that $100 million a day to do? It is not in our interest that they have that money to spend to become a military force that can threaten our allies like Israel and interests of the United States elsewhere in the Middle East, and maybe even the United States itself.

Thank you very much, Mr. Chairman. I yield back the balance of my time.

Mr. Markey. The gentleman's time has expired. The chair recognizes the ranking member of the full committee, Mr. Barton.

Mr. Barton. Thank you, Mr. Chairman. The beauty of television, I could watch Mr. Waxman in my office and for once I

timed it just right. I had a very nice lunch, too. So I am glad you all were here while I was eating lunch.

Mr. Markey. I don't think our witnesses wanted to hear that.

Mr. Barton. I know. We do appreciate each of you gentlemen being here. I know it has been a long day.

I want to start with Mr. Drevna. You talked in your statement about the form of energy that delivers a BTU at the lowest economic cost and that a free market economy wins. Does economic growth in this country depend on the source of the BTU or the cost of the BTU?

Mr. Drevna. I think it depends upon the cost. I mean, the American consumer deserves the most efficient, the least cost approach. So I would like to clarify something here. Let's make a difference between the imported crude and its effect on the economy.

The domestic refining industry is the first customer to be impacted by high-priced oil, and you have seen the results of this impact and what the state of the industry has been since it went up to $147 a barrel, and then with the recession. You know, we don't like paying high prices for oil any more than the consumer at the pump.

So, I mean, the programs -- and I agree wholeheartedly with Mr. Smith's comment. I think I said it, and if I didn't state it clearly enough, I will try to repeat it. We have to cover the field. We have to make sure that the U.S. energy policy provides

the proper incentives for the entrepreneurs to develop these kinds of technologies. But we can't flip a switch and automatically transform ourselves into a non-oil reliant country. We have plenty of resources here in the United States. Let's start using them and end that reliance on so much imported oil.

But even at that, you have got to realize where the imported oil comes from. Most of it comes from North and South America. And if we do our own resources, we can put a big dent in that, in the rest of our imports.

Mr. Barton. Mr. Smith, I didn't read your testimony, so I am kind of shooting in the dark here, which is not a good thing. You should know the answer to the question you ask before you ask it. But I know a lot of your reputation as a straight shooter, so I am going to take a shot and see how you respond.

Have you followed the endangerment process that the EPA has used to come up with their endangerment finding?

Mr. Smith. Not to the extent that I was exposed to it this morning. But I got a pretty good tutorial on it.

Mr. Barton. Well, Administrator Jackson admitted that if you find that the endangerment finding is not done properly; in other words, if you repeal that or dispose of it, under current law the EPA does not have the authority to regulate CO2 as a pollutant under the Clean Air Act. If you put a price on carbon because of this endangerment finding, it is obvious that you are going to raise the price of doing business for a business like yours, which

I don't know what your cost of aviation fuel is, but it has got to be -- and your trucks on the ground, but it has got to be a considerable cost of business. So anything to regulates CO2 is going to raise your business cost.

Do you feel you know enough to give an opinion whether the endangerment process that the EPA has used is appropriate or not?

Mr. Smith. I am not qualified to make that statement one way or the other.

Mr. Barton. That is fair. Did you put in your testimony anything about what the cost to your business would be of putting a price on carbon under the proposed Waxman-Markey bill?

Mr. Smith. No. I didn't put anything in the testimony. I did say, when you were out of the room, though, that FedEx Corporation is roughly a $36 billion company, and we are the largest air cargo, air transportation system by far and we operate over 70,000 vehicles. So we burn north of 1.5 billion gallons of fuel. So anything that increases the cost of energy obviously would affect us. But, much more importantly, since the way we handle this is to have a base price of fuel in our rates and then pass along increases with fuel surcharges, the effect would be to our customers even more than us.

Mr. Barton. Is there anything in the research phase that takes the place of hydrocarbon aviation fuels as a fuel source for your airplanes?

Mr. Smith. Well, the answer to that is, from a technical

standpoint, absolutely yes. The aviation industry has shown that jet fuel is made from Jatropha, from Camolina, and from algae can be intermixed with Jet-A. And the fuel efficiency, in other words per BTU of power produced by the gallon of the biojet, is actually greater than the Jet-A and it burns cleaner.

So the technical issue is really not much in question. I think the Lieutenant mentioned that the Navy flew an F-18 Hornet and they called it the Green Hornet just the other day.

So from a technical standpoint it can be done. The issue is whether you can get the cost of production to a cost effective level.

Mr. Barton. Thank you. Thank you, panelists, and thank you, Chairman Markey.

Mr. Markey. Thank you, Mr. Chairman, very much.

We were about to complete the hearing, but the gentleman from Illinois.

Mr. Shimkus. Mr. Chairman, I said, with respect to you and the staff in the next hearing that is supposed to be starting in about 1 minute, I will forego any further questions.

Mr. Markey. And will the gentleman from Kentucky also take that position?

Then let's do this. We will wrap up the hearing this way. We are going to ask each one of you to give us the 1 minute you want us to remember from your testimony. We are going to do it in reverse order of your original testimony. We will begin with you,

Mr. Drevna.

Mr. Drevna. Thank you, Mr. Chairman. One minute. Okay. I think that there is a lot of misunderstanding and miscommunication as to where the energy is going to come from for this country going forward. I think -- I believe that, as I said before, we have got to make a decision: Do you want to continue a strong, robust domestic refining and petrochemical industry here? And, if we do, we can certainly work toward alternatives and we can certainly work toward supplements. But for a long time we are going to be dependent upon the hydrocarbon molecule. And the people who can deliver that molecule at the least cost are going to be the economic winners, and I sure hope it is the good old USA and not some foreign nation.

Mr. Markey. Thank you, Mr. Drevna. Lieutenant Diamond.

Lieutenant Diamond. It would certainly be the takeaway, sir, that, again, these current conflicts where America has put itself in a position of funding both sides of this war on terrorism due to its reliance on overseas energy supplies, sir.

Mr. Markey. Thank you. Mr. Wolf.

Mr. Wolf. I think the thing we might be missing here, which is important, is we are looking very internally focused on the U.S. The electric mile today versus a gasoline mile, which is that cost element that is so important, is actually cheaper in most of the world and is also cheaper in the U.S. today.

So I would leave you with the fact that at $3 a gallon --

even at $3 a gallon, which is half the price of Western Europe and a lot of developed countries that are moving ahead, the electric mile is cheaper. It is that history of infrastructure around gasoline that is not being developed. And once you develop that infrastructure, you can actually access those marginal electric miles.

Mr. Markey. Thank you. And Mr. Smith.

Mr. Smith. Well, I would simply reiterate that we feel strongly that the electrification of short-haul transportation with plug-in electric and hybrid electric vehicles offers a substantial opportunity for the United States if the Electrification Coalition's recommendations were adopted by the Congress to reduce our petroleum consumption per unit of GDP, reduce the emissions as a consequence of that even when looking at the power generation of the electrical power for the electrified vehicles; and, finally, would significantly reduce the economic and national security challenges that will undoubtedly occur if we do not take some very strong measures to accomplish the goals that we have been discussing today.

Mr. Markey. Thank you, Mr. Smith, very much.

And I would just like to say to you, Mr. Smith, that we very much appreciate your leadership in increasing the fuel economy standard from 25 to 35 miles a gallon. I don't think it would have happened without you and your organization, Mr. Diamond -- the other Mr. Robert Diamond in the room behind you back in 2007.

We had that fight in 2001 on the House floor, only 155 votes; 2003, 168 votes; 2005, 178 votes. I know, because I was making that amendment with Mr. Boehlert. When the price really started to spike in 2006, we were not allowed to have that vote up on the House floor. But because of you and your organization, we have made that breakthrough. And I think we have seen the technological revolution already unfold. And the same thing we saw in telecommunications. Alexander Graham Bell invented his phone, and we were all still using black rotary phone 100 years later. It was only after this committee and the Justice Department acted that we changed the incentives that moved us from black rotary dial phones to BlackBerries. It only happened in 10 years after everyone said we could not do it.

So I think when America has a plan, America wins. And I saw you checking that BlackBerry in the course of this hearing. And, by the way, the members of the committee are very proud that you can check your BlackBerry.

Mr. Smith. I was afraid I said something wrong, and Gene sent me a message saying shut up.

Mr. Markey. No more tapping on the shoulder.

Mr. Wolf. That is a Canadian technology. This is an American technology.

Mr. Markey. But that revolution in telecom happened because we changed the policies in this committee. And what we are seeing in the automotive sector is the same thing. And I think if we

just put together a plan America won't have to try to keep China out because we will be taking them on. We will have a plan, and we will win. America wins when it has a plan.

Anyway, thank you all so much for your testimony today. With that, and with the thanks of the committee, this hearing is adjourned.

[Whereupon, at 2:05 p.m., the subcommittee was adjourned.]