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THE AMERICAN ENERGY INITIATIVE

TUESDAY, JULY 17, 2012

House of Representatives,
Subcommittee on Energy and Power,
Committee on Energy and Commerce,
Washington, D.C.

The subcommittee met, pursuant to call, at 3:00 p.m., in Room 2123, Rayburn House Office Building, Hon. Ed Whitfield [chairman of the subcommittee] presiding.

Present: Representatives Whitfield, Shimkus, Terry, Burgess, Scalise, Gardner, Pompeo, Griffith, Barton, Upton (ex officio), Rush, Castor, Markey, Green and Waxman (ex officio).

Staff Present: Charlotte Baker, Press Secretary; Anita Bradley, Sr. Policy Advisor to Chairman Emeritus; Maryam Brown, Chief Counsel, Energy and Power; Andy Duberstein, Deputy Press Secretary; Cory Hicks, Policy Coordinator, Energy & Power; Heidi King, Chief Economist; Ben

Lieberman, Counsel, Energy & Power; Mary Neumayr, Senior Energy Counsel; Chris Sarley, Policy Coordinator, Environment & Economy; Charlotte Savercool, Executive Assistant; Lyn Walker, Coordinator, Admin/Human Resources; Michael Aylward, Minority Professional Staff Member; Phil Barnett, Minority Staff Director; Greg Dotson, Minority Energy and Environment Staff Director; Caitlin Haberman, Minority Policy Analyst; and Alexandra Teitz, Minority Senior Counsel, Environment and Energy.

Mr. Whitfield. I would like to call this hearing to order. This is the 26th day of our hearings on the American energy initiative. Last week we held a day of hearings on the alternative fuels and vehicles that focused on nongovernmental perspectives. We did not complete that hearing so today we are going to hear three governmental perspectives: The Energy Information Administration and projections on alternative fuel and vehicle trends from them; the Environmental Protection Agency, which implements several rules and several fuels and vehicle programs, like the renewable fuel standard and CAFE greenhouse gas standards for cars and trucks; and the Department of Energy, which heads up the federal research efforts on alternative fuels and vehicles.

Among the things we hope to explore today is the proper role for the government in spurring innovation in alternative fuels and vehicles. Where the Federal Government is already involved, we need to monitor its progress and make revisions if necessary. For example, I believe that the renewable fuel standard created in the 2005 bill and expanded in the 2007 bill has worked well in several respects. The Nation has successfully ramped up ethanol and biodiesel production to meet the standards. Some believe there are challenges with the RFS that require congressional review.

EPA is also involved in fuel economy greenhouse gas standards for cars and trucks, and indeed, we expect a final rule for light duty standards for 2017-2015 very soon. We do need to scrutinize the impact of these standards. While they are going to improve fuel efficiency

and save money in that way, we know that they will also increase the price, the sticker price of automobiles, and we want to be sure the middle class Americans can still afford these vehicles.

The good news is that a variety of transportation alternatives are on the table; electricity, biofuels, natural gas, propane, et cetera. Each offers its own unique mix of potential economic, environmental or national security benefits, as well as cost and technical challenges that need to be overcome. So I look forward to our witnesses today on this last panel. I will introduce them right before we will receive their opening statements. And at this time, I would like to recognize the gentleman from California, Mr. Waxman, for his 5-minute opening statement.

[The prepared statement of Mr. Whitfield follows:]

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Mr. Waxman. Thank you, Mr. Chairman.

We are holding our 26th day of hearing on the American energy initiative. And what we will hear from the Republican majority I think will be disconnected from reality as have the other 25 previous hearings. For 18 months, the Republicans have tried to talk about energy policy without even mentioning, let alone addressing, the problem of carbon pollution and climate change.

Climate change is inextricably linked to our energy choices, and sound energy policy is critical to strengthening our energy security, boosting our economy, improving our international competitiveness, growing jobs, reducing pollution and protecting public health. We must tackle climate change and our other energy challenges together, or we will inevitably fail to achieve these goals.

The Republican's approach is like trying to make America more secure without acknowledging the threat of terrorism. It is like trying to improve our international competitiveness while pretending China doesn't exist. It is doomed to failure.

And that failure has a very high price. We are now starting to get a clear picture of the cost of unchecked climate change. The recent wildfires, drought, heat waves and extreme weather events, even in Kentucky, are exactly the types of extreme events that scientists have been predicting and that this committee has been ignoring.

According to the National Oceanic and Atmospheric Administration, more than 40,000 hot temperature records have been set this year. The past 12 months were the warmest 12-month period ever

recorded in the United States. At the end of June, more than 100 million people in the U.S. were in areas under extreme heat advisories. Two-thirds of the country is experiencing drought. And last week, the Agriculture Department declared a Federal disaster area in more than 1,000 counties covering 26 States, making it the largest disaster declaration ever made by the USDA. More than 2 million acres have burned in wildfires this year.

A recent study by NOAA and the U.K. Hadley Center found that due to climate change, the odds that Texas will experience an extreme heat wave like it did last summer are now 20 times higher compared to the 1960s. According to economists at the Texas Agri Life Extension Service, last summer's drought caused Texas agriculture \$7.6 billion. That is just a portion of the cost of one extreme event that was made far more likely by climate change.

But instead of tackling this problem, the Republicans have refused to acknowledge it. Representative Rush and I have written to Chairman Upton and Chairman Whitfield 15 times this year to request hearings on various climate change reports and topics. We have yet to get a response.

And the Republicans have done worse than just ignore climate change. They are actually pushing policies that would make it worse. The House Republicans have voted 81 times on the House floor to block action to address climate change and establish clean energy policies. Republicans have even voted to block the EPA carbon pollution tailpipe standards, which we will hear about today. As proposed, those

standards will save consumers on average \$4,400 at the pump, net a vehicle cost, as well as reduce carbon pollution by 2 billion metric tons and save about 4 billions barrels of oil.

Only an extreme ideology can view these standards as a bad idea that Congress needs to stop.

Mr. Chairman, 26 hearings in this subcommittee, and we continue to ignore the real and urgent problem of climate change. As Americans across this country continue to experience devastating extreme events which are becoming far more frequent as the earth warms, it is increasingly clear that we don't have any more time to waste. And I am not going to waste any more time and yield back my 19 seconds.

[The prepared statement of Mr. Waxman follows:]

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Mr. Whitfield. Thank you very much.

At this time, I recognize the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. Shimkus. Thank you, Mr. Chairman. And thank you for holding this hearing today and the follow-up with the hearing that we had last week on really the renewable fuels portion of our national energy security and standard.

It was in this hearing room in 2005 that we established the renewable fuel standard, which has credibly helped in reducing our reliance on imported crude oil, and it has helped change the liquid transportation market to something other than totally a crude-oil-based economy.

So the question is where do we go from there? We are still importing 60 percent of the crude oil to meet our needs for transportation. That is why in 2007, then again later, we continued to move the renewable fuel standard and portfolio even further. That is why always this is an opportunity to take advantage to highlight the bipartisan bill that Mr. Engel and I have dropped, H.R. 1687, which is the open fuel standard.

And I think the hearing that we had last week really helps build on that piece of legislation. Because as I have been thinking about the hearing -- and we all know there is a plentiful supply of natural gas available, and that is really going to help on electricity generation, on emissions and the like. Being from a coal State, I have obviously some concerns that my coal will be disenfranchised, but I

do believe in the competitive marketplace. If the EPA wasn't making the additional cost so high, it would still be competitive, but that is an argument for another time.

On the liquid transportation front, why can't we take the natural gas, move it into methanol, add methanol, add ethanol, encourage, incentivize, plead with the auto industry to have a one fuel standard for vehicles and then have real competition at the refilling stations, so that the individual consumer could go up and decide what is the best fuel at the best price and let market competition take over? As my friend said last week, we really have -- we are still constrained, and I think some of the opening statements by our panelists will highlight, that we are still constrained and reliant on crude oil as a base feed stock for transportation fuels.

What the open fuel standard says is, let's break that, we are still going to be highly reliant on crude oil, but let's bring other feed stocks and let the individual consumer choose, choose at the pump and fight. So I want to take this opportunity to highlight H.R. 1687, thank my friend Mr. Engel, who has actually been carrying this a lot longer than I was the primary sponsor. We appreciate the associations and the national defense folks, who are really involved with this because our reliance on imported crude oil throughout the world and the Strait of Hormuz, and we understand the firing from yesterday, so this is always a timely thing to discuss.

And with that, Mr. Chairman, I do appreciate having this hearing, and I yield back the balance of my time.

[The prepared statement of Mr. Shimkus follows:]

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Dr. Burgess. Mr. Chairman, would you mind yielding to me?

Mr. Shimkus. I would yield time to my friend from Texas.

Dr. Burgess. And I appreciate the gentleman for yielding. I just want to point out this last weekend we had our annual energy efficiency summit in my district back at the University of North Texas. Constituents are concerned about what they see as the increasing cost of electricity in their fuel bill, so this hearing is timely today. The keynote speaker for our event was our railroad commissioner, David Porter, who has the responsibility for regulating the oil and gas industry in the State of Texas, and he provided a great deal of insight how Texas is leading the way in energy technologies, particularly in the alternative shale formations, which are now so prevalent in our State and has been a boon to the region and much of the rest of the country. Lower costs to consumers are driving more people to drive hybrid vehicles and make their homes more energy efficient, all good things, without the need for government incentives to do so. That is how the market was designed to work, and we should be cautious at any moves that might distort the market.

For the same reason, I have been concerned about the EPA's mandates in the renewable fuel standard. I have legislation out there, H.R. 424, The LEVEL Act, to keep the EPA from fast-tracking the use of E15 in our fuel systems. The cost of consumers from this move both at the pump and at the mechanic shop is going to be significant. And we have yet to provide any satisfactory liability protection for the small retailer. I thank the chairman for the recognition and I yield

back.

[The prepared statement of Dr. Burgess follows:]

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Mr. Shimkus. And I yield back the time.

Mr. Whitfield. That gentleman yields back the balance of his time.

At this time, I recognize the gentleman from Illinois Mr. Rush for 5 minutes.

Mr. Rush. Why thank you, Mr. Chairman, for holding yet another hearing ad infinitum on this subject. Mr. Chairman, this is our 26th hearing on this particular subject matter, and we have not had a law passed yet, nothing has been signed into law yet. So, Mr. Chairman, at some point, this subcommittee needs to move away from holding partisan doomed-to-fail political messaging votes and get on with the business of working together to actually enact policies that will help move this country's energy policies forward and help move us away from the point of no return in regards to the serious matter of climate change.

Yet another hearing, Mr. Chairman, and during last week's industry hearing, we heard that we faced most significant opportunities and challenges as we started to meet the goal of \$36 billion of biofuels by the year 2022 as mandated by the renewable fuel standards, which was included in the Energy Independence and Security Act back in 2007.

And Mr. Chairman, today more than ever, we see why it is extremely necessary to move our country towards a greater reliance on alternative and renewable sources of energy as opposed to carbon-intense fossil fuels that emit dangerous levels of greenhouse gases and contribute enormously to ever-present climate change.

Over the past few years, we have seen an uptake in severe wildfires and extreme weather events associated with global climate change that is occurring all around this Nation and indeed around the world. According to NOAA, the United States has set more than 40,000 high temperature records this year alone. And the last 12 months have been the hottest ever recorded in the history of this Nation. And at the end of June, Mr. Chairman, more than 113 million people in the U.S. were in areas under extreme heat advisories. And just last week, the U.S. Department of Agriculture declared a Federal disaster area in more than 1,000 counties, covering 26 States, making it the largest disaster declaration ever made by the USDA. Today two-thirds of the country is experiencing drought in States from your home State of Kentucky to the Midwest, where I live, facing severe losses of corn and other crops due to lack of rain.

On my way in from the airport earlier, one of the airport employees bemoaned the fact that corn, the corn crop this year would be disastrous and thereby was driving up the cost of enormous amounts of consumer goods to the American people that is hurting already under this economic times that we live in. Mr. Chairman, at least half of the Nation's grazing pastures are in poor or very poor condition, and up to 30 percent of the Nation's corn crop is in poor or very poor condition, which will impact, again, the price of food, consumer goods and ethanol. Dry conditions are taking a toll on the Great Lakes where water levels in four of the five lakes have plummeted this summer due to high evaporation rates and insufficient rainfall, which of course may pose

a significant challenge for us who rely on the lakes for drinking water and other economic activities.

Even here in the Nation's Capital two weeks ago, a storm caused over 1 million homes to lose power in the D.C. region, while States from Florida to Minnesota have experienced some of the most damaging floods in history due to torrential downpours.

Mr. Chairman, this is not about party, regardless of party or geography or ones whether you like President Obama and/or his policies, this committee and this subcommittee can no longer afford to stick their heads in the sand and pretend that mother nature is not showing us the signs that we need to act. The scientists are also increasingly sounding alarms and informing us that these natural catastrophes are anticipating consequences of climate change and are expected to continue.

Mr. Chairman, what are we doing here, when are we going to stop the charade, when are we going to move to bring forth meaningful bipartisan legislation to deal with real problems and real issues? With that, I yield back the balance of my time.

[The prepared statement of Mr. Rush follows:]

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Mr. Whitfield. The gentleman didn't have any time to yield back, but we appreciate your opening statement.

I would like to introduce the witnesses on the first panel this afternoon. First of all, we have Mr. Howard Gruenspecht, who is the deputy administrator, U.S. Energy Information Administration. We have Ms. Margo Oge, who is director, Office of Transportation and Air Quality, U.S. Environmental Protection Agency. And we have Dr. Kathleen Hogan, who is the deputy assistant secretary for energy efficiency at the Department of Energy.

We genuinely appreciate your being here today, we look forward to your testimony. And each of you will be given 5 minutes for an opening statement, and then, at the end of that time, there will probably be some questions.

STATEMENTS OF HOWARD GRUENSPECTH, DEPUTY ADMINISTRATOR, U.S. ENERGY INFORMATION ADMINISTRATION; MARGO OGE, DIRECTOR, OFFICE OF TRANSPORTATION AND AIR QUALITY, U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA); KATHLEEN HOGAN, DEPUTY ASSISTANT SECRETARY FOR ENERGY EFFICIENCY, U.S. DEPARTMENT OF ENERGY

Mr. Whitfield. So, Mr. Gruenspecht, you are recognized for 5 minutes for your opening statement.

STATEMENT OF HOWARD GRUENSPECHT

Mr. Gruenspecht. Chairman Whitfield, Ranking Member Rush, members of the subcommittee, I appreciate the opportunity to appear before you today.

The Energy Information Administration is the statistical and analytical agency within the Department of Energy. EIA does not promote or take positions on policy issues and has independence with respect to the information and analysis we provide. Therefore, our views should not be construed as representing those of the Department or other Federal agencies.

The transportation sector and the use of petroleum fuels are tightly linked. In 2010, 71 percent of total U.S. petroleum consumption occurred in the transportation sector, while petroleum products provided 93 percent of total transportation energy. Light duty vehicles, both passenger cars and light duty trucks, accounted for 60 percent of total transportation energy use in 2010, with petroleum based fuels providing 94 percent of that. Gasoline-only nonhybrid vehicles had an 86 percent market share out of 10.8 new vehicles sold in 2010 followed by flex fuel, hybrid electric and diesel vehicles at 9 percent, 3 percent and 2 percent respectively.

EIA's annual energy outlook 2012 provides projections for the U.S. energy system through 2035. The reference case is a business-as-usual trend estimate using known technology and

technological and demographic trends and the assumption that current laws and final regulations, including any applicable sunset dates, remain unchanged. Annual energy outlook 2012 also includes several alternative cases with market technology or policy assumptions that can significantly change the outlook for light duty energy use, including high and low oil price cases, a case that includes the fuel economy standards proposed by NHTSA and EPA for model years 2017 through 2025, an extended policy case that raises fuel economy standards beyond 2025 and a case that considers cost breakthroughs and battery technology.

Although growth in the number of drivers and vehicle miles per driver results in a projected 35 percent growth in light duty vehicle miles of travel between 2010 and 2035 in the referenced case, projected light vehicle petroleum use in 2035 is about 7.2 million barrels per day, 11 percent lower than in 2010, due to changes in the fuel mix and improved fuel economy. In the CAFE standards case, overall light vehicle energy consumption decreases by 20 percent over the same time period with petroleum use falling to only about 5.8 million barrels per day.

In both cases, petroleum products remain the dominant fuel for light duty vehicles, but biofuels are projected to provide a growing share of their energy use, driven primarily by the renewable fuel standard mandate that has been discussed in the opening statements. Electricity usage begins to grow but remains quite small. It grows much more rapidly in the high technology battery case.

Our fuel economy case analysis indicates a marked increase in the efficiency of gasoline engines both with and without microhybrid technologies. My testimony discusses several challenges surrounding the Federal renewable fuel standard targets. First, since the Energy Independence and Security Act was first enacted, EIA has projected that rates of technology development and market penetration for cellulosic biofuels would likely fall short of the specified targets and timetables. We do believe that you get there 25 years from now, but you don't get there as quickly as the timetables are set up.

Our near-term projections for cellulosic biofuels have been further reduced in this current addition of the outlook. Second, nearly all U.S. motor gasoline already contains 10 percent ethanol, so increased absorption of ethanol into a fuel pool that is not growing fast requires market acceptance of ethanol blends up to 15 percent, which EPA has approved for use in model year 2001 and new or nonflex fuel vehicles or the increased use of E85 in flex fuel vehicles, both of which face some significant market obstacles.

Another pathway involves the development and market penetration of drop in renewable fuels or renewable fuel components, such as biobutanol. Four key areas of uncertainty in the annual energy outlook projections, including fuel prices, technology costs, consumer acceptance and potential changes in policies, are addressed in my testimony. The impact of alternative assumptions about technology costs are particularly striking for battery technologies. Success in attaining DOE goals leads to a very significant increase in projected

market penetration of hybrid electric vehicles, plug-in hybrids and electric vehicles compared to the sales projected in the referenced case using our default cost assumptions and would likely be even more significant in the CAFE standards case.

That concludes my statement, Mr. Chairman, and I would be happy to answer any questions that you or the other members may have.

[The prepared statement of Mr. Gruenspecht follows:]

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Mr. Whitfield. Thank you very much.

And Ms. Oge, you are recognized for 5 minutes.

STATEMENT OF MARGO OGE

Ms. Oge. Thank you.

Chairman Whitfield, Ranking Member Rush, and other members of the subcommittee, thank you so much for the opportunity to testify today. I would like to give you a brief overview of EPA's efforts implementing the renewable fuel standards and our efforts in developing the vehicle and truck greenhouse gas centers.

In November 2011, EPA and NHTSA proposed vehicle standards for model years 2017 through 2025, calling for a CO₂ standard of 160 grams per mile or equivalent 54.5 miles per gallon by 2025. Now this builds upon greenhouse gas and fuel economy standards for model years 2012 through 2016. These regulations provide incentives for manufacturers to produce and sell the most advanced vehicle technologies. These standards will save an estimated \$1.7 trillion for consumers and businesses in our country and cut our country's oil consumption by 12 billion barrels of oil while reducing greenhouse gas emissions by 6 billion metric tons. Consumers on average will see fuel cost savings of about \$8,000 for an average 2025 vehicle compared to an average 2010 vehicle over that vehicle's lifetime.

Last year, the agency also completed the first greenhouse gas and fuel economy standard for model years 2014 through 2018 for trucks and

buses. These standards will reduce CO2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of the vehicles that are built from 2014 through 2018.

Now, I want to note that owners of a 2018 truck will enjoy net savings of \$73,000 over the vehicle lifetime with a payback period for that cost for about a year.

Also recognition of the introduction of advanced technologies in our vehicles and alternative fuel vehicles, EPA and DOT in 2011 jointly issued an overhaul of the EPA fuel economy label. These new labels have a lot of new information, but I want to highlight that for the first time, the labels will highlight the fuel savings or increased cost that the consumers will experience as compared to fuel costs for an average vehicle in the marketplace, whether that fuel is gasoline, diesel, electricity, hybrids and/or CNG. Now shifting over to biofuels, these fuels are a critical part of the evolving alternative fuel landscape.

In 2010, EPA finalized regulations to implement the EISA revisions to the RFS program. Congress, as you know, set the target of 36 billion gallons by 2022. EISA requires EPA each year to publish an annual standard for total advanced biomass based diesel and cellulosic renewable fuels. As directed by Congress, each year EPA conducts a thorough review of the cellulosic industry including one-on-one discussions with each producer to determine its individual production capacity.

We also consulted with our colleagues from EIA, our colleagues

from DOE and USDA before we proposed the annual volume standards. As a result of these reviews, EPA reduced the cellulosic standard to about 6.5 million gallons for 2010 and 2011 and 8.6 million gallons for 2012. That is about 98 percent below the EISA target for those years.

This summer, we plan to finalize the 2013 biodiesel volume levels and propose the other 2013 RFS volume standards.

I want to note that the biofuel sector is a dynamic one. We already have a significant list of qualified advanced and cellulosic biofuels for the oil transportation sector as well as jet fuel and heating oil uses. Last year, we added canola-based biodiesel and a number of other new technology based pathways. Most recently, we took comments on a number of advanced and cellulosic biofuels, including grain sorghum, camelina, Napier grass, sugarcane and others, and we hope to finalize this analysis later this year. We are currently evaluating dozens, I want to say over 30 additional petitions for new biofuels, both feed stocks and different pathways.

EPA recognizes the value of these fuels and the value of advanced vehicle technologies and we look forward to a successful development introduction of these new fuels and advanced technology to the marketplace. Thank you.

[The prepared statement of Ms. Oge follows:]

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Mr. Whitfield. Thank you.

Dr. Hogan, you are recognized for 5 minutes.

STATEMENT OF KATHLEEN HOGAN

Ms. Hogan. Thank you Chairman Whitfield, Ranking Member Rush and members of the subcommittee. I do thank you for the opportunity to be here today.

As part of the President's all-of-the-above approach to American energy, the department is advancing transportation innovations to do a number of things. That is to reduce our dependence on foreign oil and the nearly \$1 billion we send out of the country for oil each day; helping our vehicle manufacturing industry, that accounts for 5 percent of GDP and millions of jobs, compete in this global industry; and then to provide consumers with more transportation choices and cost savings, as transportation is the second biggest monthly household expense.

The DOE portfolio is broad spanning light, medium and heavy duty vehicles, and including advanced combustion electric drive biofuels, hydrogen fuel cells, lightweight materials and other efforts, and we are making important progress. Electric vehicles is one important focus. Electricity is cheaper than gasoline. At about \$1 per gallon equivalence, it offers competitive performance at-home charging convenience, less pollution and is almost oil free. Other countries, of course, recognize these benefits and are making their own investments, and we here have a critical opportunity to grow U.S.

manufacturing building upon our past successes.

Today DOE-developed battery technology is in nearly every hybrid vehicle on the road. We have achieved a 35 percent cost reduction in the next generation of batteries, and we expect an additional 50 percent reduction by 2014. President Obama has announced a new EV everywhere grand challenge just this last March to enable U.S. companies to lead the world in producing plug-in EVs that are as affordable and convenient as gasoline-powered vehicles, and to truly spur the U.S. to further reduce costs, extend vehicle range and improve performance and convenience. Biofuels are also important to reducing our dependence on foreign oil and developing a home-grown industry, and again we are making great strides with cellulosic ethanol production.

In the past 2 years, four DOE supported commercial cellulosic ethanol biorefineries broke ground, and we have also developed the know-how to produce cellulosic biomass at about \$2 per gallon when it is scaled, having reduced these costs by a factor of four over the last 10 years.

Beyond ethanol, we are working to reduce the cost for cellulosic and algal based drop in biofuels, so that we can overcome some of the infrastructure issues, use our existing infrastructure and displace diesel, jet fuel and gasoline. Our goal here is \$3 per gallon drop ins by 2017.

Integrated biorefineries are a critical part of our work to help commercialize first-of-a-kind approaches. Currently 20 of 24 DOE

supported biorefineries are in construction or operating with an overall combined total of nearly 100 million gallons per year of advanced biofuel capacity expected by 2014.

We also continue to work with hydrogen fuel cells to make them cost competitive. Here the global market has doubled in the last 3 years and offers important opportunities for U.S. manufacturing. Our goal is for automotive fuel cells to be cost competitive with internal combustion engines by 2017 and for renewable hydrogen to be competitive with conventional fuels by 2020.

Progress here includes the cost of automotive fuel cells being down 80 percent since 2002; hydrogen delivery costs down 40 percent; 3 million monitored miles for fuel cell electric vehicles demonstrating good durability and more than twice the efficiency of today's gasoline vehicles; and manufacturers on track to commercialize some fuel cell electric vehicles by 2015 in that timeframe; and many States developing stationery applications and infrastructure.

Here -- so I guess broadly the President has proposed the National Community Development Challenge to enable local communities around the country to accelerate the deployment of clean alternative fuel vehicles and infrastructure, helping communities use the technologies that best fit their local needs, whether it is electric drive, natural gas, biofuels or another fuel.

So, just in summary, the transportation sector does offer a number of critical opportunities for the U.S. to meet major national objectives, such as reducing our dependence on oil, keeping America

on the cutting edge of advanced manufacturing, as well as environmental issues. And so thank you for the opportunity to discuss this, and we welcome your questions.

[The prepared statement of Ms. Hogan follows:]

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Mr. Whitfield. Thank you, Dr. Hogan.

And at this time, I will recognize myself for 5 minutes of questions.

We appreciate your testimony.

I want to start off with just a little editorial comment. You had mentioned that the President is committed to an all-of-the-above energy policy, which he frequently does state wherever he goes. And I know we are focusing today on fuel and transportation primarily. But when he came out with his campaign Web site on energy sources, he neglected to even mention coal. And of course, we can't remain competitive in the global marketplace, unless we can produce electricity at a competitive rate. So I just wanted to throw that out there, even though that is not our subject matter today because he sometimes says he is for all the above, but some of his actions in my view do not indicate that.

Ms. Oge, under the renewable fuel standard law, EPA is required to publish its required volume obligations for certain fuel categories on an annual basis. These obligations inform industry stakeholders as to the specific amounts of renewable fuel that must be produced, purchased, blended or imported in order to comply with the program.

Now, you all are given discretion when it relates to biomass based diesel. And I can't get all of my dates exactly right, but at one point, you all had established proposed volumes for 2012 and called I think for 1.28 billion gallons of biomass diesel in 2013. However, when EPA issued its final rule, it included the 2012 volumes but omitted the

2013 volumes for biomass diesel. And we had actually written a letter to you all about that and was asking for an explanation of why was that omitted in the 2013 year.

Ms. Oge. Mr. Chairman, you are absolutely right. We did propose a biodiesel level of 1.28 billion gallons for 2013. We received a lot of comments, especially in the area of the cost associated with increasing the volume from 1 billion gallons to 1.28. So the agency had to go back and do additional analysis. So what we decided to do was to finalize the 2012 volumes, and we are in the process of finalizing the 2013. Actually, our final action has gone over to the Office of Management and Budget, and we expect the final release very soon to establish the 2013 volumes for biodiesel.

Mr. Whitfield. Do you expect it to be released within a month?

Ms. Oge. I hope so.

Mr. Whitfield. Okay. So you do intend to do it?

Ms. Oge. Yes.

Mr. Whitfield. And there were just some technical issues with it?

Ms. Oge. Yes.

Mr. Whitfield. Okay. Well, thank you very much.

Mr. Gruenspecht, I noticed in your testimony you talked about that by the year 2035, you projected the use of oil for transportation purposes being in the neighborhood of 5.8 million barrels a day, which was significantly less than today. How did you conclude that that is the volume it would be in 2035? What assumptions did you all use?

Mr. Gruenspecht. Well, we develop estimates of the amount of travel. That is driven by the number of licensed drivers, travel per licensed driver.

Mr. Whitfield. And a lot of it I am assuming would be improved fuel standards would help --

Mr. Gruenspecht. A lot of fuel economy helps a great deal in that. So efficiency sort of offsets the growth in travel. And we also have a significant increase in the use of biofuels, so that also offsets petroleum use.

Mr. Whitfield. One of the things that bothers me is we talk about electric cars. We talk about fuel cells. We talk about compressed and liquid natural gas. We have a multitude of fuels that we are looking at for our transportation purposes. All of them take a significant amount of infrastructure, which really is not out there right now. And I am just concerned myself on the availability of capital, the lack of this infrastructure, going off in so many directions. I mean, within your agencies, do you all ever discuss that fact, or do you just want to continue pursuing a multi-source fuel sources for transportation?

Ms. Oge. Well, let me give you an example. We are in the process of finalizing the 2017 to 2025 greenhouse gas and fuel efficiency standard for light duty vehicles. We, again based on the Clean Air Act, we are using the Clean Air Act, our colleagues from NHTSA is using their law, we are looking at advanced technologies, existing technologies and advanced technologies that companies can use to

achieve those standards. And just to give you an example, for the 2025 timeframe, we expect that the levels of standards that we have proposed, if indeed we finalize those standards, will be met, for the most part, over 90 percent of it will be met with existing technologies, gasoline and diesel. And less than 3 percent will be relied on electric power train, like electric vehicles and plug in hybrids.

Mr. Whitfield. Less than 3 percent.

Ms. Oge. Less than 3 percent. The remaining of it will be based on gasoline and diesel and hybrids.

Mr. Whitfield. Well, I had planned to ask six questions, and I am already out of time so I will recognize Mr. Rush for 5 minutes.

Mr. Rush. I yield to the ranking member, Mr. Waxman.

Mr. Whitfield. I am sorry. Mr. Waxman.

Mr. Waxman. Thank you, Mr. Rush, for allowing me to go first with my questions.

Dr. Gruenspecht, at a similar hearing last year, I raised concerns about EIA's analysis of the vehicle fuel efficiency and tailpipe standards. At that time, many of EIA's assumptions about vehicle technologies differed substantially from NHTSA and EPA projections, and EIA appeared to not have adequately engaged with NHTSA and EPA in developing the EIA analysis. The annual energy outlook 2012 reflects improvements in this area, but there are still some outstanding concerns about the underlying vehicle technologies, data and analysis used by EIA.

For example, the California Air Resources Board has raised

concerns that the EIA analysis still fails to incorporate the latest data and analysis into its models. CARB has worked very closely with EPA, NHTSA and the auto industry to develop what it describes as a most comprehensive, accurate and up-to-date database of efficient and low-polluting vehicle technologies anywhere in the world, along with associated modeling capability to project how automakers will comply with the standards.

Dr. Gruenspecht, does EIA view the vehicle technologies data and analysis developed by NHTSA, EPA and CARB as a valuable source of information in this area, and if so, will you commit to working more closely with these agencies to inform your own models and analysis.

Mr. Gruenspecht. We do consider that information to be very valuable, and we do consult with our colleagues, and we also consult with nongovernmental organizations and manufacturers, and we expect to continue to do so.

Mr. Waxman. Thank you.

Given the remarkable joint effort on the fuel efficiency and tailpipe rulemakings and the wealth of information it has produced, incorporating such information should produce a stronger analytic product. I think it is worth spending a few minutes on the tailpipe standards themselves, given their tremendous benefits.

Ms. Oge, would you please summarize the full suite of benefits from the tailpipe standards?

Ms. Oge. So, Congressman Waxman, on my opening remarks, I have to find the papers, my opening remarks I summarized the overall benefits

of the two programs. But just to give you a brief overview of the benefits of the 2017 to 2025 program, which is the program that we have proposed and we are in the process of finalizing, based on the proposal, we expect that the cost on an average for the fleet, that doesn't mean for every vehicle, but on an average would be about \$2,000 per vehicle on an average for 2025. However, the benefits, the net benefits that the consumer will achieve as a result of the fuel savings will be \$4,400.

Mr. Waxman. So, after accounting for any increased cost for the vehicle over its life, consumers would save on average \$3,000 under the current standards and another \$4,400 under the proposed standards. Consumers save this money because these vehicles use a lot less gasoline. The best way to save money at the pump is to drive right by it, but we are more used to thinking about savings at the pump in terms of gas prices.

So I asked EPA to calculate how much lower gas prices would have to be to save a consumer the same amount of money. For a new 2012 vehicle, the net savings experienced by a consumer are equivalent to dropping the price of gas by \$0.14 per gallon, and those savings will rise over time as the new vehicles become more efficient. By 2025, the proposed standards are equivalent to lowering gas prices for the consumer by \$1.13 per gallon. As the fleet turns over, eventually every light duty vehicle driver on the road will experience these savings.

Could you tell us, Ms. Oge, about EPA's heavy duty vehicle standards.

Ms. Oge. So for the heavy duty vehicle standards, as I mentioned in my opening remarks, the cost for a tractor, let's say these are the heavy duty diesel tractors that you see on our highways, in 2018 will be \$6,200.

Mr. Waxman. These are significant benefits, but the House Republicans have already passed legislation that would block or imperil all of EPA's tailpipe standards and make Americans continue to spend more money at the pump, as well as exacerbate climate change and our dependence on oil. Next week, they are bringing a regulatory bill to the floor that would stop EPA from finalizing the proposed tailpipe standards until unemployment falls below 6 percent. This is nonsensical. Preventing Americans from saving money at the pump certainly isn't going to help our economy.

Thank you, Mr. Chairman. I yield back my time.

Mr. Whitfield. At this time, I recognize the gentleman from Texas, Mr. Barton, for 5 minutes.

Mr. Barton. Thank you, Mr. Chairman, and thank you for your diligence in pursuing these hearings.

My first question is to the representative from the Department of Energy. Could you tell us what the Department of Energy thinks the purpose of the renewable fuel standard is, what is the goal? I asked DOE, but if EPA wants to comment.

Ms. Oge. I still work for EPA.

Ms. Hogan. I believe there are multiple goals to the renewable fuel standard, and I think it includes improving our independence from

imported oil, as well as addressing environmental issues.

Mr. Barton. Does the EPA want to comment on that?

Ms. Oge. Agree.

Mr. Barton. Well, based on that assumption, it is not a mutually conducive goal. If the goal is to reduce oil imports, then clean coal technology and more use of natural, domestically produced natural gas should be a part of any discussion about a standard, although clean coal and natural gas are not renewable in the classic sense. Both of those, certainly natural gas, would reduce emissions. I mean, I am just a little, I am a little puzzled because I read the testimony and most of the -- the gentleman from the Energy Information Agency is just talking about what has happened, which is kind of what EIA's job is to do. The EPA and to some extent DOE's testimony is talking about the increased use of ethanol. The problem with ethanol is that if you are looking to reduce greenhouse gases, ethanol goes the other way. Now, I am not -- I don't believe that CO₂ is the danger and the enemy that some people do, but if your goal is to reduce greenhouse gases, definitely CO₂ is a greenhouse gas and you can't get there with ethanol. You can't get there with ethanol on a cost basis.

So if the goal is to reduce foreign imports, then we look at natural gas as a transportation fuel, and we also look at using clean coal to produce diesel and things like that.

Dr. Hogan, do you agree with that, what I just said?

Ms. Hogan. I believe we are trying to address multiple objectives and you are trying to address them over the period of time

of the RFS, which is over some period of time. And if you do look at the fuels that the RFS is promoting, clearly one of the things you are looking to do is to address carbon.

There has certainly been a number of studies that have been brought forward on the carbon profile of ethanol. I think the most recent set of studies actually show about a 20 percent benefit from ethanol. And then what I mostly talked about in my statement was not corn-based ethanol but really cellulosic based ethanol which really gets you a very, very, very substantial carbon benefit. And certainly we can have a conversation of the multiple objectives we are trying to advance in this country. But as I understand the RFS, it was mostly, it was for carbon as well as oil imports and it is delivering on that. And as we look at the growing, I guess, requirements for cellulosic based ethanol we would see even greater benefits going forward.

Mr. Barton. Well, my time is about to expire, but the statistic that I have in front of me is that ethanol contains only 61 percent of the energy of gasoline. It takes 1.64 gallons of ethanol to do the same amount of work as a gallon of gasoline. That 1.64 gallons of ethanol emits 20.5 pounds of CO₂. Ethanol emits 1 pound more of CO₂ in the air than using a gallon of gasoline. Now, I don't know if that is a correct statement, but that is what my staff has prepared. Do you agree with that?

Ms. Hogan. We can certainly share with you our calculations. I do know that the studies that we are engaged with take into account the energy value of ethanol versus the energy value of a gallon of

gasoline, and we are happy to share our numbers with you.

Mr. Barton. Well, I would encourage the department to look at both clean coal and also natural gas as a transportation fuel because they are both abundant domestic resources and, especially in the case of natural gas, definitely reduce the amount of CO₂. And clean coal done properly also does that.

And with that, I yield back.

Mr. Whitfield. At this time I recognize the gentleman from Illinois, Mr. Rush, for 5 minutes.

Mr. Rush. Thank you, Mr. Chairman.

Mr. Chairman, when I was in the fifth grade in a history class, I was astounded when my history lesson mentioned the fact that Emperor Nero fiddled while Rome burned.

Mr. Chairman, America is burning right now, and we, Mr. Waxman and I, have asked the Republicans 15 times in the matter of a few months to hold a hearing on climate change, and we have been rebuffed on each and every occasion.

You are out of touch, Mr. Chairman. This is the committee of jurisdiction. And this committee is out of touch with the plight of the American people. In my opening statement, I mentioned that some of the most extreme weather events that America has ever faced are occurring right now: 40,000 high temperature records set this year. For the last 12 months, they were the hottest months on record; 113 million people in the U.S. in areas of extreme health advisory. America is burning, and this subcommittee is fiddling and twiddling.

The U.S. Department of Agriculture declared a Federal disaster area in over 1,000 counties in 24 States. Two-thirds of the U.S. is experiencing a drought. One-half of U.S. grazing lands are in poor or very poor condition. America is burning, and this committee is fiddling and twiddling; 30 percent of the U.S. corn crop is in poor or very poor condition. And we are talking about burning coal when America's crops and corn, America's corn is burning. The Great Lakes have had low water levels due to lack of rain.

Mr. Chairman, when is this committee going to get in touch with what is happening in America? I would like to ask the witnesses, Ms. Oge and Ms. Hogan, why is it important that the Federal Government play a role in steering energy policy in the direction of the IFS and CAFE standards? Again, my Republican colleagues like to say that we need to leave all this to the market, and everything will work out just fine. Why is it important that we have leadership from Congress to move energy policies toward greater energy efficiency, additional alternative fuels and diversity in the Nation's energy portfolio?

Ms. Oge and Ms. Hogan.

Ms. Oge. Let me just give you an example.

Using the authority under the Clean Air Act, EPA working with our colleagues from NHTSA, we have undertaken three very significant programs in the last couple of years to address greenhouse gas emissions and improve fuel efficiency for our vehicles, our light duty vehicles, and for our trucks. I believe that these programs are a win-win situation. And you just have to take a look and see that these programs

are supported -- not just by the Federal Government and State government -- they are supported by the industries. The car companies have supported this program, the truck companies, the American Trucking Association. And the reason for that is because these investments that they will make, they pay back to the consumer. So it is good for the consumer. It is good for the economy, but also it is good for our environment and for energy security.

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Mr. Rush. Ms. Hogan. Go ahead.

Ms. Hogan. And, I certainly agree with what Ms. Oge had to say, and I think another aspect that the Department of Energy works hard to bring to the table is to support our manufacturing base here in this country. There is innovation happening all the time, and we want our manufacturing base to be competitive with the activities in these global industries.

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

At this time, I recognize the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. Shimkus. Thank you, Mr. Chairman.

And thanks again for coming. I -- don't take this bad. I am friendly, friendly on this hearing.

But I do want to ask Ms. Oge a question on your on EPA estimates on the cost of -- with the new CAFE and greenhouse gas standards, by 2016, it will add another thousand dollars to a cost of a car. And then by 2025, you are projecting \$3,000 for an additional car; is that correct?

Ms. Oge. No, \$2,000. So it is \$900 for 2016 and \$2,000 for 2025. I think the total probably --

Mr. Shimkus. Oh, yeah. It is cumulative, I think, so we had one plus two, then. Then let me go on.

And you also calculated, I think this is good for the record, that

you are projecting that people will buy new cars and they will keep them, their lifetime will be about 200,000 miles. Is that correct?

Ms. Oge. Yes.

Mr. Shimkus. Okay. I think that is pretty generous, but I hope you are correct in that.

For both Ms. Oge and Ms. Hogan, I am reading, I do believe that we are on the verge of getting close to the cellulosic goals and desires. I am very fortunate to have the National Corn and Ethanol Research Center at SIU, Edwardsville. And last month, they, the researchers at Southern Illinois University Edwardsville say they have successfully produced ethanol from cellulosic portion of the corn kernel by utilizing existing technology that you can find in the commercial marketplace, and then obviously they believe it is built on cellulosic ethanol reality, which -- and I tried to do this last in the last hearing of last week. I kind of portrayed a, what is a kernel of corn, for the lay people and there is about six different parts of a kernel of corn, that some go to fermented ethanol, but the benefit of cellulosic is using another portion of that.

I also tried to highlight in just the fuel food debate, that even when you are doing the fermentation, a byproduct is distilled or dried grains, which goes into the livestock feed market, and we actually ship that all over the world as a commodity product. But there is -- that is why we have these hearings so that we can get out the full fact and full data and statistics on this.

Ms. Oge, I was curious on the CAFE standards and trying to rectify

that with what Eliot Engel and I are trying to do with the open fuel standard, which is that bill that I talked about. Basically it has a phase in of flex fuel vehicles, for the most part, to 50 percent by the vehicle fleet by 2014 and 80 percent by 2016. Under your ability to do that with, how would we go about that based on what you all have been able to do with CAFE and the greenhouse gas rules? How does that segue into that process?

Ms. Oge. So, for the greenhouse gas standards, we, until, through 2016, we will provide the car companies the same benefit that they will get introducing flex fuel vehicles in the marketplace that they are getting under the CAFE program. As you know, those incentives go away in 2019 for CAFE.

But EPA will continue to evaluate how much actually E-85 is used in the marketplace, and then we clearly know the car companies that they are selling flex fuel vehicles. And we will give them credit toward meeting the greenhouse gas standards for light duty vehicles.

Mr. Shimkus. I just want to make sure I keep on record, I love fossil fuels, so I am not anti-fossil fuels. I am concerned about the 45 percent that we import and the national security implications. And I do hope that with Keystone and coal to liquid, and other things that we can also have more local supply but my focus has always been the national security ramifications of the sea lanes closing and that then the catastrophic events that could occur. So, for all of my crude oil folks and refineries and my coal guys, don't worry, I am still on board, and I am still part of the, part of the overall team.

Ms. Oge, I want to ask the last question is on the E-15. Can E-15 be introduced for some vehicles but not others without widespread misfueling? And then the agency has issued misfueling mitigation plan. Do you think that is adequate?

Ms. Oge. So we have looked at the Clean Air Act, our existing regulations, and we believe, again, based on the law that is in front of us we have used the best legal specifications and scientific specifications to waive E-15 for the years of 2001 and newer vehicles. However there is lack of data. To what extent E-15 could potentially impact the environmental control systems for vehicles older than 2001 and off-road equipment. And that is what we need to look when we look, when we do these waivers; it is really to what extent a new fuel will impact the pollution control systems. And based on the lack of data, we have decided that we are not going to allow E-15 to be used in the marketplace for those older vehicles and off-road equipment.

Now, what I have to say is that when we waive the use of E-15 for 2001 and newer vehicles, we are not mandating it. So we are not requiring the marketplace to use E-15, but we are telling all of the parties involved that if you use E-15, there are a number of things that you need to do. And you need to make sure that there are products that transfer data that we can evaluate from point A to point Z. We want to make sure that there is an appropriate labeling at the stations. Clearly, there are issues that go beyond my office that have to do with dispensing units and to what extent are appropriate to be used with E-15, If they have not been designed to be used for E-15 underground

storage tanks. So there are a slew of issues that accompany the marketplace. We have to decide to what extent they are going to have to meet in order to market E-15 in the market place.

Mr. Whitfield. At this time, I will recognize the gentlelady from Florida, Ms. Caster, for 5 minutes.

Ms. Castor. Well, thank you, Mr. Chairman.

And thanks to the witnesses. Actually, I think it is fairly remarkable, the chart that is attached to the EIA's testimony tells a very positive story, and frankly, you know, for decades, all you heard in America was, we are increasing our use of fossil fuels or increasing our use of oil; oil consumption has risen steadily until very recently. Until very recently, the Energy Information Administration has consistently projected that U.S. oil consumption would continue to rise into the future. And every President I can remember and past Congresses have talked about reducing our dependence on oil, but none has succeeded in doing so until now.

This year's annual energy outlook projects that America will consume less and less oil for decades to come. And this is great news for the climate. It is good news for consumers and their pocketbooks, at a time when they need a little relief. It is very positive for America's energy security, and you have to say our manufacturing sector that has been improving, improving the last couple of months, a little shakier, but I think this is going to be an area where we will be able to create jobs in the future.

Mr. Gruenspecht, how has the Obama administration's final and

proposed fuel efficiency and tailpipe standards affected EIA's forecast for oil consumption over the coming years? You can get into a little more detail than your opening statement.

Mr. Gruenspecht. Sure. Well, again, the projections for transportation energy use depend on economic activity, depends on the number of licensed drivers, how much they travel, the efficiency of the vehicles, which the fuel economy standards definitely have an impact. Light duty truck fuel economy standards started to be raised in the previous administration and then this administration came in and proposed first the model year 2012 to 2016. That chart that you referred to in my testimony by the way is for the reference case. It would look to be even lower energy consumption with the CAFE standards case. So, again, in my testimony, there is a little table that shows what difference the efficiency standards make. Certainly energy prices are also making a difference. Less welcome to the American people in part. You know, if one is looking not only at petroleum consumption, if one is looking at imports, then energy production is also making a contribution.

So we are both reducing our petroleum demand, if you will, both by greater efficiency and by substituting other fuels, and we are also increasing our domestic production.

Ms. Castor. And clearly, these projected reductions didn't just magically appear. They are in substantial part the result of the administration's fuel efficiency and tailpipe standards. I think it is a tremendous achievement for the Obama administration. But even

better, these standards also save consumers money and reduce our dependence on foreign oil.

I thank my colleagues who have been here for a while that were oftentimes pushing past administrations, and a few years ago, the Congress, under Democratic control, gave a substantial push to, so to my colleagues who were there then, my hat is off to them as well.

Ms. Oge, would you tell a little bit more about how the these standards will save Americans at the pump? And I can tell you just from personal experience, I have a relative that purchased one of these, and you see more and more of them on the road, and he loves the fact that he gets 50 miles per gallon. And, you know, when -- gas prices have fallen again, but when they were up, he loved driving by the gas station and driving by it again and again because 50 miles per gallon, you know, I know that it cost a little bit more, but over the life of the vehicle and now with teenage daughters that may be looking to drive, I know they are going to save money. But go head.

Ms. Oge. So, as you said, this program collectively, the 2012 to 2016, greenhouse gas fuel efficiency improving standards for light-duty cars, 2015 to 2025 that is the proposal that we just made and the truck rule for trucks and buses are good for the users and the consumers, climate, energy security and innovation in this country.

Just to give you an example: So our greenhouse gas fuel efficiency standards started this year. So actually this year, there are about a hundred models that you can go out and buy that meets the

standards of 2017 of what we propose for 2017. So that tells you the innovation that is going on in our country. Developing this technology, and as you know, the car industry is doing extraordinary well --

Ms. Castor. Well, my time has run out, but I do want to congratulate you and your whole team for the progress that you have made.

And to close, Mr. Chairman, I would like to encourage you to call a hearing on climate change. And I think that the committee and the Congress could benefit from the testimony of many experts that could advise us on policy and what else we should be doing to address this serious problem.

Mr. Whitfield. Well, I really appreciate that suggestion, and I might remind everyone over the last 5 years, we have had a multitude of hearings on climate change, and I am sure that we will in the future as well.

At this time, I would like to recognize Mr. Terry for 5 minutes.

Mr. Terry. Thank you, Mr. Chairman.

Mr. Gruenspecht, help me with a couple of things here. First of all, as energy usage is related to economy in a sense that if the economy is growing, well, the effect will be energy use grows. Is that a correct assumption?

Mr. Gruenspecht. All else equal, economic growth does lead to more energy use.

Mr. Terry. And a shrinking economy results in less usage of

energy historically.

Mr. Gruenspecht. We have seen that.

Mr. Terry. You have seen that. In fact, we have seen it in the last 4 years.

Mr. Gruenspecht. Well, I mean, well, we saw it for a portion of the last 4 years.

Mr. Terry. Yeah.

Mr. Gruenspecht. And I think now the economy is growing, but there was a time certainly when the economy was not growing over the last 4 years, and energy use did fall dramatically.

Mr. Terry. Yeah. So if we want to, in general, compliment the administration for bringing down usage of gasoline, we should also then compliment them for our slow in recession, slow growth economy and recession. That is a rhetorical question. You don't have to answer that.

Mr. Gruenspecht. Thank you.

Mr. Terry. But you do have to answer this one. And this is, you know, when we were debating on the floor and developing the renewable fuel standard several years ago, there was an assumption that a good part of the growth would come from cellulosic ethanol. We haven't seen that yet today.

So I am going to ask you both, you Mr. Gruenspecht and you, Ms. Hogan, why haven't we? Why, why aren't we seeing mass production of cellulosic energy in July of 2012?

Mr. Gruenspecht. Well, I follow the data more, so I think Ms.

Oge could go into the reasons, but, you know, we are, as suggested in Ms. Oge's testimony, we do every year in the legislation provide an estimate to EPA of our view of what might be produced. I think the estimate we provided them this past year for 2012 was 6.7 million gallons, which is a lot less than the 500 million that was envisioned in the statute.

Mr. Terry. So instead of repeating back the statute, because, as you know, I have very little time --

Mr. Gruenspecht. Right.

Mr. Terry. -- educated in how to use that up. But if you would just answer, why aren't we seeing it? I am asking honestly.

Mr. Gruenspecht. No, I am not trying to --

Mr. Terry. I support it.

Mr. Gruenspecht. -- but I think it is hard. I think the technology -- you know, that some plants are going to come on this year we believe. It will not be as high as what we thought. It will certainly not be as high as the legislation --

Mr. Terry. Has EIA, in regard to biofuels and ethanol and biodiesel, began to factor in the consequences of the drought hitting the corn belt this year, and is that going to in any way affect fuel prices?

Mr. Gruenspecht. It would affect ethanol prices to some extent. Corn is the major input to ethanol. One gets about 2.8 gallons of ethanol per bushel of corn. So if the price of a bushel of corn would, would rise, that would tend to lead to an increase in the cost of

producing ethanol. Ethanol is not the only product. Distillers dried grains are also produced, and those have some value. So it is not that the full increase in the price of corn has to show up in the cost of producing ethanol, but a lot of it will.

Again, keep in mind that ethanol right now is about 10 percent of the fuel, you know, the content of gasoline by volume so an increase of you know 50 cents per gallon of ethanol, which would be more than the impact, a lot more than the impact.

Mr. Terry. So if it is only 50 cents, I think it would be lucky.

Ms. Oge, do you have anything to add now with those two questions?

Ms. Oge. You know, I asked the same question myself. So what I did this year is I asked the major cellulosic companies to come and talk to me, and I said, let's talk, let's figure out what is going on, because like you, you said what is going on? And this is what I have learned. What I have learned is we are talking about 5 years. EISA passed in 2007, So we are talking about 5 years. And I have concluded that significant progress has been made when you consider we are talking very advanced biofuels and technologies, from R&D to pilot demonstration to commercial availability, and this year, we are going to see commercial scale cellulosic plants in this country.

The other thing that we need to keep in mind is that despite -- this is what I learned from this company -- despite the tough economic conditions that our country has been going through, significant private sector investments have been made in the sector. What I was told is that about \$2.4 billion from venture capitalists have been, you know,

invested for these fuels. And furthermore, what I am hearing is that we are moving, not only we are moving from pilot to large commercial scale, but when you talk to large companies, like BP and Dupont, that again are investing a significant amount of money, they are committed to bring large commercial scale of cellulose in 2014 time frame.

So I think we are beginning to see a move, significant move from pilot to commercial scale, and if that continues, I think that the hope of cellulose will be realized.

Mr. Terry. Thank you.

Mr. Whitfield. At this time, I recognize the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. Green. Thank you, Mr. Chairman, and I thank each of you for being here today.

Ms. Oge, my questions today, just to reminisce, we had a subcommittee hearing in Oversight and Investigations last week on the RIN fraud issue. And Mr. Bunker and Mr. Brooks answered some of my questions, but I understand you also are involved in finding a solution to these problems. I wanted to make sure I look at the opportunity -- took this opportunity to discuss this with you as well.

The EPA maintains that petroleum refineries are expected to exercise good business judgment and use due diligence. I know that the obligated parties have been pressing the EPA for months to formally define what merits due diligence. And what do you expect from that? My first question is, will the agency be able to propose and finalize the rules so that programs can be in place before 2013?

Ms. Oge. Congressman, we are working very hard to come up with solutions. The goal is to have the final actions taken place by the end of the year. We want to make sure that both sides of the industry, the biodiesel sector and the obligated parties, which is the refining industry, are working with us. And up to date, I want to let you know is that we have had very collaborative efforts. So I am very optimistic that we are going to be able to resolve this issue.

Mr. Green. Okay. And I know from our testimony last week by Mr. Bunker and Mr. Brooks, there is a cooperative effort. Is it possible for EPA to issue a separate expedited rulemaking to ensure that the rule becomes effective before 2013?

Ms. Oge. We will work very hard and do our best, sir.

Mr. Green. Okay. If not, could EPA make some other type of administrative adjustment to help small biodiesel producers before 2013? We heard from some of them last week that a lot of refiners in my area are just not going to go to these folks because they don't know what due diligence is.

Ms. Oge. Yeah. Clearly the solutions that we are evaluating, and you can imagine that there are solutions and proposals from both sides, we want to make sure that we are not going to have unintended consequences, which is impact of small biodiesel producers.

Mr. Green. Okay. Aside from the notice of violations issued to three fraudulent biodiesel producers, how many invalid RIN producer investigations are ongoing? Do you know? I know we have three that are public, but do we have a number of other investigations ongoing?

Ms. Oge. I don't know, sir. I am not overseeing the enforcement office at EPA.

Mr. Green. Okay. And do you know how many invalid RIN investigations were concluded that found no violation occurred?

Ms. Oge. I don't.

Mr. Green. Okay. If you could, if you could check and get that back with us.

[The information follows:]

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

Mr. Green. In May of 2011, we held a similar hearing to this one, and I submitted a question for the record asking EPA for its estimate for misfueling was in the first few years of the E-15s existence at gas pumps. EPA responded that you didn't have enough information on the E-15 market penetration to make an estimate. But since then, EPA has registered over 65 companies to market E-15 and has approved over 50 companies' misfueling mitigation plans. Additionally, over 80 companies have enrolled in an approved national compliance survey. Are you in a place where you could now make an estimate on that question?

Ms. Oge. My understanding is that there is only one station in the country that is introducing E-15. So, again, we don't have the data available to us given the limited introduction of E-15 in the marketplace. However, we did approve the misfueling mitigation plants from 60 to 80 of new biofuel producers, and we believe that these plants will minimize the misfueling concerns that you have expressed.

Mr. Green. Okay. Only one station in the country has E-15?

Ms. Oge. That is my understanding.

Mr. Green. I assume it is in Mr. Terry's district or Mr. Shimkus.

Mr. Oge. I believe it is in Kansas.

Mr. Green. Okay. That is close enough.

I want to follow up on my colleague from Texas, Congressman Barton, because, again, some of the success we have had and we are seeing it slowly in natural gas to be a transportation fuel, and I know it is not a renewable fuel. But it is one that we are producing substantially in our country, and of course, 7 years ago, I would not

be talking about it because natural gas was \$12.50 or \$13 per million cubic feet. But now it is less than \$3. Is EPA actually looking at that sustainable growth in using natural gas as a transportation fuel with the benefit of the clean air issues and the carbon issues?

Ms. Oge. Clearly, we are looking at that as part of the 2017, 2025 greenhouse gas rule. We have received a number of comments from the natural gas industry and OEM's about the potential benefits of natural gas vehicles. So we are in the process of evaluating these comments and suggestions that we have received. But natural gas is cleaner at the tailpipe, about 18 to 20 percent less carbon, so I think it can compete very well on this, for these new standards that we are planning to finalize sometime this summer.

Mr. Green. Okay. Well, appreciate the time.

Thank you, Mr. Chairman.

Mr. Whitfield. At this time, I recognize the gentleman from Texas, Mr. Burgess, for 5 minutes

Dr. Burgess. Thank you, Mr. Chairman.

Ms. Oge on that same line, there is a large tractor trailer manufacturing plant in Denton, Texas, the district that I represent, the Peterbilt Cooperation, that is actually producing an off the line natural gas vehicle for the long haul as well as short-haul applications, and my understanding is that is a little bit more expensive, but the expectation is the fuel cost recovery will happen in a very short period of time, 12-18 months, which over the lifecycle of that vehicle is very manageable. And they are doing it all without

Federal subsidies, without any Federal law. They are doing it because it is the right thing to do, and people are anxious to purchase that type of vehicle, and natural gas, of course, as we have seen the story on that from 10 years ago to now, the cost has come down tremendously.

I am concerned and have been concerned since we had a briefing between Department of Energy and the Environmental Protection Agency on the E-15 gas. And you have approved that for models, automotive models that are later than 2001. But you haven't approved it for earlier engines. You haven't approved it for marine vehicles, for boats. And you haven't approved it for the small engines. So what are the problems with those pre-2001 engines, boat engines, small engines? What are the problems that occur that led you to refrain from approving the use of E-15 in those engines?

Ms. Oge. Is the question for me or --

Dr. Burgess. Yeah, for the Department of Energy.

Ms. Oge. So, clearly, when we look at the data for older vehicles older than 2001, there was insufficient data to approve it, but also our engineering judgement was that, given the technologies that those vehicles were using -- and again, we are talking about the emission control systems. We were sufficiently concerned that E-15 could potentially increase the emissions from those vehicles, so the agency decided not to approve those vehicles.

Dr. Burgess. How many did you test?

Ms. Oge. Excuse me?

Dr. Burgess. How many did you test? Do you know?

Ms. Oge. For the testing that took place was only under the Department of Energy for 2001 and newer vehicles, and Ms. Hogan can speak about, about the work that they have done.

So when we approved the 2001 and newer vehicles, we had the data and we had significant additional data for newer vehicles. However, there is very limited information for older vehicles and off-road equipment so the agency decided, given on this lack of data or rather limited data, not to approve the use of E-15.

Dr. Burgess. But, I mean, I am old enough to remember when unleaded gasoline became the norm, and you had the side-by-side fueling pumps, and you changed the nozzle sizes and all that stuff. But still there were mis -- there were fueling accidents, misfueling applications that occurred. Do you have any experience from going back to the seventies, that serves as a template to prevent misfueling problems?

Ms. Oge. I wasn't in the agency in the 1970s, but the agency does have experience. The only thing I want to say, there is, there is a difference between the unleaded gasoline and the E-15. Back in the 1970s, there was a mandate for using unleaded gasoline for certain even vehicles. Here E-15, you know, we are not mandating E-15 be used --

Dr. Burgess. No, you are mandating a volume of ethanol to be blended with all of the gasoline that is sold in the country, and as a consequence, every snowblower, every lawnmower, every pump is going to be contaminated with E-15 within a very short period of time, and you know that. I mean, that is going to happen. That is a sad reality

of where we have gone, which is why, and I think, you know we have heard reference from Mr. Rush. This a tough summer. Grain production is way off. Why are we continuing to follow this foolhardy policy?

I mean, it was done under President Bush and I acknowledge that, but I think it is time to recognize the limitations of this and move away from what really is a, it is not, it is not a policy that follows commonsense.

Ms. Hogan, I just wanted to ask you a question. On your bio on the Web site, it talks that you were the, one of the principle overseers of \$16 billion in stimulus funding at EERE, is that correct?

Ms. Hogan. That is correct.

Dr. Burgess. And I know you wouldn't have it with you today, but can we ask you to provide the committee with some detail on how that money has been spent, how much is left, what it was spent for? You referenced in your testimony the new law with new batteries that are going to be produced. I am having difficulty trying to calculate the cost per battery. It looked high, but I want to be fair about it. So could you provide us the line item budgetary detail on that \$16.4 billion that your agency administered?

Ms. Hogan. We absolutely can provide you with that detail.

[The information follows:]

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

Dr. Burgess. All right. Mr. Chairman, I appreciate that, and I will yield back the balance of my time.

Mr. Whitfield. At this time, the chair recognizes the gentleman from Kansas, Mr. Pompeo, for 5 minutes.

Mr. Pompeo. Thank you, Mr. Chairman.

Thank you, witnesses, for coming out today.

Ms. Oge, I read your testimony twice and I saw precious little discussion of cost and price for consumer. It was all about mandates and department investments and that kind of thing. And that always troubles me an awful lot when you don't, when you don't trust consumers to really do what is in their best interest. And that I think is what RFS is riddled with.

Mr. Waxman mentioned price. He said that Republicans are preventing consumers from saving money. Do you think that is true?

Ms. Oge. That is not my position to say what the Republicans or Democrats are doing, sir. I am a civil servant. I am not here representing any political views.

Mr. Pompeo. Do you think if -- yeah, I am just repeating what he said. Do you think that folks who oppose some of the RFS standards, do you think that that is preventing consumers from saving money?

Ms. Oge. I want to remind Congress that EPA is implementing a law that Congress passed in 2007. So we are looking at the law. We are using the best science and legal interpretation to implement the law.

Mr. Pompeo. I appreciate that. I have seen some of that. An

electric vehicle today, if a consumer was going to go out and purchase one, would it save that consumer money today?

Ms. Oge. A new vehicle?

Mr. Pompeo. Yes, ma'am. A new vehicle.

Ms. Oge. A new vehicle today would be more fuel efficient than the vehicle of yesterday so on based on that analysis, the answer is yes. And the data that I have that -- I cannot tell you about 2012 -- but the data that I have is for 2016. So if you buy a new vehicle in 2016, you will pay \$950 more, but you will save \$3,000 from fuel consumption savings and fuel, assuming that the gasoline prices in 2016, according to EIA, will be about the same level as it is today.

Mr. Pompeo. Sure. And so consumers aren't choosing that in great numbers yet, you would agree with that?

Ms. Oge. Yes.

Mr. Pompeo. And the reason they are choosing more expensive vehicles that are available in the marketplace today is because of what set of circumstances?

Ms. Oge. I didn't say that they are choosing more expensive vehicles.

Mr. Pompeo. I will come back. They are not choosing a whole lot of electric vehicles, you would agree with that. Yet you said it was more economical for them to choose that today. How do you account for that disconnect?

Ms. Oge. What I said is that the 2012 to 2016 greenhouse gas standards and fuel efficiencies standards are good for the consumer

because the consumer on an average will save money at the pump that will more than offset the upfront cost of the vehicle. And that is the data that we have. Furthermore, what I want to note is that all the car companies have agreed on that, and they are supporting the program. So I think they know something more than I do.

Mr. Pompeo. Could be. I am just trying to figure out how come consumers don't know as much as you do about what is good for them.

How many cellulosic RINs have been generated over the life of renewable full standards?

Ms. Oge. I don't have the number, but there were a number of cellulosic RINs that were developed as part of the RFS 1; that is the 2005 program. And I believe, for 2011, 20 percent have the cellulosic RINs were used to meet the cellulosic standard. But I need to get back to the specifics. But there were cellulosic RINs that have been developed.

Mr. Pompeo. I would appreciate it if you could get that to us. I looked at the Web site. It looked to me like there had not been any during the entire course of the program. It looked like on the EPA's Web site, there had been no cellulosic RINs. So if I am wrong about that, I would appreciate you letting me and the committee know.

Mr. Gruenspecht, if the RFSs fills 36 billion gallons -- I have seen estimates that that would mean that we would need 40 percent ethanol? Does that sound about right to you, assuming the CAFE standards are fully met? Sound about right?

Mr. Gruenspecht. If it were all ethanol. We expect a lot of you

know, renewable diesel, a drop in fuels as well, but it would be about 40 percent of the fuel cooled by volume if it were all ethanol.

Mr. Pompeo. Right. And but today, the fleet can't handle on average 40 percent fuel volume; is that right?

Mr. Gruenspecht. Not today. That would be right.

Mr. Pompeo. And so, Ms. Oge, where are we going to put all of this extra ethanol?

Ms. Oge. Well, again, the 2007 is a rule that did not mandate ethanol to be used. Congress did not actually mandate a specific biofuel. And I think there is a lot of progress that we have seen on drop-in fuels, biobutanol, bio master liquid for both biodiesel and gasoline. Biogas and bioelectricity. As I said, in my testimony, also we have seen uses beyond the cars and trucks, jet fuel and home heating oil.

So I understand your concern, but again, I think there is a lot of innovation in fuels that are not going to be limited by this so-called blend war that has been --

Mr. Pompeo. I hope you are right. I hope it can be done affordably. I am less optimistic than you are.

Mr. Chairman, I am out of time.

I yield back.

Mr. Whitfield. At this time, I recognize the gentleman from Massachusetts, Mr. Markey, for 5 minutes.

Mr. Markey. Thank you, Mr. Chairman.

You know the thing about the auto industry is that they never knew

what was good for them. Their CEOs were oblivious. They fought every year fuel economy standards in this committee. How do I know? Because I made the amendment every year, 2001, 2002, 2003, 2005, and the auto industry all sat out there all sending the signal up, no, we can't do it. It is not good for us.

And they did it very successfully until they had turned themselves into technologically obsolescent companies heading toward bankruptcy that then asked the American taxpayers with hands out to please save us from the fact that no one wants to buy our vehicles. And none of those CEOs are around any longer because they all got canned because they did not know what was good for their companies. And unemployment just kept rising higher and higher in the automotive sector because no one would buy their vehicles. Then the Federal Government came in and we gave them a loan to help bail them out.

But moreover, out of this committee in 2007 and out in the House -- or out of the conference committee, we passed a bill to increase fuel economy standards to 35 miles per gallon. By the way, all of the auto industry was saying they can't do it. So we actually gave them a couple of more years to go to 2020 in that bill. And then the Supreme Court ruled in *Massachusetts v. EPA* that, that the EPA had a responsibility to make a decision as to whether or not greenhouse gases were dangerous to the planet, which it did, which then ultimately empowered the use of the California Clean Air Act.

And to President Obama's credit, he never passed any laws. Let's be honest. He never filed any suits before the Supreme Court. Let's

be honest. But what did do was he took the authority that we had given him, The Supreme Court had given him, and he acted on it.

So here is where we are, ladies and gentlemen, back in 2007, I looked around, I looked around. I was really trying to find a very good American hybrid sedan, and it was hard to find; Matter of fact, nonexistent. So I bought a Camry hybrid that got 33 miles per gallon, by they way, that is the EPA standard for the purposes of NHTSA, for the purposes of reaching 54.5 miles per gallon, which is really what we should be talking about here so that everyone understands that it is the NHTSA standard, not EPA. You should NHTSA down here, Not the EPA. Then my car as it is in a 2011 version is now getting 47 miles per gallon, the Camry hybrid, today. And they have all the way until 2026 to take the single most popular sedan in the United States and figure out how to squeeze eight more miles per gallon out of it.

. Now, can the auto industry figure that out? Well, the Republicans say, no, they can't do it; it is going to paralyze them. And so they are going to have a vote next week that strips the EPA from completing the regulation from 2017 to 2025 that will get us to 54.5 miles per gallon when a Camry Sedan is already at 47 miles per gallon today, as you walk into the showroom.

Now, how sad a commentary is that on the confidence the Republicans have in the innovation and the technological capacity of the automotive industry? Sad isn't it? And by the way, they bought into this American technological inferiority arguments for all of the time I have been on the committee. They just don't think America can

do it. They don't think that our auto industry can do it, even though Toyota is already up to 47 miles per gallon for a Camry today.

Now what is the consequence of them repealing this? I will tell you what. Between now and 2030, if we meet 54.5 miles per gallon, it is 3 million barrels of oil a day. You want sleepless nights for Saudi sheiks? That will do it. And it is 4.7 million barrels by the year 2040. Why should we export young men and women over to the Middle East when we can be exporting fuel efficient vehicles all around the planet made in America. The unemployment rate is plummeting in the automotive sector because they are now making vehicles people want to buy because they are fuel efficient. And the Republicans are now going to go back to the old plan of technological obsolescence that led to the problem in the 1970s when I had to vote here to bail out Chrysler. Then I wait and I get a second chance to bail out Chrysler again in 2009. How fortunate am I that twice I get to see how little they understand about the need for continued innovation if they are going to be competitive on the open marketplace. But the tragedy is, let's be honest, it is the amount of oil that the Republicans are allowing to continue to be imported from the Middle East because that is where we put 70 percent of all of the oil we consume in our country in gasoline tanks. And the single greatest weapon we have is increased fuel economy standards, and they are going to repeal that next week? Well, you are going right at the heart of the number one national security vote that anyone is casting in Congress this year, and we are going to have a hell of a debate over whether or not that helps our country.

I yield back the balance of my time.

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

At this time, I recognize the gentleman from Louisiana, Mr. Scalise, for 5 minutes.

Mr. Scalise. I thank the gentleman for yielding and again thank this chairman for this continued conversation as we have, as we have looked over hearing and hearings for months now about ways that we can improve this country's woeful energy policy and also work to create jobs.

I want to ask first, Mr. Gruenspecht, some of the data that comes out of the energy information administration, we have -- we have viewed and you know, we look in the Gulf of Mexico at a lot of -- a lot of slow down in exploration as well as production. And I understand that you all have come out with some reports recently looking at, using some data to look at production in the Gulf of Mexico. It is my understanding that you have got projections that show that this year production would be down roughly 30 percent from last year. Do you know what the data your agency has on that is?

Mr. Gruenspecht. I would be, I would be surprised if that number -- maybe something like 30,000 barrels -- but 30 percent from last year to this year, that doesn't sound right to me, but I will go back and check.

[The information follows:]

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

Mr. Scalise. Do you have any data in front of you regarding where production is? Just start with the Gulf of Mexico, and I want to look at some other areas, too.

Mr. Gruenspecht. I don't really have, I don't have the detail on the Gulf of Mexico in front of me. I know that for crude oil production as a whole, and again, the Gulf of Mexico has, as you know and I know, some, you know, issues that surrounded the moratorium, but for the U.S. as a whole, crude oil production rose by about 200,000 barrels a day in 2011.

Mr. Scalise. Now you are counting private land, Federal land.

Mr. Gruenspecht. -- land, everything, right.

Mr. Scalise. All right. If you just broke it down to Federal lands.

Mr. Gruenspecht. Federal lands, I think in 2011, was down a bit than 2010.

Mr. Scalise. What is a bit?

Mr. Gruenspecht. I don't have it in front of me, but I would be glad to get it for you.

[The information follows:]

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

Mr. Scalise. So you know exactly how much it is up overall when you don't count Federal lands, but then you just conveniently don't know how much it is down when you actually talk about the areas that the Federal Government has control.

Mr. Gruenspecht. Because I have a summary of the short-term outlook before me that doesn't have all of the regional detail, but I will definitely get it for you --

Mr. Scalise. Well, when we are making policy in Washington, you know, there are States that have their own programs in place. You have people that have private land that are able to lease that private land out, but then where we really have the purview is over those areas where the Federal Government has control through both the Department of Energy, with the EPA. You have got of course the Department of Interior and all of these agencies control Federal lands, and what we have seen is that production is actually down in the areas where the Federal Government has control. Now, do you dispute that, or do you know --

Mr. Gruenspecht. In 2011, it was lower than 2010.

Mr. Scalise. And that is you know something I guess that perplexes a lot of us when we hear the President out going around the country bragging that production is higher and yet when you look at the areas where the President has control, production is actually down. The areas that he could help us to increase production, it is actually going the opposite way because of his policies.

In fact, we just saw what the 5-year lease plan that was released. I am not sure if you have evaluated this. I know EIA has looked at

it, but from the reports we have seen, the latest 5-year lease plan in the Outer Continental Shelf that the President released actually closes off about 85 percent of the areas that were getting ready to come open for exploration. Have you seen that? Have you looked at that data.

Mr. Gruenspecht. I have not looked at. I am aware that there is going to be some drilling in the Federal offshore off of Alaska, I believe, is planned for this year. And I believe and we are projecting a growth in the Gulf of Mexico production in the future, but there is no question that the aftermath of the Macondo disaster did have an impact

Mr. Scalise. Well, but it was the -- it was the aftermath that was based on the President's policies that went against actually some of his own scientists and engineers. It was a 30-day report that the President put together a team of a scientists and engineers after the Macondo explosion to look at and evaluate what we do to increase safety. And then the President tried to use that report to impose the moratorium that you referred to. And the scientists and engineers, basically, they called a foul and said, no we did not suggest that and the White House recanted; somebody in the White House doctored the report. But the scientists and engineers actually said you will reduce safety in the Gulf. You will actually run jobs out of this country. And we have seen that. We have seen about almost 20,000 jobs, American jobs, that have been lost because of that policy, and we have lost some of our best rigs, Some of our most experienced crew base. So the President

went against his own scientists and engineers by saying you will, you will reduce safety by having a moratorium. And so that may, may have something to do with the reduced production on Federal lands.

I want to ask Ms. Oge, we have been talking about the E-10 and increases potentially coming up, do you all work with gas stations, with car manufactures that do have concerns they brought up in this committee and other places about what liability issues there would be, of the costs that would be associated with, with going to a higher level? What kind of coordination do you have with them to address those valid concerns that they have.

Ms. Oge. We have had extensive discussions with gas stations and extensive discussions with the car companies. And again the basis for the waiver is the Clean Air Act that requires the agency to evaluate the potential impacts on emission control systems and emissions from vehicles as a result of a new fuel, fuel additive. And that is the analysis that we have done.

As far as the gas stations' concerns, we have incorporated misfueling requirements for the renewable fuel producers. And for the car companies, we, when we met with them and they did express concerns, we asked them to provide to us any data, any scientific data that they have that demonstrates that E-15 will undermine emission control systems for 2001 and newer vehicles, and they have not provided any data. So based on extensive scientific data that we have received, testing from the Department of Energy and other studies, the agency has concluded that E-15 will not have any impact when it comes to

emission control systems for 2001 and newer vehicles.

Mr. Scalise. Does that address -- I am out of time. I yield back the balance of my time.

Mr. Whitfield. At this time, I recognize the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. Griffith. Thank you, Mr. Chairman.

Sleepless nights for Saudi sheiks. In my part of the world, you give Saudi sheiks sleepless nights by looking at turning coal into gas. And I am just wondering what thoughts have gone into that and if there is any intent to support my alt fuels bill, H.R. 2036, which would allow for the alt fuels to include coal that has been turned into gasoline, and it looks like we can do it for about \$94 a barrel, and we are the Saudi Arabia of coal. So I am just wondering when are you all going to get on that ship and sail with us to a better America?

Ms. Oge. Sir, I am not familiar with your bill, but I can take your request back and take a look at it.

Mr. Griffith. All right, and generally, if not my bill, some other bill regarding coal being converted into gas. What are your thoughts on that? You don't have to be familiar with my bill to have some thoughts on this, I assume.

Ms. Oge. I don't have any views.

Mr. Griffith. All right.

We heard the President talk about algae and its potential and I'm just wondering if, if perhaps either of you can or any of you can give my some idea of where we stand on that. My bill also touches on algae.

So it is not that I am anti-algae, I just don't know whether we are ready yet. Where do we stand on algae being converted into gasoline?

Ms. Oge. EPA has qualified algae as a feed stock to meet the renewable fuel centers as with cellulosic. I know that there are significant efforts by a number of companies, including ExxonMobil, on algae research. I don't know to what extent these efforts will allow them to bring commercial available material into the marketplace any time soon

Mr. Griffith. And so do we have any idea what level of production we have at this point?

Ms. Oge. I don't believe there is any commercial available algae material.

Mr. Griffith. Do we have any expectation of production by say 2015 or 2020?

Ms. Oge. I don't know, sir.

Mr. Griffith. So to be putting our money on algae at this point, although it certainly should be researched, would be a foolish bet for the next 15 or 20 years. Is that a fair statement?

Ms. Oge. I am in no position to say that. Again, you know, a lot of resources have been spent, a lot of companies -- maybe Ms. Hogan can speak to that. But for me to evaluate R&D efforts and to what extent they will materialize in the next 5 or 10 years, I think that is an appropriate -- that is not an appropriate position for me to take.

Mr. Griffith. Ms. Hogan?

Ms. Hogan. So the algal resource is certainly a part of our

biomass R&D program where we are looking at a variety of sort of bio-based sort of starters. Where we are with algae is it is part of our drop-in fuels program, and that is one of the strong areas. And where we expect is to get to sort of cost competitiveness in about 10 years.

Mr. Griffith. Cost competitiveness. Competitive with what?

Ms. Hogan. With traditional fuels, gasoline

Mr. Griffith. And we have been talking a lot about or there has been a lot of talk about electric cars, and of course, the question asked in my, in my part of the world is, how are you going to have all of these electric cars if you are not producing enough electricity and obviously a big part of our coal or part of our electricity is produced by coal.

Mr. Gruenspecht, did I get close on that?

Mr. Gruenspecht. Very close. Perfect.

Mr. Griffith. All right. If we keep raising the cost of electricity, don't you think that will cause some concern or some diminution in the advantages of going to an electric car?

Mr. Gruenspecht. I think my understanding is that the cost of electricity once you have the electric vehicle is very attractive relative to the cost of gasoline or diesel. The question with the electric vehicle is the cost of the of the electric vehicle.

Mr. Griffith. Right but part of the advantage of the electric vehicle is that once you start using it, you have lower costs but just today, a part of my district got notice that their electric bill was

going to go up because of innovations made at a new coal-fired power plant, and of course, that is state-of-the-art, but there won't be any more of those built because we are going to shift the country away. And just yesterday we had a hearing where the president of -- or CEO of Dominion Power indicated that one of the ways they have been able to keep costs down for their customers is having a wide diversity of different ways to produce their electricity, and now coal is being taken away from them, away from them in that mix and they don't think that is going to work for the American consumers, and they believe electric costs are going to go up. And in fact, Kentucky utilities indicated 10 to 14 percent in our region is going to be an increase just based on new regulations from the EPA. So when you start raising the cost of that electricity up, you are really going to damage that value, are you not?

And I see my time is up, and I will yield back.

Mr. Whitfield. The chair recognizes the gentleman from Colorado, Mr. Gardner, for 5 minutes.

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Mr. Gardner. Thank you, Mr. Chairman.

And thank you to the witnesses for your time and participation in today's hearing.

Dr. Hogan, I will start with you. As the Deputy Assistant Secretary for Energy Efficiency, what does that entail? Just a brief one-sentence job description.

Ms. Hogan. Just overseeing our energy efficiency R&D and deployment portfolio.

Mr. Gardner. And when you research study energy efficiency projects what do you take into account, aside from the energy efficiency aspect itself?

Ms. Hogan. Certainly we are looking to find cost-effective opportunities to improve efficiency of our homes, our buildings, our transportation systems and our industry.

Mr. Gardner. Do you take into account jobs that would be affected by the energy efficiency measures?

Ms. Hogan. We are very interested in strategies that we can advance that will help build domestic jobs, jobs that cannot be exported overseas.

Mr. Gardner. Do you take into account jobs that can be lost as a result of some of the measures that you are considering?

Ms. Hogan. I think we try to look holistically at how to have

a robust set of jobs in the energy efficiency field.

Mr. Gardner. And obviously -- my district in Colorado has a large agriculture base. It is the 11th largest agricultural district out of the 435 districts in Congress. A lot of the corn growers are very concerned about what is taking place around the country today. And I just got an email today from a farmer in Colorado who asked this question, and I will read the question to you; it says, a hearing talks about the EPA relaxing the ethanol mandate due to corn shortage. What are you hearing? And I know you have addressed this a couple of times. So is the EPA, do you have the statutory authority, are you considering relaxing the ethanol mandate due to the corn shortage?

Ms. Hogan. I think I am going to share this one with my colleague.

Ms. Oge. I am EPA. We are hearing the rumors also. Clearly, there is concern that has been raised because of the drought, so we have been in discussions with our colleagues from the USDA. What we are hearing actually, although the yield, USDA has lowered the yield by 10 percent, there are more acres and more corn produced this year than was produced last year. And actually, this year, we are going to have, based on the USDA data, the third highest of corn production in the record of the country.

Now, EISA, the Congress passed in 2007, provides an opportunity for companies that are regulated under this law, including State Governors, to petition EPA to waive the volume of the renewable fuel standards based on a lack of availability of renewable fuels and significant cost impacts to the region or the State. We have not seen

any petitions today. If we receive a waiver, there is a process that the agency has, which is a 90-day process to put the waiver out for comments and potentially public hearing and will act accordingly.

Mr. Gardner. So there is no consideration at this point?

Ms. Oge. Absolutely not.

Mr. Gardner. And Dr. Gruenspecht, if I could ask you this question about hydraulic fracturing. Do you know what percentage of our energy production, oil and gas production, is developed or achieved through hydraulic fracturing?

Mr. Gruenspecht. Well, I know that we are producing -- excuse me. I know that we are producing more than a third of our natural gas now from shale gas. And I think all of that involves fracturing, and there may be some fracturing additionally in some of the oil production and some of the other gas production, so I imagine it is pretty significant.

Mr. Gardner. Could you get back to me with specific numbers?

[The information follows:]

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

Mr. Gardner. You have one for the natural gas, and then on the oil side, I would be interested as well because there is a lot of fracturing, hydraulic fracturing occurring in my district, including oil and gas development. One-third of natural gas. Could you also quantify the impact if hydraulic fracturing were to be restricted? Do you know the number off the top of your head what that would mean?

Mr. Gruenspecht. I don't know off the top of my head but I will try to do that.

Mr. Gardner. Could you get back to us?

[The information follows:]

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

Mr. Gruenspecht. Yes.

Mr. Gardner. I yield back my time.

Mr. Whitfield. The gentleman yields back the balance of his time.

There are no further members for questions, so that will conclude today's hearing.

Once again, we thank you. We appreciate you all being with us, we appreciate your testimony. And during the question and answer, there was some commitment on your part to provide some additional information, which we would appreciate. And we will keep the record open for a period of 10 days for any other material that might be inserted.

And with that, we will conclude today's hearing. Thank you very much.

[Whereupon, at 5:04 p.m., the subcommittee was adjourned.]