OVERSIGHT OF THE DEPARTMENT OF ENERGY'S STIMULUS SPENDING

HEARING

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

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OVERSIGHT OF THE DEPARTMENT OF ENERGY'S STIMULUS SPENDING

TUESDAY, MARCH 20, 2012

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 10:08 a.m., in room 2154, Rayburn House Office Building, Hon. Darrell E. Issa (chairman of the committee) presiding.

Present: Representatives Issa, McHenry, Jordan, Chaffetz, Walberg, Lankford, Buerkle, Labrador, DesJarlais, Gowdy, Ross, Guinta, Farenthold, Kelly, Cummings, Maloney, Norton, Kucinich, Clay, Connolly, and Speier.

Staff present: Ali Ahmad, Majority Communications Advisor; Kurt Bardella, Majority Senior Policy Advisor; Michael R. Bebeau, Majority Assistant Clerk; Robert Borden, Majority General Counsel; Molly Boyl, Majority Parliamentarian; Lawrence J. Brady, Majority Staff Director; Joseph A. Brazauskas, Majority Counsel; Drew Colliatie, Majority Staff Assistant; Gwen D'Luzansky, Majority Assistant Clerk; Adam P. Fromm, Majority Director of Member Services and Committee Operations; Linda Good, Majority Chief Clerk; Tyler Grimm, Majority Professional Staff Member; Peter Haller, Majority Senior Counsel; Christopher Hixon, Majority Deputy Chief Counsel, Oversight; Justin LoFranco, Majority Deputy Director of Digital Strategy; Mark D. Marin, Majority Director of Oversight; Christine Martin, Majority Counsel; Kristina M. Moore, Majority Senior Counsel; Rebecca Watkins, Majority Press Secretary; Michael Whatley, Majority Professional Staff Member; Lisa Cody, Minority Investigator; Kevin Corbin, Minority Deputy Clerk; Ashley Etienne, Minority Director of Communications; Jennifer Hoffman, Minority Press Secretary; Carla Hultberg, Minority Chief Clerk; Chris Knauer, Minority Senior Investigator; Dave Rapallo, Minority Staff Director; and Donald Sherman, Minority Counsel.

Chairman ISSA. Good morning. The hearing will come to order.

The Oversight Committee exists to secure two fundamental principles: first, Americans have a right to know the money Washington takes from them is well spent and, second, Americans deserve an efficient, effective government that works for them. Our duty on the Oversight and Government Reform Committee is to protect these rights. Our solemn responsibility is to hold government accountable to taxpayers, because taxpayers have a right to know what they get from their government. We will work tirelessly in partnership with citizen watchdogs to deliver the facts to the

American people and bring genuine reform to the Federal bureaucracy. This is our mission statement.

Today, gasoline is $3.80. When this Administration took office, it was close to half that. Whether it is 2009 at $2.05, 2010 at $2.72, or last year at $3.69, or today at $3.84, we know that gas prices are a leading indicator of whether or not we are on the right track or wrong track in the overall energy fight.

The Department of Energy was produced as a separate cabinet level position as a result of years of, in fact, declining fuel self-sufficiency and a need to ensure that we had a full cabinet at the President's table level department to ensure that energy was a priority. At that time we were more energy self-sufficient than we are today. At that time the dreams of green energy were talked about, too.

The fact is, at that time we had a bigger percentage of our portfolio of electricity coming from nuclear than we do today. The fact is 51 percent of electricity produced in America today is produced from that same dirty coal that was always used. Thanks to the Department of Energy and others, coal is cleaner than it was.

The fact is our reliance on coal, petroleum, natural gas, somewhat on hydroelectric, all remain somewhat similar to what it was, and the dreams and the investments in green energy continue to be somewhat elusive.

That is not to say we shouldn't continue. As the Secretary may mention today, we still invest in fusion on a limited basis in the hopes that someday from a glass of water we will produce green, sustainable energy at a high level, just as the sun does.

The fact is that is not what we are going to talk about today. I want to make it clear that administration after administration has set lofty goals and not achieved them. We are going to talk, to a great extent, today, and hear from the Secretary about Department of Energy's $14.5 billion loan guarantee program, including the much known and touted Solyndra.

We are going to go beyond that, though. We are also going to review the Inspector General's report. We are going to recognize, like any large agency, it is made up of multiple different sub-entities that must do their job, must be respectful of internal management, must heed the Inspectors General and other groups who find fault.

Today we are not here to find primary fault. We are here to, in fact, ask the Secretary to respond to a number of findings, many of which came from whistle-blowers, but even more came from internal audits done by the Inspector General and the Department of Energy itself.

Let's make it clear. We are the Oversight Committee, but we are also the committee that has an obligation to ensure that reform occurs.

Post the election of the President, the first act of the new Congress was, for all practical purposes, to pass the largest single expenditure of money in a relatively, at the discretion of the President way, in history. In other words, the stimulus was very much discretionary money. At the time people said, no, no, it is going to be well-accounted for. I think we know better today. We know that in fact a tremendous amount of money, enough money to double the size of the budget of the Secretary we have before us today, was put at his disposal.

It is hard to spend that much money and spend it responsibly. I believe in our Q&A today we are going to find that, in fact, in many cases it was too much money too quickly to be spent well. As we look at weatherization failures noted by the Inspector General, it is going to be clear too much money, too loose control, too much to ramp up and do well perhaps will be the excuse, but the bottom line is we need to learn from this mistake.

If our goal is in fact to save energy through providing assistance for weatherization for needy families, that in fact we have to make sure that it is done well, it is done cost effectively, and that there be no excuse that we simply couldn't find enough good vendors so, as a result, we found vendors who did a shoddy job and in many cases left people worse off, not better off, than they were before their windows or insulation were installed.

It is very clear that the Obama DOE was DOA when it came to delivering affordable energy to consumers. One of the challenges we have today will be to ask did we need to have large loans? Why did we need them? Were they proof of concepts or were they part of a grand plan by the Administration to ensure that enough funding to scale up green energy to make it work was possible?

As a Californian, I am very well aware that many of the projects would not even have been penciled out for these loan programs if my State had not mandated that our incumbent electric utilities buy energy at as much as 10 times the cost of other energy sources. California and other States have made determinations to buy green energy at whatever the cost was. That fueled a lot of penciling of projects that could have worked, but as we found they didn't always work.

Additionally, the Department of Energy's $5 billion weatherization assistance program is a stunning example of wasted billions of taxpayer dollars. Let's understand, $5 billion should have done more for needy people in America. Perhaps the most important thing is it should have been spent at the pace that would have allowed every weatherization project to be done by a skilled contractor at an affordable price, delivered and verified.

That does not mean that the Secretary before us is directly responsible. He oversees a vast agency that has multiple bureaucratic and appointed individuals. But we need to ask today, Secretary Chu, can we allow this to happen again? Can we do better? What were the lessons learned? How would you keep it from happening again? And since weatherization programs are not exclusive to just the stimulus, can we in fact do a much better job? Have we found out, if done correctly, what the real benefits would be?

Last, but not least, I would like to commend the Secretary today for being probably the smartest cabinet officer in a generation; for being someone who understands the potential of technology. Our criticisms today of the Department of Energy I believe you will find have more to do with whether or not the people that work for you deliver the kind of product they should have delivered; whether in fact people that you are asked to hold accountable in fact did you do a disservice by putting either their personal priorities or simply not being good managers.

So as we go through today, Mr. Secretary, I, for one, am somebody who believes that your continued participation in the science

community, your continued participation in the future of energy and of science are essential. So as the questions get hard, please understand they are not about you; they are about an agency that you began to lead nearly 3 years ago.

With that, I recognize the Ranking Member for his opening statement.

Mr. CUMMINGS. Thank you very much, Mr. Chairman, and thank you for calling this hearing.

And to you, Mr. Secretary, I am very glad that you are with us today, and I want to thank you on behalf of a grateful Congress and a grateful Country for what you do for us every day.

One of our Nation's most important public policy goals is to move toward energy independence and energy efficiency. We all know the reasons for this: we want to enhance national security by reducing our dependence on foreign oil; we want to remain competitive with countries like China by developing innovative technologies of the future; we want to boost our economy while reducing our environmental footprint; and we want to lower energy costs for American consumers.

We all agree with these goals, so how are we doing? First, the United States is now producing more oil than any time in the last 8 years. We are producing record amounts of natural gas; we are now the largest producer of natural gas in the world. The Administration has approved more than 400 permits for additional drilling, but with safeguards to prevent the devastation faced by the Gulf after the oil spill of 2010.

We have also become more efficient. In 2010, oil imports to the United States fell below 50 percent for the first time in 13 years and a new agreement on fuel economy standards by the Administration and U.S. auto companies will reduce oil consumption by more than 2 million barrels a day by 2025.

Regardless of how much we drill and how much we save, however, we know that these measures alone will not achieve energy independence. We use about 20 percent of the world's oil, but have only about 2 to 3 percent of known reserves. We need an aggressive policy to invest in the most innovative clean technologies of the future, and that is where the Recovery Act comes in.

The Recovery Act has been extremely successful in responding to the economic crisis of 2008. It allocated more than $35 billion for more than 15,000 projects and increased the number of people employed by between 1 million and 2.9 million, according to the Congressional Budget Office. The Recovery Act has also made significant investments in projects that boost the ability of private sector companies to innovate and produce new technologies in order to generate more energy and lower costs for consumers. These investments include electric grid improvements, advanced energy manufacture, geothermal businesses, and hundreds of other projects.

The United States is now on track to double renewable energy generation by the end of this year, and companies supported by the Recovery Act are making amazing breakthroughs in technologies that could dramatically reduce energy costs and generate whole new industries. For all of these reasons, Members of Congress on both sides of the aisle have written nearly 500 letters in support of these broad goals and specific projects.

In addition to evaluating the overall effectiveness of the Recovery Act, one of our jobs in this Committee is to examine the procedures used by the Department and industry to determine whether they can be improved. Although the bankruptcy of Solyndra raised legitimate questions about these procedures, it did not and does not support unsubstantiated allegations that the Department engaged in criminal conduct or made its funding decisions based on political favoritism, pay-to-play relationships, or outright corruption.

We have to be responsible about our oversight. We cannot simply attack any program that has the words Obama and clean air attached to them. We have to base our review on the facts and strive to serve the long-term interests of the American people, rather than short-term interests of partisan politics. For example, last week the non-partisan Government Accountability Office issued a report with recommendations to improve the procedures used by the Department to evaluate loan guarantee applications. GAO also made this little notice of finding: it concluded that the Department's due diligence procedures "may equal or exceed those used by private lenders to assess and mitigate project risks."

I think the Department should be commended for these actions even as it continues to become more efficient and effective.

As our Committee conducts its oversight of the Recovery Act, I hope we fairly assess the overall success of the Department's programs and focus on constructive ways to fulfill our shared goal of energy independence and energy efficiency.

With that, Mr. Chairman, I yield back.

Chairman ISSA. I thank the gentleman.

Mr. JORDAN. Mr. Chairman, I ask unanimous consent for one minute to make a statement.

Chairman ISSA. Without objection, so ordered.

Mr. JORDAN. Thank you, Mr. Chairman.

Chairman ISSA. The gentleman is recognized.

Mr. JORDAN. I appreciate that and I will be brief.

Let me just say this. The Department of Energy's budget authority went from $23 billion in 2008 to $69 billion in 2009 when the Secretary took over. DOE was the main conduit through which the Obama Administration sought to implement their green energy strategy and, 3 years later, what do the American people have to show for DOE's use of their money? A disgraceful portfolio of loans and loan guarantees.

Solyndra, which went bankrupt in August 2011, had a credit rating of B, B-minus when the Department of Energy gave it its loan guarantee. And we were all shocked to find out that the entire DOE portfolio for the 1705 program has an average unweighted credit rating the same as Solyndra's, B, B-minus, with several companies receiving credit ratings even below that of the bankrupt Solyndra.

When you look at this information, I think there are only two explanations: either gross incompetence at this agency or, just as dangerous, decisions were not made on the merits of the projects but, rather, on the names in the company's Rolodexes. For a disturbingly large portion of the projects that got loan guarantees, there are connections to the Obama Administration too stark to ignore. In my opinion, this loan guarantee program typifies the kind

of cronyism that has made Americans across the Country despise what they see in Washington.

Mr. Chairman, it is either incompetence at this agency or you had to be a friend of the Administration to get a loan guarantee, and that needs to be investigated. And I want to thank you for having this critical and important hearing today. With that, I yield back.

Chairman ISSA. The gentleman yields back.

Members will have 7 days to submit opening statements for the record.

Before I recognize the panel, I would ask unanimous consent that the list of all the Republican members of this Committee who submitted loan guarantees be placed in the record. Without objection, so ordered. I might note that no Republican-only requests for funding from the Department of Energy were granted; the only one that was granted was actually bipartisan, had almost all the Indiana members, including the Senator.

Additionally, Mr. Cummings had sent me a letter yesterday. Here is a full response letter, along with all of the Committee notes that substantiate the invalidity of your letter.

With that, I would recognize our first panel, first and only panel, the Honorable Steven Chu. Secretary, as I did in my opening, I made it clear you are undoubtedly the smartest person to occupy your office in a very long time, if ever. Your resume, including maybe not more patents than I have, but patents that are certainly more long-reaching than mine, speak for themselves.

I would, however, note that the Committee rules require we swear all witnesses. Would you please rise to take the oath?

Do you solemnly swear or affirm the testimony you are about to give will be the truth, the whole truth, and nothing but the truth?

[Witness responds in the affirmative.]

Chairman ISSA. Thank you. Please be seated.

Let the record reflect a yes.

Mr. Secretary, in my printed response it says, as it always does, limit yourself to 5 minutes, look at the clock, and so on. To be fair, take the time you need. Bear in mind that your entire opening statement will be placed in the record, so what is not in the record is just as valuable as what is in the approved notes.

With that, you are recognized.

STATEMENT OF THE HONORABLE STEVEN CHU, SECRETARY OF ENERGY, U.S. DEPARTMENT OF ENERGY

Secretary CHU. Thank you, Chairman Issa, Ranking Member Cummings, members of the Committee. Thank you for the opportunity to discuss the Department of Energy's work through the Recovery Act to strengthen the U.S. economy and promote a secure energy future.

When President Obama took office, the United States was in the midst of the greatest economic crisis since the Great Depression.

To meet this challenge, we had to respond quickly and forcefully. In February 2009, President Obama signed into law the American Recovery and Reinvestment Act to jump start the economy and lay the foundation for our future prosperity.

Today we are moving in the right direction and the economy has added private sector jobs for 24 straight months. The nonpartisan Congressional Budget Office estimated that at its peak the Recovery Act was responsible for up to 3.6 million jobs nationwide.

The Energy Department received more than $35 billion through the Recovery Act, supporting more than 15,000 projects across the Country and helping the United States compete in the global clean energy race.

Since the summer of 2010 we have consistently supported between 40,000 and 50,000 direct jobs each quarter. The Department takes its obligation to the American taxpayers seriously, and from day one our mission was to get the Recovery Act funding out the door quickly, responsibly, and transparently.

Oversight has been a top priority for the Department and me. We have put in place an aggressive monitoring system to ensure that the Department and its grantees spend Recovery Act funds wisely. The Department takes any case of waste, fraud, or abuse very seriously.

To date, less than one-tenth of a percent of the Department's Recovery Act projects have resulted in a criminal indictment or conviction for waste, fraud, or abuse. Each of these cases was unacceptable. We have taken action to address issues early on and hold responsible parties accountable. Moreover, the Department has cooperated, and will continue to cooperate, with the Inspector General's investigations.

I have spent my career as a scientist. Rigorous peer review and double-checking someone else's findings are fundamental to sound scientific progress, and I believe the same is true in the government. So I welcome any and every sincere effort at oversight and where we find mistakes we have and we will move swiftly to correct them.

I hope today can be an opportunity to have a serious, substantive dialog. The American people expect all of us to honestly assess the investments we have made and chart our course for the future. Ultimately, we share the same goal: ensuring that America wins the clean energy race.

While any case of fraud, waste, or abuse is unacceptable and deserves swift and appropriate action, oversight also requires us to examine the overall effectiveness of our Recovery Act programs. These investments are helping to modernize the ways we produce and use energy so we can compete for energy jobs of the 21st century. We have made strong progress in several areas.

Through the Recovery Act we have helped families and communities save money by saving energy. We have put construction workers, contractors and others to work weatherizing 680,000 homes. Thanks to the Recovery Act investments, the United States has nearly doubled the renewable energy generation since 2008. Projects supported by the 1603 program, the 48(c) tax credit, and the Section 1705 loan program are putting tens of millions of Americans to work building and installing the clean energy technologies that will power our future.

The Recovery Act is also helping to diversify our transportation sector to protect consumers from high gas prices and to reduce our dependence on imported oil. We are supporting advanced biofuel fa-

cilities and strengthening our electric vehicle manufacturing industry.

Through the Recovery Act, we are upgrading the grid to a more secure, stable electrical system. We are investing in cutting-edge research so the United States can maintain our leadership in science and technology.

The Department of Energy's Recovery Act efforts are working. They have created jobs and put us in a stronger position to compete in the global clean energy economy. Last year the United States reclaimed the title from China as the world's leader in total clean energy investments. However, our comeback was due in large part to the programs and tax incentives that have expired or are set to expire soon.

America has reached a crossroad. We can play to win in the clean energy race, investing in America's workers, industries, and innovations, or we can wave the white flag and cede leadership to other countries. I believe the United States can and must win this race. The Recovery Act gave us a strong foundation to build on, but we must move forward with fierce urgency.

Thank you, and now I welcome your questions.

[Prepared statement of Secretary Chu follows:]

Statement of Secretary Steven Chu
U.S. Department of Energy
Before the
Committee on Oversight and Government Reform
U.S. House of Representatives

March 20, 2012

Chairman Issa, Ranking Member Cummings, and Members of the Committee, thank you for the opportunity to discuss the Department of Energy's work through the American Recovery and Reinvestment Act to strengthen the U.S. economy and promote a secure energy future.

When President Obama took office, the United States was in the midst of the greatest economic crisis since the Great Depression. More than 800,000 jobs were lost in January of 2009, and nearly 3 million jobs were lost in the six months before that.

To meet this challenge, we had to respond quickly and forcefully. In February of 2009, President Obama signed into law the American Recovery and Reinvestment Act to jumpstart the economy. The Recovery Act provided immediate assistance to families, gave much-needed relief to states and local communities, and invested in priorities like energy, infrastructure, and technology that would create jobs and lay the foundation for our future prosperity.

Today, we are moving in the right direction. The economy has added private sector jobs for 24 straight months for a total of more than 3.9 million jobs during this period. The non-partisan Congressional Budget Office estimated that at its peak, the Recovery Act was responsible for up to 3.6 million jobs nationwide.

Energy Department Recovery Act Implementation and Oversight Efforts

As part of the Recovery Act, the Energy Department received more than $35 billion to help jolt the economy and to position the United States to lead in the global clean energy race. By the end of fiscal year 2010, the Department had obligated virtually 100 percent of its Recovery Act contract and grant funds. We are supporting more than 15,000 projects across the country. And since the summer of 2010, we have consistently supported between 40,000 and 50,000 direct jobs each quarter, and likely thousands more throughout the supply chain.

From day one, our mission was to get Recovery Act funding out the door quickly, responsibly, and transparently. The Department takes its obligation to the American taxpayer seriously, and we took a number of steps to make sure we efficiently implemented our programs and rigorously monitored our projects.

For example, we broke down silos in the Department and brought together all the relevant parties from program and staff offices for regular meetings to discuss how to overcome barriers to implementation. We improved customer service by conducting webinars to train recipients on reporting requirements and by establishing a clearinghouse to answer questions. To

promote quality decision making, we asked leading experts in their fields to review project applications. And to increase the transparency and accountability of our spending, we developed an online financial database to provide users with a standard set of financial numbers for departmental and public review.

The amount of money we had to get out the door to meet our obligations to Congress and the American people required us to significantly ramp up our operations. While there were, understandably, some bumps along the way, we worked hard to promptly resolve road blocks.

Oversight of our Recovery Act funds has been a top priority for the Department and me. We have put in place an aggressive monitoring system to ensure that the Department and its grantees spend Recovery Act funds wisely and that taxpayers get the value they deserve. Our multilayered process includes financial controls at the front end, regular monitoring and site visits by our project officers, and audits by the Inspector General's office, which continues to play an important role in identifying ways we can further improve our programs.

The Department takes any case of waste, fraud, or abuse very seriously. The data strongly suggest that these cases are the exception rather than the rule. To date, less than 0.1 percent of the Department's 15,000 Recovery Act projects have resulted in a criminal indictment or conviction for waste, fraud, or abuse. Each one of these cases was unacceptable, and we have taken aggressive action to address issues early on and hold responsible parties accountable. Moreover, in addition to our own monitoring and oversight efforts, the Department has cooperated, and will continue to cooperate, with the Inspector General's office as it investigates any allegations of waste, fraud, or abuse.

I have spent my career as a scientist. Rigorous peer review and double-checking someone else's findings are fundamental to a sound scientific process — and I believe the same is true in government. So I welcome any and every sincere effort at oversight, and where we find mistakes, we have and we will move swiftly to correct them. I hope today can be an opportunity to have a serious, substantive dialogue. The American people expect all of us to honestly assess the investments we've made and chart a course for the future. Ultimately, we share the same goal: ensuring that America wins the clean energy race.

While any case of waste, fraud or abuse is unacceptable, and deserves appropriate punishment, oversight also requires us to examine the overall effectiveness of our Recovery Act programs. These investments are helping to modernize the ways we produce and use energy in this country so we can compete for the energy jobs of the 21st century and build an economy to last. We have made strong progress in several key areas, which I would like to briefly highlight.

Saving Americans Money through Energy Efficiency

The Recovery Act has put construction workers, contractors, and many other Americans to work helping families and communities save money by saving energy.

- **Weatherization Assistance Program:** Since 2009, the weatherization program has completed energy efficiency upgrades in approximately 860,000 homes. Of those homes, 680,000 were upgraded through the Recovery Act.

  These energy efficiency improvements are helping families to reduce energy waste and cut energy costs. An Oak Ridge National Laboratory study found that weatherization services save families an average of more than $400 on their heating and cooling bills in the first year after services are performed.

- **State Energy Program and Energy Efficiency and Conservation Block Grant Program:** These programs are helping states and local communities to save money by supporting energy efficiency upgrades in nearly 120,000 buildings and by installing a combined total of 390,000 energy efficient streetlights and traffic signals.

Renewable Energy

The Recovery Act invested in the research, development, production and deployment of renewable energy technologies to strengthen U.S. competitiveness in this growing industry. Thanks to our Recovery Act investments, the United States is on track to double renewable energy generation by 2012.

- **1603 cash payment in lieu of tax credit program:** The 1603 program, administered by the Department of the Treasury in consultation with the Energy Department, has supported more than 30,000 renewable projects nationwide, which have put tens of thousands of Americans to work and will have enough capacity to power roughly 4 million homes.

- **1705 loan guarantee program:** The Section 1705 loan guarantee program, which was included in the Recovery Act, is accelerating the deployment of commercial-scale, innovative clean energy technologies. Among other important projects, we are supporting the world's largest wind farm, several of the largest solar generation facilities, and an unprecedented solar rooftop project.

  The Energy Department also supports deployment of clean energy and advanced vehicle technologies through two non-Recovery Act programs: the Section 1703 and the Advanced Technology Vehicles Manufacturing programs. Collectively, projects supported by the loan programs are expected to employ more than 60,000 Americans, generate enough clean electricity to power nearly 3 million homes, and displace nearly 300 million gallons of gasoline annually.

  The Loan Programs Office continues to work to make certain that its Portfolio Management Division has the resource capacity and expertise to actively monitor loan and loan guarantee transactions to protect U.S. taxpayers. The office is held accountable through a number of rigorous internal and external reviews.

- **The Advanced Energy Manufacturing Tax Credit**: Known as 48C, this tax credit provided $2.3 billion in incentives to create jobs and strengthen America's high-technology manufacturing industry to produce advanced energy technologies.

Reducing our Dependence on Oil and Diversifying Transportation Options for Consumers

The Recovery Act is helping to transform America's transportation sector to reduce our dependence on oil, to help protect consumers from high gas prices, and to promote U.S. leadership in making and selling the fuel-efficient vehicles consumers demand.

- **Advanced Battery Manufacturing:** In 2009, the U.S. had only two factories manufacturing advanced vehicle batteries. With Recovery Act funding, 30 new advanced battery and electric vehicle component plants are opening across the country. By 2015, the United States will be able to produce enough batteries and components to support 500,000 plug-in hybrid and electric vehicles through strategic Recovery Act investments.

- **Advanced Biofuels:** To move advanced biofuels closer toward commercialization — helping to create jobs across rural America — the Recovery Act is supporting nearly 20 integrated biorefinery projects. For example, construction is underway on the commercial-scale INEOS biorefinery in Florida, which will produce up to eight million gallons of bioethanol per year once fully operational from renewable biomass including yard, wood, and vegetable waste.

Creating a 21st Century Electric Grid

To compete in the 21st century global economy, the United States needs a 21st century electric grid. The Recovery Act is helping to upgrade the grid to a more secure, stable nationwide electric system that can better integrate renewable energy and help consumers manage their energy use. A $4.5 billion investment from the Recovery Act has been matched by more than $5.6 billion of private sector investment in smart grid projects.

- **A Modern Electric Grid:** The Recovery Act supports more than 130 projects nationwide through the Smart Grid Investment Grant program and the Smart Grid Demonstration Program that could set the course for a modern electric grid. We have already installed more than 10 million smart meters, helping to give consumers better information on their energy use. We also expect to install about 1,100 networked phasor measurement units on the transmission system, providing nearly 100 percent visibility of the transmission system by the end of FY 13 — helping to make our power grid stronger and more reliable.

Unleashing American Innovation to Win the Clean Energy Race

The Recovery Act included $400 million for the Advanced Research Projects Agency-Energy, known as ARPA-E. ARPA-E supports high-risk, high-reward research projects that could fundamentally transform the ways we use and produce energy. If successful, these projects could create the foundation for entirely new industries. For example, companies and

research teams are working toward a prototype of a battery that has double the energy density and one third the cost of batteries in 2010, bacteria that convert carbon dioxide and electricity to make fuel for cars, grid scale electricity storage, and other potentially game-changing breakthroughs.

- **Catalyzing Private Sector Investment:** With ARPA-E investments of $40 million total, 11 companies have advanced their technologies and attracted more than $200 million in private investment.

- **Battery Breakthrough:** Last month, Envia Systems, a company supported by ARPA-E, announced that it doubled the world record in energy density for a rechargeable lithium ion battery cell, a breakthrough which could dramatically reduce its cost.

The Recovery Act also included $1.7 billion for the Office of Science to help keep the United States at the forefront of science and technology, which is critical to our economic competitiveness in the 21st century. These funds support cutting-edge research, a strong scientific workforce, and infrastructure improvements to our national laboratory facilities so we have the modern tools we need to lead in science and discovery.

- **Energy Frontier Research Centers:** The Recovery Act invested $277 million in the Department's Energy Frontier Research Centers, which are mostly university-led teams working to solve specific scientific problems that are blocking clean energy development. The EFRCs, which are also supported by annual appropriations, are making strong progress. So far, the EFRCs have published more than 1,000 peer-reviewed papers and filed more than 90 patent applications or patent/invention disclosures. Researchers are reporting multiple breakthroughs in areas ranging from advanced battery technology and solar energy to solid-state lighting and nuclear power.

- **Upgrading Science User Facilities:** The Recovery Act included nearly $400 million for much-needed user facility upgrades across the national laboratories to help the United States stay at the forefront of research. Among other projects, investments are supporting advanced networking, light source improvements, and the Environmental Molecular Sciences Laboratory.

- **Acceleration of Ongoing Construction Projects:** The Recovery Act included nearly $340 million to accelerate ongoing construction projects such as the National Synchrotron Light Source II.

Reducing Environmental Risks

One of the Energy Department's top priorities is to protect public health and the environment by cleaning up the legacy of our nation's nuclear weapons program. The Recovery Act included $6 billion to accelerate cleanup work across the country.

- **Reducing our environmental footprint:** Thanks to Recovery Act funding, the Department has made significant progress cleaning up hazardous, radioactive legacy

waste from the Manhattan Project and the Cold War. By the end of 2011, the program had permanently cleaned up more than 600 square miles of contaminated land, reducing its geographic footprint by 66 percent and far exceeding our goal of a 40 percent reduction.

Conclusion

The Department of Energy's Recovery Act efforts are working: they've created jobs and put us in a stronger position to compete in the $260 billion global clean energy economy. Last year — for the first time since 2008 — the United States reclaimed the title from China as the world's leader in total clean energy investments.

This welcome news comes with a huge caveat, however. Our comeback is due in large part to programs and tax incentives that have expired or are set to expire soon.

America has reached a crossroads and members of Congress have a big decision to make: We can play to win in the clean energy race — investing in America's workers, industries, and innovations — or we can wave the white flag and cede leadership to other countries that are investing in these industries.

Trillions of dollars will be invested in clean energy in the coming decades, and countries around the world are moving aggressively to seize this economic opportunity.

I believe the United States can and must win this race. The Recovery Act gave us a strong foundation to build on, but we must move forward with fierce urgency. Thank you, and now I welcome your questions.

Chairman ISSA. Thank you, Mr. Secretary. I will recognize myself for 5 minutes.

Let me start by saying you were still speaking in the present tense. My understanding is the Recovery Act is expired. You can't spend funds under the Recovery Act now, is that correct?

Secretary CHU. The Recovery Act has expired. There are programs put in place, for example, in the loan program we still have the majority of disbursements to go forward with. So there is recovering due diligence that has to be done in the Recovery Act.

Chairman ISSA. So from a pure standpoint of stimulus Recovery Act, it was all supposed to be spent in a year or two in order to get the economy going again. We are 3 years past its passage and you haven't spent it all. Would you say that in fact much of the money that you have left to spend legitimately is in fact not stimulus per se, but in fact simply a plussing up of what you got to do for your entire 4 years as Secretary?

Secretary CHU. No, I respectfully disagree. The requirement was we would have to work toward obligating the funds.

Chairman ISSA. No, no, I understand the law. What I want to hit you on is a little bit more of your undergraduate economics. Stimulus was supposed to get the people working again, it was not anticipated, nor was it designed, to go 4 years. But in fact you are saying today it is going to go four-plus years. You will still be spending or obligating these funds, particularly from the loan programs, after a full 4 years at the current run rate, meaning that the money rushed in quickly and spent, basically $800 billion, was in fact an effective doubling of your budget for the entire 4 years.

Secretary CHU. Not exactly. Not really, in fact, because if you look at the things that were funded under the Recovery Act, they were proportioned considerably differently than what the earlier Department of Energy budgets had been doing.

Chairman ISSA. Well, I didn't head this Committee when President Bush was doing the plus-ups for war, but I watched the Department of Defense simply decide how much to put in one pot and how much to put in the other pot, and basically what happened is DOD got a huge windfall going into the war that let them catch up with a lot of things they wanted to do.

The point I think that we are making here today is your weatherization program—would you put the weatherization slide up? This is from your own IG. You rushed quickly and you effectively, and these are hard to see, but these are actual finished products where the vendor left and the IG went in, and the IG's report says basically you didn't have the controls in order to ensure that vendors like this were quickly fired and the job was corrected.

So on one hand weatherization was effectively doing a shoddy job. I don't think most of us would like to have that particular improved blanket over our hot water heater, although I have been told it might be somewhat effective.

Realistically, on one hand you had a lot of money coming in quickly and on the other hand you had projects like Solyndra and so on, and many other that are still going to be ongoing and funded well into the future, is that correct?

Secretary CHU. We have some projects that are ongoing and funded, as you note, in the future, but as I noted virtually all the money has been obligated.

Chairman ISSA. Okay, well, obligated is not stimulative.

Now, let me just ask one basic question. In an earlier hearing you gave yourself an A minus. In weatherization do you give yourself an A minus?

Secretary CHU. Actually, I do.

Chairman ISSA. Okay. In controlling the cost of gasoline at the pump do you give yourself an A minus?

Secretary CHU. Well, the tools we have at our disposal are limited, but I would say I would give myself a little higher in that since I became Secretary of Energy I have been doing everything I can to get long-term solutions.

Chairman ISSA. Well, and I appreciate that. Now, the President took two pieces of credit in the State of the Union that I want to just question you on factually. First of all, he said that the Department of Energy created fracking. He took credit for that in the State of the Union. My understanding is fracking was created 60 years ago and enhancements to fracking which the Department of Energy participated in in funding the improvements occurred before you came to office, is that correct?

Secretary CHU. It is absolutely true that there were earlier ventures into fracking it was producing at the very earliest times less than a percent of the natural gas. The Department of Energy, in 1978 to 1992, I believe, invested in fracking. We got out when Schlumberger got in.

Chairman ISSA. Okay. So when the President says the Department of Energy is the reason, that is great. The only problem is he was still in high school when the Department of Energy started investing in that. I just want to make sure we understand the time line of this particular President's claims.

Last, but not least, if you had to do it all again, would you have made the large scale investments that you made in Solyndra and all these others, or would you in fact have made smaller scales? In other words, was it essential to put tens of billions of dollars at risk, hundreds of billions of dollars at risk in some ways? Was that scale responsible or in fact proof of concept, some sort of a scaling up, where we could have had a Solyndra bankruptcy for less?

Secretary CHU. That is an excellent question. So as Herb Allison and his committee report commented, our loan portfolio can be divided into essentially three tranches. One was the tranche of investing in the deployment of innovative technologies; solar, wind, others, geothermal. Virtually all of them had power purchase agreements. That actually requires a considerable amount of money, but as Herb Allison said, on balance, those are lower risk.

The higher risk ones included innovative manufacturing because you don't really know how things are going—but on that innovative manufacturing we think that some loan assistance played a very useful purpose.

And then, finally, there were two major auto loans to Ford and Nissan which at the time were regarded as risky, especially the Ford loan, and did not have, at the time, a reasonable rating, but that turned out to be a very successful loan and we saved a lot of

jobs, created a lot of jobs, and Ford has bounced back tremendously.

Chairman ISSA. I am sure we will get to other questions about the term innovation.

With that, I recognize the Ranking Member.

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

Mr. Secretary, yesterday the Chairman made a new allegation, he said that in reviewing a loan guarantee for an Arizona-based company called First Solar, the Department of Energy "manipulated analysis, ignored objections from career professionals, and strategically modified loan evaluations in order to force project funding out of the door." Mr. Secretary, prior to issuing its report, did the Committee contact you about that allegation or ask you for an explanation?

Secretary CHU. Yes, it did.

Mr. CUMMINGS. And did you provide them with one?

Secretary CHU. I believe we did.

Mr. CUMMINGS. And can you tell us now are these allegations true?

Secretary CHU. No. What was happening was that there was a series of emails and internal debate among our career professionals. Internal policies establish that we wanted these loans to support deployment of innovative technology, and there is a robust discussion between our career professionals as to whether it met the self-imposed criteria, and in the end the person who was looking and trying to decide within his own group said, no, these we think are innovating and crosses that threshold.

Mr. CUMMINGS. Did the Department manipulate the analysis, ignore senior officials, and force this funding out the door for political reasons?

Secretary CHU. No. In fact, this was discussion all with the career employees. Who by the way, I would have to say I know some of these individuals. They are truly outstanding individuals.

Mr. CUMMINGS. Was your career employee overruled by political appointees in order to defy his own scientific judgment? Is any of that true?

Secretary CHU. No, it is quite the opposite. Again, it was all in the career staff and in internal discussion.

Mr. CUMMINGS. Mr. Secretary, I don't know if you are aware, but in March 2011 Arizona Governor Jan Brewer issued a statement praising First Solar's projects in the State and she said, "First Solar's presence in Arizona has been a great engine in driving our renewable energy sector forward." She also noted that First Solar's Mesa facility project, would create 600 quality jobs "and the potential for hundreds more, and would help in promoting Arizona's Commerce Authority's plan for business attraction, retention, and expansion." In October 2011, Governor Brewer touted First Solar's DEOE projects as part of Arizona's "ascension as a national and global leader in solar energy."

Were you aware of those statements?

Secretary CHU. Perhaps distantly.

Mr. CUMMINGS. And can you tell us did you take any action because of her political support of First Solar?

Secretary CHU. No. As I have said repeatedly, we evaluate each loan application on its technical merits.

Mr. CUMMINGS. Now, Governor Brewer was not alone. Senator John McCain also praised First Solar's decision to build in Arizona and he stated, "First Solar's announcement to build a new factory in Mesa and deploy their domestically manufactured modules in solar projects like Agua Caliente in Yuma County will not only create jobs for Arizonans, but also represents another important step toward greater energy security."

Were you aware of that?

Secretary CHU. Again, I don't read all of those statements, so I am not really sure.

Mr. CUMMINGS. Mr. Secretary, one last question. On September 20, 2011, the Chairman went on national television and condemned the Department's entire loan guarantee program as a "broad scandal" that "has been driven by political favoritism, accusations of pay-to-play relationships." He stated that having politicians involved in selecting winners and losers is how we "end up with corruption in government."

Is there any truth at all to the allegation that you base your findings and decisions on political favoritism or on pay-to-play relationships or on outright corruption?

Secretary CHU. No, there is none.

Mr. CUMMINGS. Now, you said, in answering one of the Chairman's questions, he asked you about grading yourself with regard to weatherization, I think you gave yourself an A or an A minus, and gas at the pump you gave yourself an A.

Mr. Chairman, you took a little longer than I did. Can I have a little extra time?

Chairman ISSA. Continue.

Mr. CUMMINGS. All right.

Let me ask you this. Explain why that is. I am just curious.

Secretary CHU. Sure. Very, very quickly, because I see time is running out. If you looked at, for example, the weatherization program, we set up a system where, before you are reimbursed for work done, everything had to be inspected. Our money went to the State, the State went to local organizations, and local organizations then arranged for contractors. In addition to that, that you have to verify the work had been done, we also set up through the States, insisted on an independent audit. At least 5 percent of the work had to be seen and its value done independently.

And what we found in this audit was there were about 3 or 4 percent of the work fell into three categories. One category is perhaps the family didn't qualify because there was a maximum of 200 percent above poverty line; in some cases, if the work was not done adequately or shoddily done; and, finally, if not all the stones were unturned, there could have been other weatherization work in that program. I don't have the breakdown, but it is lumped into those three.

So what they found was roughly 3 or 4 percent went into those three categories in an independent audit. Then the DOE IG and the Government Accounting Office did another independent check on what this independent group found, and my understanding is they found very little beyond what our IG found. So in 3 or 4 per-

cent of the cases and in all cases where there were things as shown in those pictures where, yes, it was a very badly done job, the contractors were asked to go back and fix it on your own dime.

So if you look at that 3 or 4 percent, this is not that bad in an area where a lot of insulation and things like that are largely invisible. So it was the mere fact that we set this robust oversight. And then the third independent oversight wasn't really finding anything more, it told us that it was more or less all right.

But again let me stress, and I will say this, we are not happy with those instances where there was shoddy workmanship. We are not happy with any of it.

Mr. CUMMINGS. Thank you, Mr. Chairman.

Chairman ISSA. You are very welcome.

I would ask unanimous consent now that the email records, and I apologize, Mr. Secretary, your people provided no Bates stamps and delivered only on paper, so I will read a little bit. The document dated Tuesday, February 1st, 2011, at 1:57 p.m., from David Franz, which, by the way, is the one that says, Isn't that a carbon copy of Agua Caliente? His answer is, it is.

Something prohibited within the regulations. It is in your report too.

Second, the document dated February 1st, 2011, 12:12 p.m., from Sarah Huizinga; and, third, the document dated Thursday, June 23rd, 2011, 12:34 p.m., from Kim Dong, who I understand is, or Dong Kim. I am reading, unfortunately, his form rather than his name. Dong Kim, who is Director, Technical and Project Management Division LP 30 Loan Program Office.

Without objection, so ordered.

Mr. CUMMINGS. Mr. Chairman, may I have copies of those?

Chairman ISSA. Of course. You already have copies.

Mr. CUMMINGS. Where are they?

Chairman ISSA. They were all delivered to you in the same fashion, with no Bates stamps by the Department of Energy, who chose to print off of computer paper so they would be extremely hard to go through. We were delivered 50 boxes. You were delivered the same boxes.

With that we recognize the gentleman from North Carolina, Mr. McHenry, for 5 minutes.

Mr. MCHENRY. Thank you, Mr. Chairman.

Secretary Chu, thank you for being here. My constituents commute, on average, 25 minutes a day to work. Eighty-four percent of them drive themselves. Public transportation is not readily available in western North Carolina. Tell me what you have done to reduce the price of gas at the pumps. What policies have you put in place to reduce the price of gas at the pumps?

Secretary CHU. Well, I can tell you what the Administration has done and then I will narrow it down to what the Department of Energy can do and has done. Certainly, a lot of Federal lands have been put up for auction for production of oil. Although due to a complex set of reasons, it is certainly true that, since the President took office, the amount of oil production in the United States has gone up and——

Mr. MCHENRY. My question, Secretary Chu, as you know, the production of oil on public lands has actually gone down under your

Administration's watch. What policies and production has gone up on nonpublic lands? For instance, in the Dakotas, the Bakken Shale is fantastic, wonderful technology advancements, but what policies has this Administration put into effect to help reduce the price at the pumps?

Secretary CHU. Well, there was one policy, I would say, a reaction to an oil interruption due to the Libyan incident, but in the tools that the Department of Energy has at its disposal, what we have done is we have worked with manufacturers to improve the efficiency of internal combustion engines to reduce those costs.

We are very aggressive in trying to look for alternatives other than petroleum, if adopted worldwide, could have a moderating effect on the price of gasoline, bring those prices down. For example, we were very enthusiastic about the development of natural gas, shale gas, especially over the last 5 and 10 years, and the Department of Energy has been very active looking at ways to use natural gas for long-haul trucking, for centralized delivery trucking.

We just put out an announcement saying we want to see if we can reduce the cost of storage of natural gas in automobiles and short-haul trucks that can be readily available. If we can do this, we can move to what are called bi-fuel cars, so that the same internal combustion engine can burn natural gas or gasoline or diesel. But one of the barriers is the very high cost of that carbon fiber tank or the very high pressure. So we have pushed forward a program to develop better storage.

So those are examples. Battery, electrification alternatives. Right now the electric cars are fairly expensive, $32,000 for a Nissan Leaf. Before subsidies, the Chevy Volt is about $40,000. Very aggressive about adding battery development so that we can dramatically bring down the cost of electrification to $20,000, $22,000.

Mr. MCHENRY. Well, Secretary Chu, you have mentioned a number of things. At what point will those have an effect of my constituents' cost of purchasing gas at the pumps?

Secretary CHU. Well, as you know and as we all know, you look at all the tools available in our chest and we looked at all those tools, but as the President has repeatedly said, there is no single bullet. Yes, we want to increase production. Yes, we want to do all those other things. And mostly we want to diversify to give our consumers a choice to decrease——

Mr. MCHENRY. So at what point will those have an impact on the market?

Secretary CHU. Natural gas long-haul trucking, very quickly. A consortium of companies——

Mr. MCHENRY. Before the next election, perhaps?

Secretary CHU. Yes. Their plan is to have invested $300 billion in liquid nitrogen fueling stations by December 2012.

Mr. MCHENRY. My time is short. You have listed a long list of things that this Administration has done. I have not yet heard that they are trying to increase the supply of American oil or our refining capacity, or limit the regulations in the diversity of blends that are required. I have heard nothing from you today that indicates a policy this Administration has put in place that will meaningfully impact the price at the pumps, other than driving it up.

The policies this Administration has put in place have actually increased the cost of fuel at the pumps; they have increased the cost of commuting for my constituents. And to tell my constituents, with 10 percent unemployment in western North Carolina, that you need to go buy a Nissan Leaf, that in order to commute for 50 minutes a day, you are going to have an employer who is wonderful enough to provide you a place to plug in your car so you can get home is absolutely ridiculous.

And the anger that my constituents have of the cost at the pumps is very real. And if the President doesn't get this, if the Secretary of Energy doesn't get this, we have a real problem here. We doubled the budget of the Department of Energy in 2009——

Chairman ISSA. The gentleman's time has expired.

Mr. MCHENRY [continuing]. And yet we are paying twice as much at the pumps. This is absolutely ridiculous. We have seen Solyndra——

Chairman ISSA. The gentleman's time has expired.

Mr. MCHENRY. We have not seen a reduction at the pumps.

Chairman ISSA. I thank the gentleman.

Mr. Secretary, I know there wasn't a question there, but would you like to restate what I believe was a quote that they are investing these billions in liquid nitrogen?

Secretary CHU. Sorry, a misstatement. Liquified natural gas. Thank you.

Chairman ISSA. Correct. Without objection, we will also place the article from the CleanCitiesEnergy.gov site on liquid natural gas. With that we recognize the gentlelady from the District of Columbia. You are recognized for 5 minutes.

Ms. NORTON. Thank you very much, Mr. Secretary, for being here.

We live in a bubble; it is called the United States of America. But when I think of oil, of course, I think of the increasing consumption by the rest of the world. I was astonished to learn that we have only about 2 percent of the world's known oil supplies, and yet consume 20 percent of the oil supply, and noted this in a report by the managing director senior analyst covering oil and gas for Oppenheimer & Company, who said if we drill in the middle of Manhattan and everybody drill in their backyard, we would not have enough oil to move the global market.

Would you explain what he is talking about?

Secretary CHU. Well, the oil markets are an international market because one can ship oil fairly inexpensively anywhere in the world, and, yes, it is true that America has increased its oil production in the last 4 years. That is a good thing because it means we import less oil, and we are all for that. But there are other countries, for example, Canada has become a major oil exporting country, and yet, aside from the difference in taxes, the average Canadian and U.S. prices bob up and down exactly the same. Of course, there are differences in provinces and States because of taxes.

So the issue here is it is an overall supply and overall demand, and there are what I would call concerns with the Middle East that also tend to drive up prices. The overall demand is dominated by developing countries, notably China and India. The demand in the United States is quite moderate; in fact, it is essentially flat, which

is good news, especially as we increase our oil production. That is why our imports have gone down from 60 percent to, let's say, 45, 46 percent. And it will continue to go down because we are going to increase oil production in the U.S. because of new technologies.

So the direct tie is really this world oil price, in large part driven by growing demand in developing countries. In large part there is an issue having to do with excess reserve capacity that also makes people concerned. And then, finally, worries of the Middle East.

Ms. NORTON. Yes. So what countries do in their own territories doesn't much affect the world market and the world demand for oil, which brings me to going to other forms of energy. Do we have the same competition for other forms of energy that we have for oil and gas. The way they are coming at us in China and India for the oil, are they coming at us? Do we have any head start at all for alternative forms of energy?

Secretary CHU. Yes. Absolutely. Natural gas is one. The infrastructure for liquefying and shipping natural gas around the world, it is starting but it doesn't really exist, so there are big differences in natural gas prices, and that is why the Department of Energy is so keen on offloading some of our transportation energy to natural gas.

Biofuels is another possibility because we have great agricultural resources, just as we have great natural gas resources. So beginning to create biofuels without subsidy is our goal that can offset petroleum is another big deal for us.

So those two things create wealth in the——

Ms. NORTON. So instead of everybody joining the race to apparently nowhere for oil, understanding that we have to get as much of that as we can, we have to join other races as well. Does the funding of some of the alternative sources in the Recovery Act help in this race toward at least some form of energy which would be usable and affordable? And, if so, how did the Recovery Act help in that?

Secretary CHU. Well, the RP was funded, started in the Recovery Act. RP has been instrumental in many of the innovative biofuels, batteries, electrification. Also, an RP company has actually doubled the world record for lithium ion energy density, and we think that the cost of manufacturing will remain the same or perhaps even go down, so you have just cut in half the price of electric batteries.

If we can cut it to one-third, one-quarter, we can really talk about a $20,000 car that can pay for itself in 5 years. It would be cheaper than the $16,000 car, and that will bring immediate relief to all the families who are trapped in situations where they have long commutes. And we do feel that pain and we are working as hard as we can to give the American public those technologies.

The good news is those technologies could also be used worldwide and deployed worldwide. That would have a downward impact on the price of oil because the demand will be moderated.

Ms. NORTON. Thank you, Secretary Chu.

Chairman ISSA. I thank the gentlelady.

I now ask unanimous consent that the article be placed in the record, "The U.S. is sitting on a 200 year oil supply." This is from the Business Insider. It quotes President Obama. President Obama said the U.S. possesses 3 percent of the world's oil reserves, or

about 22.3 billion barrels, which comes out to a 200 year supply of our need.

Without objection, so ordered. With that we recognize the gentleman from Tennessee, Mr. DesJarlais, for 5 minutes.

Mr. DESJARLAIS. Thank you, Secretary Chu. Appreciate your testimony today. Five minutes goes very quickly. If you could, no one likes yes or no answers, but if you could answer yes or no to these questions. I think they are fairly straightforward.

With regard to First Solar, DOE deemed both Agua Caliente and Antelope Valley Solar Ranch as innovative projects, correct?

Secretary CHU. That is correct.

Mr. DESJARLAIS. The innovative component of the Agua Caliente projects involved inverters that benefited from fault ride-through technology and dynamic voltage regulation, correct?

Secretary CHU. Yes, that is correct.

Mr. DESJARLAIS. Thank you. And you agree that Antelope Valley Solar Ranch's application indicated it would use the same exact inverter related technology?

Secretary CHU. A very similar technology plus one additional innovative technology, one-access tracking of the sun with these lower efficiency solar panels.

Mr. DESJARLAIS. Okay. But since Agua Caliente has already relied on the inverter——

Chairman ISSA. Would the gentleman yield for a second? As a Californian, I have to say Agua Caliente.

Secretary CHU. Yes. I did not want to correct——

Chairman ISSA. The chairman of the Agua Caliente tribe in my district just passed away, so I am acutely aware that today I would like it—we will give you back the time. Agua Caliente.

Mr. DESJARLAIS. How did you pronounce DesJarlias the first time?

[Laughter.]

Chairman ISSA. So I was showing off.

[Laughter.]

Chairman ISSA. For a long time I just said, you are next, Doc.

Mr. DESJARLAIS. Okay, Caliente, is that right?

Secretary CHU. Agua Caliente, yes.

Mr. DESJARLAIS. Okay. But since Agua Caliente already relied on the inverter technology, Antelope Valley needed to find another innovation to further differentiate itself, is that correct?

Secretary CHU. That is correct. And it had this other differentiated technology.

Mr. DESJARLAIS. Okay. Are you aware that DOE deemed single access trackers which rotate to follow the sun as the innovation that would differentiate Antelope Valley from Agua Caliente?

Secretary CHU. I believe so.

Mr. DESJARLAIS. Okay. I think that is what you were referring to earlier. Okay.

Can we put up a slide where Dong Kim discusses the trackers? Oh, it is already up? Thank you.

[Slide shown.]

Mr. DESJARLAIS. Secretary Chu, I am about to show you an email here where Dong Kim, the Director of DOE's Technical and

Project Management Division, makes clear that these trackers are not innovative. Can you explain this?

Secretary CHU. Trackers have been used before. They have been used in smaller scale things. They have been used in higher efficiency solar panels because the added cost of tracking, the motor, the locking as the sun goes across was something that had been used before. But when you go to very large scale and the thin film technology, the—rods they were using, at the time 11 percent efficient, wasn't comparing to where you had a much higher efficiency, let's say 16 percent silicon to track.

So the question was can you get a large project and the additional capital expense of tracking to make it work with, at that time, relatively lower efficiency panels, which were lower cost to make. Now, the good news is the efficiency has gone up to 14.5 percent, but that was the merging of the technologies. And in the end Dong Kim decided that perhaps—and again it was totally a discussion within that group as to what would rise to the threshold of innovation.

Mr. DESJARLAIS. So you disagree with Dong Kim?

Secretary CHU. I think Dong Kim has an opinion that he then wrote the justification of that opinion later on. So what you see is the workings of an internal discussion with Dong, with others within that section of the Department. So this is all internal within the career folk. So Dong Kim, actually when he wrote up, because in the end it is going to be a decision that they put forward. If they decided it was not going to be innovative, then it would not go forward.

The other email that was referred to we believe was referring to the terms of the project finance. It is more a finance agreement rather than technology. But I don't really know, we are just assuming. That is the carbon copy. But I can't put myself in the minds of Dave France, but we think it might have to do with the terms of the finance agreement with regard to the reference of carbon copy.

Mr. DESJARLAIS. Okay, thank you. So based on the facts, Antelope Valley Solar Ranch failed to meet the innovativeness required and, as a result, DOE made a $646 million mistake by approving the loan. Will you personally commit to preventing any additional money from going to First Solar's Antelope Valley project?

Secretary CHU. Well, first, I don't really know what the status of that is. Once we make a commitment to a loan and begin to disburse the loans, we take very seriously the contractual obligations. So we can get back to you on what those contractual obligations are.

Mr. DESJARLAIS. Okay. And the projects need to meet benchmarks, is that right?

Secretary CHU. That is correct.

Mr. DESJARLAIS. Okay.

My time is up.

Chairman ISSA. Would the gentleman yield?

Mr. DESJARLAIS. Yes, sir.

Chairman ISSA. So since they are both with the same company and they used a carbon copy and created a false difference, one that really didn't exist, one that could have been some units with,

some without, by definition isn't their application in fact one that you could go back and question whether their application claiming innovation was correct or not?

You are the owner of 15 patents, including the ones that are pending. The fact is a patent is not a right that you can't be reviewed for its accuracy later. Don't you have the right to go back and look at the accuracy of claims by a company who chose to invent, if you will, a difference where there was none?

Secretary CHU. Well, I don't know.

Chairman ISSA. From an innovation standpoint.

Secretary CHU. I think in terms of a loan guarantee, a finance agreement, once you have decided you have made a commitment and you go forward, as you well know, that is a contractual basis. It was an internal debate within our career folk as to whether the next project Antelope Valley had borne the threshold of innovation, and those people who, as I said before, are very, very good people, determined that it was so.

So again, once we entered into an agreement, we have to be very careful. There are milestones, there are things of that nature, and we will follow those procedures.

Chairman ISSA. Okay, I will give the Minority a copy of this, but I am going to enter at this time into the record a page, page 12, which indicates no difference in the application on the actual document. We will give you a copy, Mr. Secretary, and come back to it in a few minutes.

Chairman ISSA. With that, the gentleman from Virginia, Mr. Connolly, is here.

Mr. CONNOLLY. Thank you, Mr. Chairman.

Welcome, Secretary Chu. It is great to see you again, and thank you for your leadership. I think our Country is very fortunate to have somebody with your caliber and your background leading the Department of Energy, and I thank you for your leadership.

For some, Dr. Chu, the narrative here seems to be that the stimulus bill, with respect to energy in particular, was a complete waste of time, a boondoggle, not very transparent, and accomplished almost nothing; in fact, maybe negative nothing because there was fraud, there was waste, we didn't know what we were doing.

I am just curious. Let's take weatherization, which has been singled out. At the time we were considering the stimulus bill, weatherization was heralded as a potential boon in terms of energy efficiency in helping lower income folks who otherwise couldn't retrofit their homes or businesses, it would put people to work, and it would save on energy costs over time. We have a report today by the Majority staff that basically asserts that billions were wasted and that program didn't work. Your take?

Secretary CHU. We think that aside from these isolated some subset of that 3 or 4 percent, it was, overall, a very successful program. Its overall impact actually can't be fully felt, but let me just tell you a little story.

I went to one of the earlier homes that was weatherized, a widow in Milwaukee. She was living in a small house; it was weatherized, they put insulation in the ceiling, in the walls; they gave her a new heating system, and she said for the first time in as long as she

can remember she can now eat breakfast in her kitchen. Before that time it was just too cold, and this is within 200 percent of the poverty level. This is a person who was suffering and spending a lot of a very limited set income on her energy bill, and that went way down. So then that person can take that money and channel it right back into the local economy.

So we have hundreds and thousands, actually, hundreds of thousands of stories like that if you consider the 680,000 homes that were weatherized.

Mr. CONNOLLY. Six hundred and eighty thousand. And do I understand that the average saving per year for each of those 680,000 is about $437?

Secretary CHU. That has been an estimate, yes.

Mr. CONNOLLY. So would you say that the program funded by the Recovery Act was a success, in your view?

Secretary CHU. Yes. As I said, that is why I was willing to give that one an A. I am actually always amused when people ask me, as a professor, how I grade myself. I am a tough grader, but, in any case, yes, that would, and again let me point out in those instances where there has been shoddy workmanship, for example, we went back and insisted they fix it with no cost to the taxpayer.

Mr. CONNOLLY. Yes. Well, perhaps some who have an ideological bent against any such invention, they want to highlight some of the problems and gloss over the preponderance of success. But in terms of effectiveness in energy efficiency, this program has long been touted as something that actually is quite effective, is that correct?

Secretary CHU. Well, it is very effective and it brings relief. And when you see it on a very personal level, when you actually see how it affects our population and——

Mr. CONNOLLY. Mr. Secretary, let me just, if I may, move on. Did you say that U.S. oil production has actually increased in every year during the Obama presidency, reversing an 8-year trend?

Secretary CHU. Yes, I did.

Mr. CONNOLLY. And how did that happen? I thought the President was opposed to fossil fuel exploitation and just liked sort of squishy renewable energy.

Secretary CHU. Well, it happened in large part because of things that were being developed over a period of a couple decades, notably the shale oil and shale gas liquids.

Mr. CONNOLLY. So it went up, not down, under President Obama?

Secretary CHU. That is correct.

Mr. CONNOLLY. The stimulus bill, we put some R&D money into advanced battery research, is that not correct?

Secretary CHU. That is correct.

Mr. CONNOLLY. Did we not also put some money into advanced battery manufacturing?

Secretary CHU. That is correct.

Mr. CONNOLLY. And did that have any efficacious effect? Did that change the percentage of our world market share of advanced batteries manufactured in the U.S.?

Secretary CHU. Yes, it did. First, by producing a higher quantity and meeting demands of Volt and Leaf and other manufacturers, it shifted the balance. We went from producing less than 1 or 2

percent of the world's advanced batteries to a capability of going up to 20 or 30 percent. So it helped reduce the price of the batteries that are going into today's cars, and will further help reduce the price in the next generation.

Mr. CONNOLLY. And positioning us competitively——

Secretary CHU. Right.

Mr. CONNOLLY [continuing]. Where we were pretty much almost eliminated.

Chairman ISSA. The gentleman's time has expired.

Mr. CONNOLLY. I thank the Chair.

Chairman ISSA. The gentleman from Ohio, Mr. Jordan, is now recognized.

Mr. JORDAN. I yield to the Chairman a few seconds.

Chairman ISSA. The gentleman from Virginia asked the question and you answered it as capacity. Isn't it true that in fact the actual amount of lithium ion and other advanced batteries being placed in the United States is not significantly greater and, in fact, we continue, both in photovoltaic and in battery production, to see China effectively continuing to see our technology that we invest in, but ultimately be the place of choice for that purchase?

Secretary CHU. Well, actually——

Chairman ISSA. When the government doesn't mandate buy in America.

Secretary CHU. I think the biggest competition was actually coming from Japan and Korea in the batteries. But with that program we did see a couple of U.S. manufacturers bring factories back home, which was very, very good. We can give you a complete list.

Chairman ISSA. We appreciate that.

I thank the gentleman from Ohio, the home of Honda Motors, one of the great manufacturing companies. I ask unanimous consent the gentleman have his full 5 minutes. Without objection, so ordered.

Mr. JORDAN. Thank you.

Mr. Secretary, Nancy-Ann DeParle, White House Deputy Chief of Staff, financially entangled with Granite Reliable, did that in any way influence your decision to give Granite Reliable a loan?

Secretary CHU. I didn't know she had any connection.

Mr. JORDAN. Yes. With her son. She actually yielded a share to her son. Mr. Secretary, did the fact that Michael Froman, Deputy Assistant to the President, investor in Solar Reserve, did that in any way influence your decision to give Solar Reserve a loan guarantee?

Secretary CHU. No. Similarly, I didn't know——

Mr. JORDAN. Mr. Secretary, did the fact that David Sandalow, Senior Advisor at Good Energies, Assistant Secretary at Department of Energy, major investor in Solar Reserve, did that in any way influence your decision to give Solar Reserve a loan guarantee?

Secretary CHU. No.

Mr. JORDAN. Mr. Secretary, Steve Spinner, whose wife's law firm represents Solyndra, former bundler for the President, Mr. Spinner was, did that in any way influence your decision to help Solyndra?

Secretary CHU. No.

Mr. JORDAN. Mr. Secretary, how about John Bryson, former Chairman of the Board at Bright Source, now the Commerce Sec-

retary, did that in any way influence your decision to give a loan guarantee to Bright Source?

Secretary CHU. No.

Mr. JORDAN. How about Peter Weeks, Mr. Secretary, Clean Energy Advisor at the Department of Energy for loan guarantee programs. Did he have any influence on whether decisions were based on politics, seeing how his experience on his resume says his only experience prior to working in the Presidential campaign?

Secretary CHU. No.

Mr. JORDAN. How about, Mr. Secretary, Sanjay Wagle, principal at Vantage Point Venture Partners, investor in Bright Source Energy, did that in any way influence the Department of Energy's decision to give Bright Source a loan guarantee?

Secretary CHU. No, it did not.

Mr. JORDAN. Mr. Secretary, how about Larry Summers, former Director at the National Economic Council at the White House, formerly with DE Shaw, an investment firm with a stake in the Cahokia Project, did that in any way influence your decision to give a loan guarantee to Cahokia?

Secretary CHU. No, it did not.

Mr. JORDAN. How about Steve Wesley, Mr. Secretary, who bundled a half a million dollars for President Obama in the 2008 campaign? Did that have any influence on your decision to give a $465 million loan guarantee to Tesla, the company that he was involved with?

Secretary CHU. No, it did not.

Mr. JORDAN. Did any of these individuals I mentioned today in any way lobby you, talk to you about the respective companies that they had a stake in during the decisionmaking process with the 1705 program?

Secretary CHU. To the best of my knowledge, no. In fact, this is a remarkable list because I was unaware of——

Mr. JORDAN. I just mentioned nine people, Mr. Secretary, if I could, because I have a short time. I just mentioned nine people representing eight different companies. My understanding is there were 27 companies in the 1705 program who got a loan guarantee, 8 of which had connections, close connections with the Administration, with the campaign.

Do you see any kind of pattern? This is approximately 30 percent of the recipients in the 1705 program, close connections with the White House. Do you see a pattern or concern there?

Secretary CHU. No, I don't.

Mr. JORDAN. Do you think the American people might see a pattern if 30 percent of the folks were bundlers for the President, involved the Administration, sitting on the boards of the companies who received money, particularly companies like Solyndra that are now bankrupt? Do you think the American people might see a pattern?

Secretary CHU. Well, if the full record is revealed, I think you could look at some of the other financial backers of some of our loans who were prominent Republican donors. The fact is——

Mr. JORDAN. Did the White House ever call you, ever talk to you about any of these? Did you get someone from the White House,

Chief of Staff, someone from the White House talk to you about these respective companies involving these individuals?

Secretary CHU. No, we did not.

Mr. JORDAN. So you weren't just helping your friends? You weren't just helping people who were politically connected to the Administration?

Secretary CHU. That is correct.

Mr. JORDAN. Even though 30 percent of the loan guarantees went to people who had connections with the Administration?

Secretary CHU. Well, as I said, we looked at loans on their own merits, we don't look at who is backing——

Mr. JORDAN. Okay, so let me turn to that. So if you weren't helping your buddies, and you were basing the decisions on the merits of the loan, how do you explain the fact that 23 of the 27 recipients of the loan guarantees were rated as junk status investments? How do you explain that fact? This is what my opening statement was about.

If it wasn't your political buddies, it had to be incompetence, because tell me what organization would put money at risk in 23 companies out of 27 that are rated junk category, B, B-minus. This is what the American people want to know about. Because there is no other conclusion you can reach. You helped your friends or you guys were incompetent. When you look at the 1705 program, the facts are the facts, and I don't see how anyone could arrive at any other decision.

Secretary CHU. When you look at the constraints and what we wanted to do with the loan program, which was to invest in innovative technologies, if you are a AAA rated company——

Mr. JORDAN. What does junk status mean, B, B-minus? What does that mean? It means analysts expect these companies to fail. And yet you put millions of taxpayer dollars, American dollars at risk in companies that S&P and Moody's expect to fail, and you put the money at risk. So you are telling me that is what you did because, your words, you didn't base it on the fact that these were political friends of the White House. So you had to base it on something, and it certainly couldn't have been the investment ratings that they were given by the investment companies, because that indicates that these companies are expected to fail when they are junk status.

Secretary CHU. Well, first, if you look at the statutes in the loan program, it said that we wanted to invest in innovative projects but had a reasonable chance of repayment. And if you look at the——

Mr. JORDAN. Don't you think——

Chairman ISSA. The gentleman's time has expired. If you just want to get a final answer.

Mr. JORDAN. I would just say a reasonable expectation of succeeding, then why did the ratings agencies say that they were junk status, which means that they are probably going to fail. That is why they gave them the rating.

Chairman ISSA. The Secretary may answer.

Secretary CHU. Very briefly, I think we can all look up what these ratings mean and——

Mr. JORDAN. Oh, I have. I have. I wish you guys would have before you gave the loans.

Chairman ISSA. The gentleman's time has expired.

Mr. CUMMINGS. Mr. Chairman?

Chairman ISSA. Yes.

Mr. CUMMINGS. Mr. Chairman, I would ask, those were some strong allegations, at least give him a chance to answer.

Chairman ISSA. I am.

Mr. CUMMINGS. Okay.

Chairman ISSA. That's why I keep saying the gentleman's time has expired.

Mr. Secretary, we want to make sure you are fully able to answer a question. Please continue.

Secretary CHU. Mr. Chairman, thank you for that courtesy. All I wanted to say is that B, B-minus things of that nature, they are qualitative words. This can be quantified with FCRA ways of dealing with this and the FCRA rules are saying that you try to assign as best you can, it is an art more than a science, a probability of failure. So we used those FCRA rules to actually begin to quantify if you look up in Standard & Poor's and Moody's, you name it, any definition of these, they are more qualitative, they talk about potential risks, things like that.

So then it lands down to what is the probability of failure, and we feel that it has to have at least a 50 percent chance of succeeding.

Chairman ISSA. Well, Mr. Secretary, because I want you to fully answer, do you have guidelines that say where you do or don't provide funding? Is there a point at which you are not supposed to provide funding based on these letters?

Secretary CHU. Well, we believe that it should be a 50 percent or better chance of repayment. The highest credit subsidies we gave, actually, at the time, and this was determined by OMB, were to a company like Ford, which turned out to be a good choice, but at the time it was deemed by OMB to be risky.

Chairman ISSA. Thank you. I am sure there will be more questions.

With that we go to the gentleman from Utah, Mr. Chaffetz.

Mr. CHAFFETZ. Thank you, Mr. Chairman. I want to follow up on Representative Jordan's comments, and thank you, Mr. Secretary, for being here.

Is it ethical or unethical for a Federal employee to personally benefit from the decisions that they are involved with?

Secretary CHU. It is unethical.

Mr. CHAFFETZ. Is it proper or improper for a Federal employee to personally financially benefit from the decisions that they are involved with?

Secretary CHU. Yes, we have rules forbidding that and very rules so that people don't get near any gray area.

Mr. CHAFFETZ. So if somebody does step over that line, what is the consequence?

Secretary CHU. We would probably turn it over to the IG for investigation.

Mr. CHAFFETZ. Okay, so they go through this investigative process. But let's say it comes to a conclusion that they have stepped over this ethical line. What is the consequence for stepping over that line?

Secretary CHU. Well, again, it depends on the exact nature of what they did and the law, but we would certainly take this very seriously and the IG would, I am sure, have a recommendation, should that occur.

Mr. CHAFFETZ. Have you turned over any of the names that Mr. Jordan talked about, or any others, over to the IG for further investigation?

Secretary CHU. Well, in the few cases that I know, most of those people I didn't actually know they had connections until today, but, for example, in the case of C. Spinner, he was actually firewalled from participating in any decisions regarding whether we make a loan to anything that he might have had a relationship to.

Mr. CHAFFETZ. What about David Prend?

Secretary CHU. I don't know David, Friend.

Mr. CHAFFETZ. David Prend, you don't know David?

Secretary CHU. Prend? No.

Mr. CHAFFETZ. He currently evidently serves on a panel that assists the DOE with solar technology issues. What about Steve Wesley?

Secretary CHU. Steve Wesley I do know.

Mr. CHAFFETZ. Has he been turned over to the IG yet?

Secretary CHU. No, because we in deciding on the Tesla loan, he made no overtures, no phone calls, no instances to encourage us to make that loan.

Mr. CHAFFETZ. What about Nancy-Ann DeParle?

Secretary CHU. I didn't know she was connected with any of our loans.

Mr. CHAFFETZ. But she turned over some of the assets that she had to her son and she sat on the board and owned interest in Noble Power. Noble owned a company called Granite Reliable which received a partial guarantee of $168.9 million loan from the Department of Energy.

I guess, Mr. Secretary, one of the concerns is following up on that ethical standard. If there isn't a true and consistent standard that is not enforced, then it exacerbates the problem. And as Mr. Jordan rightly pointed out, there seems to be a pattern. There are so many names on this list. I just want to know personally what are you doing to follow through on our concerns that these people were personally financially benefiting from the decisions? They are there in a position to influence people, where they had major financial gain on the upside of these loans. What are you doing about that?

Secretary CHU. Well, first, we look at any allegation and see if there is any merit to it. Also, what I have been doing, again, because there were no—certainly my ears would have perked up if I got phone calls from people saying we want you to look at this loan, we encourage you to fund this loan, but we didn't receive those.

But since this time and since people have brought up these connections, if you look at our loan portfolio, you also find very prominent people who have invested in companies we have given loans to who are very prominent Republican donors. We simply didn't know that at the time, nor does it really matter, because we do not give loans based on——

Mr. CHAFFETZ. I guess I am worried about the people that work in your Department, work in the White House who are Federal em-

ployees who are personally benefiting in a group sitting there where they have an opportunity to influence people and their decisions. That is the deep concern, Mr. Secretary. I don't see any evidence that you are following through and pushing these to the Inspector General. I just want to get an assurance that you are going to do that and that there are serious consequences for people who do step over those ethical lines.

Secretary CHU. Well, certainly our own general counsel's office, they look at all these allegations, as we do, and if we think it rises to the threshold where it deserves further scrutiny, we will turn them over to the IG.

Mr. CHAFFETZ. I have seconds here, but describe what that line is. What, in your mind, becomes unethical behavior?

Secretary CHU. If it turns out that any of these people were actually active in either actually lobbying or were part of any decision-making process for the loans, I think that would warrant——

Mr. CHAFFETZ. The fact that they worked for the Department or the agency and they personally benefited, does that not reach a threshold that is concerning to you?

Secretary CHU. There are people who work for the Department and if they are firewalled from being part of any decision, then that is how we manage these potential conflicts of interest, and we do firewall them and we are very scrupulous about trying to make sure that they have no influence on any decision.

Mr. CHAFFETZ. Thank you, Mr. Chairman.

Chairman ISSA. Thank you.

Mr. Secretary, they are going to bring you down an email. It was provided in our discovery, dated April 29th, 7:28 a.m. I would ask unanimous consent it be placed in the record.

Chairman ISSA. At this time I would like you to read it and see if you want to reconsider whether or not there were contacts between the White House and DOE officials.

Secretary CHU. Well, okay, so Daniel Tobin I don't recall. I don't remember him. So you want me to read it out loud or just read it?

Chairman ISSA. Please. You have said that there were no contacts. This clearly is a DOE official asking for the information of an entity that had not yet been given a loan, saying the White House wanted it.

Secretary CHU. Well, I don't know what the context of this email is, but it says, Steve, Steve Ably, I guess, Steve, can you provide the number of jobs that will be created during the construction and what percentage of this product is U.S. content? I understand the majority of this equipment is from Germany. Do you have a breakdown? Apparently, the White House is asking for this information.

This is pure speculation as to what this was about, but certainly when we install and we provide loans, we would like to see a large fraction of the content, if we are installing a wind project, to ok U.S., because it is U.S. jobs. And the good news is, as this project went forward, we started three, four or 5 years ago, I am not sure when the clock starts, but with 25 percent U.S. made contact, on average, and now the wind turbines being constructed in the United States are about, according to the wind representatives, about 65 percent U.S. content. Automobiles manufactured by

Chrysler, Ford, and GM are about 75 percent U.S. content. So this is a good step.

So I am guessing, and it is just pure speculation, that the concern was we don't want to be giving loans that is largely non-U.S. content.

Chairman ISSA. I appreciate that, and I would only ask that since our discovery did find this, if you would do a follow-up discovery under the same subpoena and deliver us succinctly all the contents like this that appear to be involving applicants, DOE, and the White House, since obviously there is at least one that does involve the applicant, DOE, and the White House.

Secretary CHU. I can do that.

Chairman ISSA. And we will loan you a Bates stamp, if that helps make sure that we get numbers on the next time.

Secretary CHU. Very good.

Chairman ISSA. Thank you.

With that, we recognize the gentlelady from California, Ms. Speier.

Ms. SPEIER. Mr. Chairman, thank you, and thank you, Mr. Secretary.

Secretary CHU. How are you?

Ms. SPEIER. I am fine, thank you. I would like to ask you a series of questions that you can answer for the record, and I would also like to submit for the record, Mr. Chairman, an article from The New York Times, September 10th, 2011, that is entitled Employee Lawsuit Exacerbates Issues at Livermore Lab.

Chairman ISSA. Without objection, so ordered.

Ms. SPEIER. Secretary Chu, I am just going to run through these. The details of the fees the Department of Energy has been paying to the management company since 2008; an explanation as to why the work force at Livermore Labs has shrunk to 6,800 full-time employees from 9,400, while Federal funding has remained at 2007 levels of $1.2 billion; an explanation as to why the number of peer reviewed published articles by Livermore Labs scientists has dramatically decreased since the Bechtel-led coalition has been in charge and has the contract; and, finally, what oversight actions the Department of Energy has taken in response to cost overruns, degradation, and capabilities and lapses in security at Livermore Labs.

So you don't have to answer those at the moment, unless you have some overarching comment you would like to make, but I would like to have them made available to the Committee at a later date.

Secretary CHU. So in respect for your remaining time, I will not answer, but certainly I lived through that restructuring——

Ms. SPEIER. I know you did.

Secretary CHU [continuing]. When it became from the University of California to a limited liability corporation, which include 50 percent, I believe, University of California, and at the time, we, the Lab, people felt that this would be some of the fallout.

Ms. SPEIER. Okay, thank you. According to the International Energy Agency's World Energy Outlook, the fossil fuel consumers worldwide received about six times more government subsidies than the renewable energy industry. Mr. Secretary, do you know

how long we have been providing subsidies to the fossil fuel industry?

Secretary CHU. Well, it depends on which one you are talking about, but I believe oil started roughly 100 years ago. But we can get you the precise types of subsidies.

Ms. SPEIER. All right. According to a 2010 New York Times editorial, the oil industry has spent $340 million over the past 2 years lobbying against cuts to its subsidies. One of the reasons they argue for retaining the subsidies is retaining American jobs. But I note that despite heavy subsidies between 2005 and 2009, the top five oil companies have actually reduced the U.S. work force by more than 10,000 workers. So it does not appear that the subsidies to oil companies are keeping jobs in the United States.

Do you have any comments you would like to make on that?

Secretary CHU. Well, it is very complicated, but certainly those major companies are doing well, they are large, stable companies making hundreds of billions in profits, and a lot of the new finds, new gas finds and new oil finds, are started by independents, smaller entities.

Ms. SPEIER. So what would happen, Mr. Secretary, if we offered similar subsidies to clean energy initiatives?

Secretary CHU. Well, we think that it would help create an environment that would stimulate this, but I, for one, don't believe clean energy subsidies in wind and solar, for example, need more than, let's say, 20 years. The technology is improving very rapidly and they can be ramped down because the technology is improving, and will be competitive with any form of new energy. So I think many people in this room would be agreeable to saying that there should be sunsets in all technology subsidies.

Ms. SPEIER. All right. In 2009, the University of Massachusetts issued a study called The Economic Benefits of Investing in Clean Energy. The study reported that investments in clean energy initiatives create two to four times more direct and indirect jobs compared to the same investments in oil and gas production. The report concluded that investing $1 million to retrofit buildings to make them more energy efficient creates three times more jobs than $1 million invested in oil and gas.

Without getting into specifics, do you agree with the findings of this report?

Secretary CHU. Well, I can't say to the exact numbers, but I do say that energy efficiency especially is something by saving energy, you save money. The energy efficiency, the retrofits, the building of new buildings, new infrastructure in the United States, something we know can't be outsourced, and once you save that money, whether you are an individual, a residence, a business, that money gets recycled right back into the economy. So we think that that is a very good way of making us more competitive, making us economically stronger, and stimulating our own economy.

Ms. SPEIER. Thank you. My time has expired.

Chairman ISSA. I thank the gentlelady.

We now recognize the gentlelady from New York, Ms. Buerkle, for 5 minutes. Would the gentlelady yield for 10 seconds?

Ms. BUERKLE. Absolutely.

Chairman ISSA. Isn't it true, on a per megawatt basis, that the subsidy to fossil fuel is a fraction of a subsidy to renewables at this time, that those are weighted based on very small amount of renewals, very large amount of fossil fuel?

Secretary CHU. I haven't looked at the numbers, but I would presume so because the amount of energy generated by fossil fuel still overshadows that of——

Chairman ISSA. I thank the gentleman.

The gentlelady is recognized.

Ms. BUERKLE. Thank you, Mr. Chairman, and I thank you, Secretary Chu, for being here this morning.

I want to just refer to and reference a comment my colleague from the District of Columbia mentioned about the 2 percent oil reserves that exist in the United States. Do you agree with that assessment?

Secretary CHU. Well, I am not an expert on oil reserves. I have certainly heard that. But oil reserves are a very specific definition of what an oil reserve really means. But I have heard that number.

Ms. BUERKLE. Thank you. And we have heard the President refer to that both during his campaign and in his State of the Union. I think the last figure he used was 3 percent.

But I think it is important because the people throughout the Country need to know the truth, and if I look at these numbers here, our Country doesn't have just 2 percent of the reserves. At least 86 billion barrels of oil in the outer continental shelf, 24 billion barrels in shale deposits in the lower 48 States, up to 2 billion barrels of oil in shale deposits in Alaska, up to 12 billion barrels in Anwar, as much as 19 billion barrels in Utah that is tar sands, according to the Bureau of Land Management.

Now, all of these numbers are coming out of governmental agencies. There is a massive green river formation in Wyoming which, according to the USGS, contains a stunning 1.4 trillion barrels of oil shale, and on it goes. Rand Corporation found that about 800 billion barrels of oil shale are in Wyoming and neighboring States. All told, U.S. has access to 400 billion barrels of crude that is recoverable via existing drilling technologies.

That is really very important for us to recognize, that we do have more than 2 percent of oil reserves and that we can be energy independent if we just tap what is in the United States of America. We can become less dependent on the Middle East oil.

And I think, as I sit here, it is so important for me to get a feel from this Administration. Do you understand, and I will just briefly mention my district, which is upstate New York. No mass transit and very cold weather. So we have folks up there who must drive to work, and we don't measure in terms of blocks and miles like we do down here in Washington; they drive half an hour, an hour to work, just as my colleague from North Carolina mentioned. And, beyond that, we live in a climate where the battery in the Leafs and the Volts, they don't work real well because they are so light, and in the weather and the snow that we have—last year we had over 200 inches of snow in my district. So they need heavy duty cars that burn fuel.

So my question to you this morning is does the Administration even begin to appreciate the pain at the pump that the American

people are feeling? Seventy percent of Americans drive automobiles. This issue is on their minds. And I would like to see whether or not you think the Administration is even aware of the pain that the people of America are feeling at the pump.

Secretary CHU. The Administration, the President and I personally feel that very much, and we actually know this pain because if you are in a situation where you do have to commute and you do have to use your own car, it is causing great hardship.

Ms. BUERKLE. Then, with all due respect, why aren't we tapping into the resources that exist in the United States of America? And I agree, all energy exploration. But from what I am hearing, and we talked about the stimulus and the advantage of the weatherization program and the fact that it benefits 680,000 Americans, and I think the number you used was approximately $437 a year in savings. That is now being eaten up at the pumps. That is nothing.

Any benefit, if you could possibly justify it as stimulus plan, has gone out the window because this Administration is not willing to be aggressive and establish a sound domestic policy here, energy policy, where we explore all energy possibilities, but we rely on the resources that exist in this Country.

And I think if we did we would see, and you mentioned it in your opening comments, supply and demand, very simple. We increase the supply of oil, we send a message to other countries that we are not going to be dependent on you, we have the resources here, and I think you will see gas prices drop dramatically.

And I would ask of you to go back to the Administration and say the American people are hurting; they need you to do something now. They need the Keystone Pipeline initiative. They need this Country to say, yes, we will do all forms of energy exploration, but primarily we will drill and we will make sure the American people have access to lower gas prices and we access all of the resources that exist in our Country.

I see my time has expired. Thank you, sir.

Chairman ISSA. Mr. Secretary, if you wanted to respond. I don't want to have you cut off.

Secretary CHU. Again, thank you, Mr. Chairman. Very, very quickly, the Administration is supportive of increased production in the United States. Very aggressive program going on now through Secretary Salazar of Interior, much more land being offered for auction to decrease our dependency on imported oil, because we also recognize it creates jobs in America. So we are doing what we can in that respect.

Chairman ISSA. I thank the gentleman.

We now go to the gentleman from Missouri, Mr. Clay, for 5 minutes.

Mr. CLAY. Thank you, Mr. Chairman.

It is good to see you, Mr. Secretary. While some have criticized individual and, I think, uncommon examples of disappointing results, I know of many successful recipients of Department of Energy grants; smart grid, clean cities, energy efficiency, environmental cleanup, renewable energy, hybrid technology. All of these and more are successful examples of Recovery Act funds administered by the Department.

In my city, St. Louis, the Danforth Plant Science Center received funds via the Recovery Act for a project to determine how blue-green algae might be modified to produce fuel. Boeing received a smart grid grant via the Recovery Act to modernize the power grid. Washington University in St. Louis holds one of 46 Department-created energy frontier research centers. Researchers at the Photosynthetic Antenna Research Center are studying how plants harvest light and funnel energy in order to improve solar technology.

As with all the organizations that received ARRA funds, our park provides employment for staff at all levels. The city of Florissant, Missouri, in my district, was awarded Recovery Act funds through the Department's Energy Efficiency Community Block Grant program. The funding covered installation of a new integrated solar panel roof system for the civic center. In addition, the grants provided funds for an energy audit and retrofit of heating ventilation and air conditioning units for all government-owned buildings.

These projects not only provide jobs, they save a tremendous amount of money and energy. Also, Mr. Secretary, in my district, in Hazelwood, Missouri, Emerald Automotive has developed an all new lightweight range extended hybrid for fleet operators. The Emerald vehicle has a range of over 450 miles and achieves over 160 miles per gallon the first 100 miles driven. The vehicle reduces emission by 85 percent and saves a fleet operator considerable fuel costs. A testing on prototypes is currently being conducted and the green vehicle will be produced in Missouri and sold domestically and in Europe.

Mr. Secretary, Emerald has advanced through the early stages of the advanced technology vehicle's manufacturing loan program process with flying colors. There have been two rounds of questions from the Department, which have been answered promptly and thoroughly. Over 1,000 pages were submitted in the last round alone. The Emerald vehicle is exactly the type of project for which the ATVM loan program was created, yet the process has stalled. Mr. Secretary, what needs to be done to have DOE consider the Emerald application on its merits?

Secretary CHU. Well, as I said, we, first, consider all the applications strictly on the merits, and what we need to do is we have to decide how do you walk this balance between a company that is offering innovative promising technology to our responsibility to the taxholders that there is a likely chance of repayment, and this has always been the motivating factor in any decision we make.

Mr. CLAY. And it is projects like these that create jobs that were the genesis of the Recovery Act, is that correct?

Secretary CHU. Yes. But, again, I can't speak specifically about a specific loan, but it is, again, this balance between innovation that will help spur American innovation and leadership with the responsibilities to the taxpayer.

Mr. CLAY. Could you please talk about these other Recovery Act programs that have brought so many jobs and created so many innovations in my city and the rest of the Country?

Secretary CHU. Well, some of those are grants. I don't know of all of them, but I know of some of them. There are research grants, EFRCs we believe are very successful research grants, mostly to universities and groups to encourage professors to get together as

a group and solve a problem, rather than working as an individual research group, ban together, because we think that if they do get together two plus two can be more than four and one plus one can be more than two. So we think that that has been very successful.

The biofuels Danforth thing, again, innovative, it is a grant. Danforth is a great organization, so, again, all based on the merits. We are looking for ways of breaking through. Currently, the new generation biofuels is not competitive without subsidy, let's say an $80 barrel of oil, and that is our goal, we want it to be competitive without subsidy.

Mr. CLAY. Well, thank you very much.

Chairman ISSA. I thank the gentleman. I have one question for the gentleman, if I could. Was it wise to talk about all the grants you already got, when you wanted to know about the next one you wanted?

Mr. CLAY. I think it is cumulative, Mr. Chairman.

Chairman ISSA. It is cumulative, okay. You have done well, my friend.

Mr. CLAY. Thank you.

Chairman ISSA. With that we recognize the gentleman from South Carolina, Mr. Gowdy.

Mr. GOWDY. Thank you, Mr. Chairman.

Thank you, Mr. Secretary. I want to ask you about your quote from 2008. Somehow we have to figure out how to boost the price of gasoline to the levels in Europe. Was there a specific country in Europe that you wanted to emulate, or would you have settled for a continentwide average?

Secretary CHU. Well, as I said repeatedly since I became Secretary of Energy, that was no longer my goal, that was no longer what I had to do as a government servant.

Mr. GOWDY. I understand that. You made that comment a few months before you were sworn in as Secretary of Energy, and I assume you meant it at the time you said it or you would not have said it.

Secretary CHU. My duties as Secretary of Energy and my duties to serve the Administration take on different aspects, so when I became Secretary of Energy I knew what I had to do, and especially since we ended up going through this free-fall recession.

Mr. GOWDY. I understand that, but I also want to understand what you meant by that comment, which was just a few months before you were sworn in. So when you said somehow we have to figure out a way, who is the we? Somehow we have to figure out?

Secretary CHU. Again, I would rather dwell on what my record has been in the Department since I became a public servant.

Mr. GOWDY. Mr. Secretary, when you said somehow we have to figure out a way to boost, the word boost has a specific meaning, it doesn't mean to let elevate, boost is intentional. What did you mean by the use of the word boost?

Secretary CHU. I am not sure I said boost, but, as I said,——

Mr. GOWDY. What word would you have substituted?

Secretary CHU. Well, as I said, it is now irrelevant in my present job.

Mr. GOWDY. Do you know what the average price of gasoline in the United States was in 2008, when you made that comment?

Secretary CHU. It was not low, as I recall. We were suffering one of these gasoline price spikes at the time.

Mr. GOWDY. It was $3.50 a gallon. Do you know what the average price of gallon of gasoline was in Europe when you made that comment?

Secretary CHU. Considerably higher than that.

Mr. GOWDY. About $8.00 a gallon. You have mentioned several times, in fact, you did it several times in one quote, the overall goal is to decrease our dependency on oil, to build and strengthen our economy and to decrease our dependency on oil. Twice in one quote.

The President, on the other hand, talks about decreasing our dependency on foreign oil. Why the distinction?

Secretary CHU. Well, we want to decrease our dependency on foreign oil because it is really exporting money out of the United States.

Mr. GOWDY. I understand why he uses the word foreign. What I am asking is why you don't.

Secretary CHU. I think I use foreign. I think I use oil. I use them interchangeably because oil prices are set by an international market.

Mr. GOWDY. You and Mr. Jordan were talking about probability specifically with reference to bond ratings and investability. What are the probabilities of a CCC rated company getting millions of dollars in government loan guarantees?

Secretary CHU. Well, CCC plus is really at the edge of what I would consider the risk to the taxpayers.

Mr. GOWDY. So what would the probabilities of someone at the edge getting a loan?

Secretary CHU. Well, again, going back and looking at how the OMB, whose responsibility it is to set the credit subsidy, and the credit subsidy as it is set is literally, if one looks at the statute, there to offset the potential losses due to nonrepayment of any kind, delinquencies, so the credit subsidy score is 50 percent——

Mr. GOWDY. Chances are 100 percent if you donated $30,000 to the President's election bid.

Secretary CHU. Sorry.

Mr. GOWDY. What about the probabilities of a B rated company getting loan guarantees? That is not a very high rating either.

Secretary CHU. I thought we were talking about the probability as to the FCRA method.

Mr. GOWDY. Talking about Abound Solar and Solar Power, one of which was rated CCC, one of which was rated B, both of whom had principals who contributed mightily to the President's reelection bid, both of whom got loan guarantees.

I have 14 seconds. I want to ask you about subordinating taxpayer repayment for private investor repayment. Do you take the position that if there is a loan closing in the morning and, by statute, the taxpayers cannot be subordinated, that if you renegotiate that afternoon, you can negotiate them to get in line behind private investors?

Secretary CHU. No, I don't take that position.

Mr. GOWDY. What length of time has to pass before it can be restructured?

Secretary CHU. It is not a matter of length of time. As Herb Allison pointed out in his testimony, it is when a company goes into difficulty and your goal is to benefit the taxpayer as much as possible to give the chance that the U.S. Government can get back as much as possible, then Herb Allison, in his report, said that that restructuring is one of those tools.

Mr. GOWDY. I know I am out of time, Mr. Chairman. My point was the statute is pretty clear. Taxpayers cannot be subordinated to other investors. Legal counsel for the Department of Energy has, in a case of mental gymnastics that I am actually enviable of, says that only applies to the first structuring of the loan, not to subsequent structurings. So my question is can you restructure it that afternoon, according to her legal memo?

Chairman ISSA. The gentleman's time has expired. The Secretary may answer.

Secretary CHU. Very quickly, I think there is no debate. The statute very clearly says at time of origination it can't be subordinated. And we follow that. The statute does not say, when further on down the line, what you need to do, and when asked whether it was wise to allow restructuring to continue, many people in the financial world say if your goal is to maximize taxpayer benefit, that should be one of the tools.

Mr. GOWDY. Thank you, Mr. Chairman.

Chairman ISSA. I thank you.

For the record, because Mr. Connolly has left, I just want to enter in—oh, good, Mr. Connolly is here. So, for the record, from the EIA, U.S. Energy Information Administration, we currently use about 19,497,960 barrels a day, of which we import 11,753,000. The arithmetic on that, and I will put it in for the record, without objection, indicates we still have not reached that lofty more than 50 percent at the present time, according to EIA's current figure. So we can all run around, but we are still not getting that far and we certainly are not doing it on public lands. With that we go to the gentleman from Florida, Mr. Ross.

Mr. CONNOLLY. Would the gentleman yield for 1 second?

Chairman ISSA. Yes.

Mr. CONNOLLY. My only point was that we actually had reversed a trend in terms of domestic production. I think your point is well taken, and obviously more progress needs to be made.

I thank the Chair.

Chairman ISSA. And I appreciate that. The problem we have, Mr. Connolly, is that it was all reversed on private land and, in fact, what we did was reversed the public lands being made available made them less available.

So one of the problems we have on this debate today is, yes, we have more oil, more natural gas, it is a result of private people doing on private land and, in some cases, States like Texas, who have special sovereignty, when in fact the Federal Government, represented by the Secretary and the other secretaries, Interior and so on, have actually reduced, they may be reversing it now, but they reduced the availability for oil production.

So it is one of those things where you can't take credit for that which you are deterring just because you are being overcome by the private sector working around it, if you will.

Mr. Ross, for 5 minutes.

Mr. ROSS. Thank you, Mr .Chairman.

Mr. Secretary, thank you for being here. I want to follow up on what one of my colleagues earlier, Mr. DesJarlais, was inquiring, specifically with regard to single access trackers as an innovation. It is my understanding that the Department of Energy recognized single access trackers as an innovation, is that correct?

Secretary CHU. As an innovation as applied to that particular project.

Mr. ROSS. And that particular project was the Antelope Valley Solar Ranch, is that correct?

Secretary CHU. That is correct.

Mr. ROSS. If you could take a look at the monitor there. There is an email or a memo from what looks like Dong Kim to Jeff Walker, where he states specifically someone keeps changing AVSR, meaning Antelope Valley Solar Ranch, technical slides to include single access trackers as an innovation. Be clear this is not an innovation. The record will show that we did not grade this as innovative.

Now, would you agree or disagree with that assessment?

Secretary CHU. Well, this is an email Dong Kim, and as I tried to explain before, he later, for whatever reason, I don't know the particulars of it, he graded that. Is it the world's greatest innovation? Probably not.

Mr. ROSS. But he indicated it was not innovation and, therefore, Antelope Valley Solar Ranch got the loan guarantee of $646 million. Wouldn't you say that is a mistake?

Secretary CHU. Well, you know, he actually wrote up the justification for these things and ultimately it was a decision he and his group made. So it was nothing, for example, I or anybody——

Chairman ISSA. Would the gentleman yield?

Mr. ROSS. Yes, sir.

Chairman ISSA. Mr. Secretary, I just want to make sure we get this for the record. The "I think it is innovative" came first. The "I know it is not innovative, stop trying to inject that" came later. Could we agree to that? Because your documents delivered to us indicate that clearly he earlier allowed it to be considered innovative; later was overtly objecting to it being called innovative and actually objected to slides being put in that indicated it was innovative when it wasn't. I just want to make sure we get the order right, because the press has been given the assumption that he changed from no to yes, when in fact he changed from yeah, it looks okay, to hell no.

Secretary CHU. Well, I actually can't speak to that because, again, I was not party to this back and forth internally within the career folk. So we will gladly look at the full email chain and get that back to you.

Chairman ISSA. Mr. Ross, please continue. But we will in fact make sure you have the paper trail you provided us back——

Secretary CHU. All right.

Chairman ISSA [continuing]. So that you understand that this was one of those where it is a half billion dollars that would not have occurred had you listened to his later guidance.

And I would ask unanimous consent the gentleman have the additional minute that I took. Without objection.

Mr. ROSS. Thank you, Mr. Chairman. I would also like to ask unanimous consent that the memo from Dong Kim, dated August 4, 2010, to several other recipients be admitted into the record. And I will submit that to the Chairman.

Chairman ISSA. Without objection, so ordered.

Mr. ROSS. Mr. Chu, you indicated in your opening statement that each one of these cases, speaking of criminal indictments, was unacceptable and we have taken aggressive action to address issues early on and hold responsible parties accountable. Does it just take a criminal indictment to hold somebody responsible and take remedial action, or have you taken remedial action on these other matters that have resulted in absolute failure?

Secretary CHU. No, absolutely not. If you look at some, for example, in a very small amount of the cases of weatherization, if someone does shoddy workmanship——

Mr. ROSS. Has anybody been let go as a result of any of these failures? Have you terminated anybody's employment with DOE as a result of these projects, whether it be Solyndra or anybody else, and loan guarantees?

Secretary CHU. No, I haven't.

Mr. ROSS. What remedial action, then, have you taken to guarantee that this won't happen again? Or have you taken any remedial action?

Secretary CHU. We have. We have taken remedial action, for example, in the cases where we found shoddy workmanship, things of that nature. We tell the contractor you have to go back, you have to fix it on your own nickel.

Mr. ROSS. And you still use these same contractors?

Secretary CHU. In some cases. Well, I can't——

Mr. ROSS. I guess what I am getting at is there has not been an established guideline that have been implemented as a result of remedial action to be taken to make sure this doesn't happen again, is that correct?

Secretary CHU. There were established guidelines, but you have to also understand that in weatherization programs we give money to the States, the States give to local organizations. We oversee what the States and those local organizations do, and we have very clear guidelines if there is any improper work——

Mr. ROSS. So you would be willing to bet, then, that these instances will not happen again, the Solyndras, the Antelope Valley Solar Ranches, the excessiveness in the weatherization program that have proved to be, as you have seen in the slides, totally abject failures? It is your testimony today that you have taken remedial measures to make sure that this doesn't happen again?

Secretary CHU. We always look to ways of improving both our oversight of the Recovery Act and our oversight of the business we have in the Department of Energy, but it is just when McKundo happened and we worked very hard to help stop that leak that——

Mr. ROSS. Let me shift real quickly, because I want to get on this. We talked about oil production and we talked about oil production being up under this Administration. Now, we are talking about crude oil production, correct?

Secretary CHU. Yes.

Mr. ROSS. We have not increased refined oil production, have we, in the United States?

Secretary CHU. I actually don't know about that.

Mr. ROSS. How much have we been exporting of our crude oil production? Has that increased under this Administration?

Secretary CHU. I think the correct question you meant to ask was what are the net imports or exports, because there is——

Mr. ROSS. Of crude or refined?

Secretary CHU. I think both.

Mr. ROSS. Okay, then answer.

Secretary CHU. Because depending on the refineries and how sour or sweet the crude is. So there is a little bit of going back and forth of crude——

Mr. ROSS. But we have increased our exports of refined oil, have we not?

Secretary CHU. Again——

Mr. ROSS. And would not increase in production, even from the drawing board, as an economist, affect the market rate of crude oil prices, even if it takes 10 years to develop?

Chairman ISSA. The Secretary may answer.

Secretary CHU. As I said, the thing that affects prices, yes, supply and demand, very, very important. Other things that affect prices are the amount of spare capacity. Other things that affect prices are forward-looking things and nervousness about international events. All those things affect the international price of oil.

Mr. ROSS. Thank you. I yield back.

Chairman ISSA. I thank the gentleman.

My staff has given me the two documents we have been talking about and we are going to post them on my website prominently so that the August 4th, 2010 statement from Dong Kim, which is on your website as your answer to justification is placed next to the June 2011, 8 months later, when he says clearly these are not, not innovative.

I would ask that you consider strongly putting the correction, the 8 month later on the website so that the public stops thinking that he thought it was innovative when in fact, 8 months later, well before funding, he said clearly it wasn't.

And with that we go to the gentleman from Pennsylvania, Mr. Kelly.

Mr. KELLY. I thank the Chairman.

Secretary, thanks for being here today. You are in a very tough position, and I really would suggest that it is really not the pain at the pump that is affecting a lot of the comments anymore, it is the pain at the polls. That is certainly driving the great interest of how we are going to solve this Nation's energy problems.

I have to tell you I was very impressed with your resume. You certainly are, and the Chairman said earlier, one of the smartest people that has ever been here. In your statement you said, I have spent my career as a scientist. Rigorous peer review and double-checking someone else's findings are fundamental to a sound scientific process.

I believe the same is true in government. The American people expect all of us to honestly assess the investments we have made and chart a course for the future.

You also were talking about job creation and things that have happened, and I am a little bit confused because when I look at the claim that there is over 60,000 jobs created, I say, okay, well, 33,000 of those jobs for the advanced technology vehicles from Ford. Those people are already at Ford, so you didn't really create those, that is just now they are wearing a little different cap. Three thousand at Solyndra that's bankrupt; 240 at Poet, which declined the loan; 188 at Abound that have been laid off; and 34 at Beacon went bankrupt; and 26 at Fisker that were laid off. Actually, the net total is 24,900.

So if we are going to inspect other people's data and other people's findings, then we really need to get down to the actual empirical data that we have to deal with. It is nowhere near 60,000 jobs; it is just about half that amount. And a lot of that is dubious also.

When I hear about this increased production in oil under this Administration, this is not an original quote, but it is very much like the crowing rooster taking credit for the daybreak. Just because you happen to be sitting in a position that is benefiting from years, years of technology coming now into fruition, and I know a little bit about it; my family has a 147-year background in energy production. Fracking is 60 to 70 years old, it isn't new. So I think that we sometimes get these things twisted around when it comes to a political reelection, as opposed to real answers for our energy problems.

And I have to tell you that I am trying to understand, as a private citizen and one who has borrowed great deals of money from time to time, I thought it was a great deal of money for me because I actually had to pay it back; I had my own skin in the game. But when I look at some of these loans, and I am trying to understand, now, this is maybe not you, but you have a team of people that would be approving these loans. Mr. Jordan asked about it, Mr. Chaffetz asked about it, and my colleagues have asked about it.

There is no way in heck anybody could have looked at these if it was their own money, if you were truly a lender who was responsible to a group of investors for the way your money was being lent, you would say, no, no, no, no, we can't invest this way. There is something called the five Cs that come up, and most lenders would talk to you about it as character, capacity, capital, collateral, and conditions. All those come into effect before any loan is given out to any person trying to borrow it.

But I wonder as a scientist, and you say, I wanted to check, I wanted to double-check. There is no way anybody double-checked or nobody looked at these things. This isn't science; this is a basic business model that has failed dramatically, and it has failed with American taxpayer money. So this idea that we are these benevolent monarchs just showering these favors to these folks is absolutely preposterous. We have wasted so much money.

The lady from California was asking about this. Fossil fuels produce 78 percent of American energy, 13 percent of the tax incentives. Renewables, they are responsible for 11 percent of production and they get 77 percent of tax incentives. So if you were asking

which one did you want to eliminate, I would say, you know what, I think I will put my money on a horse that I think can win.

So I really do, I wonder. Sitting there as a private citizen coming here for the first time, an automobile dealer my whole life, having to fund everything myself, having collateral, having character, having the ability to have great deals of money, capital of my own to invest in any type of a way-out project before any lender would even look at me, it is incredible to me that we have gotten to this point today where we have wasted billions and billions of hard-working American taxpayer money on some green dream that isn't playing out very well.

I have to tell you this is the House of Representatives that represents the people of the United States. I don't come here as a Republican; I come here just as an American. And I hope my friends from either side feel the same way. The American people deserve to know how could we have been so careless and so casual with billions of taxpayer dollars?

In Section 1703 we were looking at nuclear, fossil, and renewables. When we went to section 1705, you know what we completely left out? Nuclear and fossil. It is all renewables. I just don't understand anybody's economic model that looked at something that was such a long shot and say, you know what, I think this is right. I think this is what we should go for. In fact, you know what you really drove out of the market were the venture capitalists.

And I would like to submit for the record a letter from Bright Automotive.

Chairman ISSA. Without objection, so ordered.

Mr. ROSS. I think we have a slide on this, too.

Chairman ISSA. I would ask the gentleman have an additional 1 minute. Without objection, so ordered.

Mr. ROSS. All right, Secretary Chu, this is February 28th. This is very recent. Today, Bright Automotive will withdraw its application for a loan under the ATVM program administered by your Department. Bright has not been explicitly rejected by the Department of Energy. Rather, we have been forced to say uncle.

As a result, we are winding down our operations. Last week we received the fourth, near final conditional commitment letter since September 2010. Each new letter arrives with more onerous terms than the last. The first three were workable for us, but the last was so outlandish that most rational and objective persons would likely conclude that your team was negotiating in bad faith. We hope that as their Secretary, this was not at your urging.

And as you look at this. I mean, we really have driven a venture capitalist out of the market because they cannot compete with a group of bureaucrats that have absolutely no background but are making decisions that would have been made by them based on the likelihood of a good investment.

So the Energy Department may be well-intentioned, but has absolutely destroyed a part of the investment industry through an absolutely preposterous model that has no basis to be even looked at and said, you know what, these were good decisions based on good information. If it had a 50 percent chance of survival? I would like to talk to one lender that would have said thumbs up on that one, just wouldn't have happened.

I yield back my time.

Chairman ISSA. Mr. Secretary? There wasn't a question there——

Secretary CHU. I don't think there was a question, so——

Chairman ISSA. Okay. With that we will go to the gentleman from Texas, Mr. Farenthold.

Mr. FARENTHOLD. Thank you, Mr. Chairman.

Secretary Chu, thank you for being here. I applaud your taking the time to be here and I am happy to see we have somebody in charge of an organization that actually has a scientific background.

Let's talk a little bit about natural gas, if you don't mind. Natural gas is cheap and abundant right here in America, and lower natural gas prices in some areas of the United States are at historic lows. Just for the record, would you say that falling natural gas prices reduce the favorableness of the business model for some of these alternative energy sources? Maybe one of the reasons they are less able to compete is we can go to a proven technology, natural gas, power plant on and put $2.60, $2.70 natural gas in it?

Secretary CHU. I would certainly agree that falling natural gas prices, especially where they are today, makes natural gas very competitive with other forms of energy.

Mr. FARENTHOLD. So now that we have relatively low natural gas prices and we actually do see the oil and gas sector ramping up employment, in South Texas we are under 7 percent unemployment, actually looking at jumping under 6, we are actually having trouble finding people to work in the oil field. Do you think this might be an opportunity for us to invest in technologies to export some of that natural gas to bring money into the United States in the energy sector and lower our balance of trade?

Secretary CHU. Well, first, we are very, very happy that the natural gas boom and the ability to recover natural gas where we thought, 20 and 30 years ago, was not recoverable, we are very excited about that. As you noted, it is creating a lot of jobs. We also think that natural gas is a good transition fuel.

In weighing whether we export natural gas or not, the Department of Energy is undertaking a study to see whether we should be doing this. And I just want to add very briefly that it lumps into two things: into fair trade countries, which we have no choice, we approve; and non-fair trade countries, which we have to weigh what is in the overall benefit of the United States.

Mr. FARENTHOLD. It just seems like we shouldn't be trading energy any differently than we trade our farmers, our automakers, our airplane makers. We encourage exports in those fields and it seems like doing the opposite in the natural gas field might be a mistake and might be an opportunity to lower.

You also mentioned the term transition fuel. Transition to what?

Secretary CHU. Well, to a lower carbon intensive economy. Natural gas emits about less than half the carbon dioxide of the average conventional coal plants. While we work to do research to help coal plants capture and sequester the carbon dioxide, which we are also very committed to, we do see, particularly with these low gas prices, that the power companies will shift the balance somewhat to natural gas. They won't go all the way because they too don't want——

Mr. FARENTHOLD. Obviously you want a diversification of fuels.

Secretary CHU. Right.

Mr. FARENTHOLD. But I would encourage your Department to be expeditious in approving permits to do exports.

Before I finish, I do want to ask you about a company called Abengoa. I think it was $132 billion. It had the lowest rating in the entire DOE profile, lower than Beacon Power or Solyndra, both of which have gone bankrupt. Are you concerned about having loaned money to this risky venture?

Secretary CHU. Well, we look at all our loans. We are very careful, we are very mindful of risks to taxpayer money and we monitor these situations. Frankly, what has happened in the solar industry and solar manufacturing, no one really anticipated that the price of solar modules, the bidding price would drop to only 20 percent of what it used to be some 4 years ago.

Mr. FARENTHOLD. Which brings up the issue of kind of a lack of diversification within the DOE profile. You have Abengoa, First Solar, Project Amp. They received about half of the 1705 program funds, or about $7 billion. Shouldn't we be inconsistent with the all of the above energy that the President has said and that we Republicans have been touting all along, be looking at diversifying that over a wide variety of different projects, rather than dumping half of it in three questionable programs?

Secretary CHU. Well, in 1705 we invested in solar, we invested in green, we invested in some geothermal. In our other loan programs, for example, we invested in nuclear. We have a conditional commitment to Vogel for their first two nuclear reactors that we started for the last 30 years. There are loans in the 1703 program for gasification of coal. So there are other parts of our loan program that include those technologies.

Mr. FARENTHOLD. It looks like 80 percent went to solar in 1705. We will look at the numbers with respect to the other programs, but just the heavy investment in solar has me concerned.

I am out of time.

Chairman ISSA. We will have a second round for the gentleman, if he will remain.

Secretary Chu, I just want to verify one thing. 1703 was essentially all the previous administration; 1705 was your administration. So when the gentleman is talking about what was funded under 1703, including nuclear and other forms of fossil fuel, those were the Bush Administration. Yours is 1705, which is essentially no nuclear, no fossil fuel, is that correct?

Secretary CHU. Not quite. I think 1705 was authorized in, I think, 2007.

Chairman ISSA. Right, but it is what you have acted on during your administration.

Secretary CHU. Well, before this administration no loans in 1703 or 1705 went out.

Chairman ISSA. Okay, I think I am not going to take it as my time because it isn't as my time.

We now go to the gentleman from my college hometown, Mr. Walberg, for 5 minutes.

Mr. WALBERG. And we are better off because of it, I am certain.

Chairman ISSA. I hope Sister Peg is listening to that as we speak.

Mr. WALBERG. She is listening and wondering why.

Michigan. Michigan, the motor capital of the world. Michigan rebounding. Michigan, in my district and I think all over, frustrated with the high cost of using those excellent vehicles that are produced in Detroit and other areas of Michigan and around this Country.

We are not going to relinquish that standard that we have and the desire to give people resources of transportation that they want. And I know it seems right now, at least from my perspective and that of my constituents, that their government is attempting to do mind-changing, whole process changing, moving to some other direction that, frankly, they are not accepting at this point in time.

And primarily in the nine town hall meetings I had last week, I just heard from my constituents saying, reduce the cost of gas at the pump. Get us what we want on that area and then take the next 200, 600, 800 years to find all of the resources that you think will come following that. I know they are not committed to destroying our environment, but they want an economy in this Country that promotes them.

In your testimony, Secretary Chu, you stated clearly that where we find mistakes, we have and we will move swiftly to correct them. Project Amp received a $1.4 billion loan commitment from the Department of Energy. The Recovery Act required projects to commence construction before 2011, by September 2011. We checked in February 2012 and still Project Amp had not commenced construction. What is your response to that? Is that not a mistake? Is that not a violation? And what will you do?

Secretary CHU. I would have to get back to you on that one, so we will look into it.

Mr. WALBERG. Well, I guess I go back and the question stated you said where we find mistakes we have and we will move swiftly to correct them. If indeed the requirement is that the project where someone receives or this specific Project Amp received a $1.4 billion loan commitment and they haven't commenced construction yet as of February 2012, when they were supposed to commence it by September 2011, what other answer would be other than we ought to be withdrawing?

Secretary CHU. Again, I am going to look into the exact things and commencing construction, whether it is an obligation, but I will certainly look into it and get back to you on whether it satisfies the statute of the law.

Mr. WALBERG. My colleague, Congressman McHenry, asked what you had done and this Administration had done to lower gas prices. You spoke of programs to improve engine efficiency and other vehicle technology. The Advanced Technology Vehicle Manufacturing program is a Bush-era program designed to assist manufacturers of advanced technology vehicles. Do you know where the last ATVM loan was issued? When the last ATVM loan was issued?

Secretary CHU. Not off the top of my head.

Mr. WALBERG. April 2011. Do you know how many companies are awaiting a loan at this time?

Secretary CHU. I, again, don't know the exact number. There are a number of loan applicants right now.

Mr. WALBERG. Well, with the lack of knowledge or seemingly attention to this detail, why does the Department of Energy website tout the ATVM as a jobs program?

Secretary CHU. You are asking for an exact count of the number of loan applications that are before us, so I was just saying that I did not know the number. It is a jobs program.

Mr. WALBERG. I will take a guesstimate. Any guesstimate on it?

Secretary CHU. Four, five, six? I don't know.

Mr. WALBERG. So, again, why do we list this or tout it as a jobs program if it seems pretty insignificant at a time when we have energy concerns that are frustrating people at the pump?

Secretary CHU. Well, it is a program that was set up in a previous administration. We believe that it did a lot of good. The loans to Ford and Nissan created and saved a lot of American jobs, and I think you would agree with that.

Mr. WALBERG. One final question, Mr. Chairman, if I could.

Chairman ISSA. I would ask the gentleman have an additional minute. Without objection, so ordered.

Mr. WALBERG. Thank you.

Simple question. When will oil production go up on Federal leased land?

Chairman ISSA. On Federal leases.

Mr. WALBERG [continuing]. Lands? We tout all of the oil production that is going up, but it is on private lands, through effective efforts that have gone on with permits that have given in past administrations, on average, 73 percent of the permits requested were approved. This Administration, 23 percent. So when will oil production go up on federally leased lands?

Secretary CHU. Sir, I can't rightly say. But if you look at the amount of federally leased lands under the control of oil companies, it is increasing. The oil companies have to make a decision as to whether they want to develop on those lands. The President actually has encouraged them to do this. When he suggested begin development or lose it, there was great objection by the oil companies. So we can do what we can to encourage oil companies to develop their leases that they now own on Federal lands.

Mr. WALBERG. Well, thank you, Mr. Chairman, for the extra time. I would just question if they are pushing back, there is a significant reason why they are pushing back on using lands that they requested to use. Thank you.

Chairman ISSA. If the gentleman would yield.

Mr. WALBERG. I would yield.

Chairman ISSA. Mr. Secretary, how do you explain that on private lands, where they pay at or greater than the 17.5 percent royalty they pay to the public, on public lands they are choosing to go to private lands and you are saying, or the Administration is contesting that they are choosing not to go on public lands. Public lands should be cheaper based on our typical royalty of 17.5 percent, but in fact they are going and buying rights on private land. How do you explain that?

Secretary CHU. Well, most of the land the Government has been leasing is in offshore, deepwater. There is Arctic also made avail-

able. Those, by their very nature, are harder to develop than this new technology which, over the last 10 years, has improved remarkably. So that is why you see this great proliferation of rigs and things of that nature; it is on land. It has become a technology that we know how to use and the initial up-cost investment and the time of development is much shorter.

Chairman ISSA. I appreciate that and I will mention that Prudhoe Bay is a term that we have been using since I came here 12 years ago, and we have not approved the request they have made in the ANWR.

With that we begin our second round with Mr. Kelly, who has waited and kept the President even waiting for an opportunity. You are recognized, sir.

Mr. KELLY. Thank you, Mr. Chairman.

Secretary, you didn't have much of a chance to respond. When it comes back to Bright Automotive, there is a report that you had a conversation with Amy Dobrikova, a former employee, and that was as recent as March 5th, 2012, at the Green Fleet Conference, that you knew a year and a half ago that Bright wasn't going to be able to qualify for this loan. Is that true?

Secretary CHU. I had a conversation with the woman. That is not what I said. We felt that for a long period of time this looked like a very iffy proposition, and although very sympathetic to the company and to her, so we did not "know" long ago, but it was on the margin for a long period of time based on our market analysis, based on all the other things that would entail the risk to the taxpayer money.

Mr. KELLY. And I guess that is part of the question, because the same thing with Fisker. We are asking them to push science forward to meet a market demand. There is not a market demand for it, but we are saying the science has to come into line right now, we have to do things quicker. Tell me a little bit about Fisker, because Fisker is going through the same situation right now; all of a sudden what they were told they were going to get in total, they have only gotten part of it because they haven't met some of the metrics I think that the Department has asked them to do. What is it that they are coming up short at?

Secretary CHU. Well, I am not going to talk specifically about any specific loan, but I will tell you in general what we have in our program, in our loans, and that is we have milestones. So as we mete out and disburse the funds, companies have to meet milestones, and if they don't we enter into discussions with them to see what can be done. And in general we think this is a very responsible stewardship of taxpayer money. So not going into any details of any company, we are just saying that we do take the responsibility to the taxpayer very seriously.

Mr. KELLY. In some instances, not in all, because, as we have seen before in previous instances, there were moneys given out to companies that had this B, B-minus rating and really didn't have the metrics in place.

Going back to the conversation you had with Amy Dobrikova, are you saying that The New York Times misquoted you?

Secretary CHU. The conversation that I recall was that I said we had our doubts about Bright Auto and we were trying to work

through with the company how to get the loan. So that is the conversation I recall.

Mr. KELLY. Okay, because there is an audio of that.

But this is what I was referring to earlier. So if we are taking people who would normally, venture capitalists who would get involved and we have taken them out of the equation now because bureaucrats now are making decisions on investing capital, not their own, but taxpayer money, so tell me where this is going, because it really does change the dynamics of the lending environment right now. And I don't know how people would go forward if they are not sure.

Where does the government get off? Where do the venture capitalists have their opportunity or where is their niche in that market?

Secretary CHU. Okay, so, first, there is a slight definition difference. We are providing not capital, but debt.

But regarding your second statement about venture capital, the loan program actually does not compete with venture capital. Venture capital typically invests smaller tranches of money in earlier funding, things that would be considered too risky for our loan program. So it wasn't intended to compete with venture capital.

Mr. KELLY. So let me go into Fisker. Where is Fisker right now?

Secretary CHU. Again, I can't talk to the particulars of any loan, so I hope you would understand that.

Mr. KELLY. Well, I understand that, but I am not sure Fisker does, because they bought a plant in Delaware, a former GM plant. Tesla bought a former GM plant in California. And a lot of this is predicated on the fact that private investment and government investment, which comes first, the chicken or the egg; do we have to get the private money in first before we qualify for the government money?

And from the private sector they are saying, well, unless you have a guarantee on the loan, we are not willing to put more money into it. So I am kind of confused. I actually have had to borrow a lot of money in my lifetime. I am trying to understand where is it that this fits and would give anybody who was actually seeking one of these loans any type of a clear avenue as to how you would obtain this funding and how you go forward.

Secretary CHU. Well, I think those requirements we hope are reasonably clear because it is written into the statute, that when we offer either a loan guarantee or something of that nature, that a minimum of 20 percent has to come from private equity investments or investments some other way. In some instances the government is following considerable investments in the private sector and then the company comes forward and says we would like to do another project which we think fits in the scope of the definition of the loan program and, therefore, they would ask for a loan.

Mr. KELLY. I know Fisker has run into some trouble. In fact, their car wouldn't start when they had it at one of the shows. They couldn't get it to start and I know they are facing some great difficulties.

I see I have run out of time. But I do appreciate your being here today and I know you are in a tough position, but on behalf of the American taxpayers, we really have to be looking into these things.

It just seems to me that so far we don't have a very good positive rate of return on what we have invested.

Thank you, and I yield back.

Chairman ISSA. I thank the gentleman for yielding back.

With that we go to the Ranking Member, Mr. Cummings.

Mr. CUMMINGS. Secretary, a little bit earlier Mr. Jordan asked you a series of questions where he mentioned people who may have had some connections with the Administration or the White House. I think we have to be very careful with those because basically what he has asked you is to go back and to look into that, which I know you will, and if I were those people I would be concerned, as a lawyer, because there is an implication that they may have done something wrong.

You said that a number of those people you didn't even know. You knew some of them, others you did not, you may have known them, but you didn't know they had involvement. And I think there were one or two people that you said there had been a firewall put up, is that correct?

Secretary CHU. Well, there are firewalls put up on any person who works within the Department of Energy who would have any connection with a loan applicant or actually a grantee of any kind. And the firewalls are that that person cannot in any way participate in any part of the selection process.

Mr. CUMMINGS. I had asked you about First Solar and the Washington Post said that one of Senator John McCain's, and this is the same project, by the way, that John McCain spoke up for and Governor Brewer, but the Washington Post went on to say that a fellow named William Post was a top bundler for Senator McCain and he served on the company's board of directors for First Solar. But that had nothing to do with First Solar getting an opportunity, did it?

Secretary CHU. No. Whether the investors are Republicans or Democrats did not enter into any decision as to whether we were going to fund the loan.

Mr. CUMMINGS. Now, last November, then White House Chief of Staff William Daley appointed Herb Allison to conduct an independent study of DOE's loans and loan guarantees to clean energy projects. The independent consultant was responsible for completing three tasks: number one, evaluating the current status of the loan portfolio; two, recommending ways of strengthening and managing of the oversight of DOE's loan program; three, proposing an early warning system for spotting potential problems that could affect the value of the loan portfolio.

Are you familiar with that?

Secretary CHU. Yes.

Mr. CUMMINGS. Now, the independent consultant's report acknowledged that Congress directed DOE to support "innovative" alternative energy projects that involved more risk than is typical for a project in corporate debt financing.

Mr. Secretary, your agency has an important mandate to fund these innovative clean energy projects, but to do so in a way that does not waste taxpayers' investment. I think you have actually said that. Can you discuss what due diligence procedures you put

in place in the loan guarantee program to help ensure that DOE balanced both of these interests?

Secretary CHU. Sure. So, for example, our experiences, for example, in the solar market, where the ecosystem of that market, the costs of commodity goes down by that much, made us acutely aware that this is something we had to monitor on a weekly basis, if you will, and monitor very closely.

The other thing that we have instituted and we continue to strengthen, and we agree with the Allison report; in fact, it started this before the Allison report, was that we had to start a separate organization within the Department of Energy, another organization, yes, part of the loan program, but actually is an independent set of eyes, certainly independent from the originators of the loan that could then say, the responsibility to the taxpayers' money, if things are in trouble, it is often said that the parents sometimes look through rose colored glasses at their children and originator of a loan is in a certain sense were parents of those loans. So we felt it very important to establish an independent set of eyes with people not only within the loan program, but people outside the loan program per se.

So these are examples of some of the things we have begun.

Mr. CUMMINGS. And GAO recently issued a report finding that your Department's due diligence procedures were as good, if not better, than procedures used by private sector investors. Are you familiar with that?

Secretary CHU. Yes, we hear that from our loan applicants all the time, that we somehow put them through a lot more diligence.

Mr. CUMMINGS. Now, there has been this whole concept of drill, baby, drill. Folks seem to believe—I ask unanimous——

Chairman ISSA. An extra 30 seconds. Go ahead.

Mr. CUMMINGS. Can I have a minute like the Republicans?

Chairman ISSA. You can have a minute.

Mr. CUMMINGS. Thanks.

The Republicans have been touting the drill, baby, drill, as if that is going to reduce gas prices. I remember when we had gas price hikes when President Bush was around. I reminded my colleagues that there are certain limitations that we have. It has been implied that you all are not doing all that you can to reduce gas prices, and since the American people may see this, I want you to be able to tell them what you are doing, and if that drill, baby, drill thing works.

Secretary CHU. First, as noted several times, this is a world commodity, it depends on the world structure. We actually like the idea that the United States is increasing its production of oil and natural gas. This is good; it means American jobs, so we are supportive of that.

I have listed before in the previous Administration I twice was asked to help, spent an hour and a half with President Bush in the Roosevelt Room with a few others to try to help get relief to the pump. He wanted to know about biofuels and things of that nature.

I spent another time, over an hour, after working with the Secretary of Energy, with Secretary of Treasury Hank Poulson, with the head of NEC Jack Hubbard, and the Secretary of Energy to

look at in the previous Administration, what can the Department of Energy do to bring relief.

So in the previous Administration I was asked to give my ideas on what they could do. It has not changed in this Administration, and there again I was at the service of a previous Administration who also felt the pain of Americans at the pump.

Chairman ISSA. I thank the gentleman.

We now go to the gentleman from Ohio, Mr. Jordan, for 5 minutes.

Oh, I will notify everyone we anticipate coming out of recess and going into a vote.

Mr. Secretary, the earlier of the two, of that vote or 1, will be your reprieve, if you don't mind.

Secretary CHU. Thank you.

Chairman ISSA. Thank you.

Mr. Jordan.

Mr. JORDAN. I thank the Chairman.

Let me just pick up where the Ranking Member started his time. I wasn't implying anything with my questions, I was simply trying to get at how the Department of Energy made their decisions, and that is why I referenced nine different individuals who were either in the Administration or were fundraisers for the Obama campaign, eight of which have ties to companies in the 1705 loan program, if that had any bearing, any influence on the Department of Energy's decision to give those companies with ties to eight of those nine individuals who are in the Administration or who are fundraisers for the Obama campaign, if it had any bearing on their decision to give those companies loan guarantees.

The Secretary's response was no to all nine of those individuals. He said then we based our decisions on the merit of the company who is going to get the loan, who is going to get taxpayer dollars, which prompted me to ask, if it is based on merit, why were 23 of the 27 companies who received money rated as junk status by Fitch and Standard & Poor's.

The Secretary seems to have, since then, referred to this independent review that was done, so I want to spend a little time on that if I can. Who conducted the independent review?

Secretary CHU. It was led by Herb Allison.

Mr. JORDAN. And did Mr. Allison have any ties to the Administration?

Secretary CHU. I can't know the exact—oh, yes, I do know of one tie. I think he was part of Treasury for a while.

Mr. JORDAN. So the guy who did the independent review was also formerly a member of the Obama administration?

Secretary CHU. I believe so.

Mr. JORDAN. And what was his title, do you know?

Secretary CHU. I can't give you the exact title, but I think he was part of—he was working with Freddie Mac and Fannie Mae.

Mr. JORDAN. Yes, he was Assistant Secretary at the Treasury Department, is that right?

Secretary CHU. Again, I don't remember his exact title.

Mr. JORDAN. But it is true that the guy who did the independent review was also formerly a member of the Obama Administration.

Secretary CHU. Yes.

Mr. JORDAN. Okay. And his review said that it is okay to give loans to 23 companies that are rated junk status?

Secretary CHU. He did not address that. His charge of his committee and his report was, going forward, how to help ensure the taxpayer interest and the vitality of the loan program.

Mr. JORDAN. And isn't it true in his report that he said, "serious systemic technical and management problems exist at the Department of Energy"? Isn't that a direct quote from Mr. Allison's review?

Secretary CHU. I don't recall those words.

Mr. JORDAN. Okay, well, they are in there.

Let me back up a second. Do you think maybe the American taxpayer who saw millions of their dollars put at risk at 23 companies with junk rated status, do you think maybe when you have an independent review done by a former member of the Obama Administration, do you think they might question whether in fact it was independent, particularly when some of these companies went bankrupt with their tax dollars?

Secretary CHU. It was a very independent review and the high standards at which Herb Allison and his people conducted the review have to be applauded. I should also say——

Mr. JORDAN. But here is what I keep coming back to, and I don't see how a rational person can't at least think this may exist. Nine individuals in the Administration or raising money for the Obama campaign, you say that has no bearing on who gets loans. Twenty-three of the 27 companies that got loans, below investment grade status, junk status. And then you hire someone to do an independent review and, oh, by the way, the independent reviewer, he also worked in the Obama Administration.

Really? That is how you are going to defend yourself, someone who was previously in the Obama Administration does the independent review? That is supposed to be independent to justify the fact that all these connections exist and 23 of the 27 companies weren't investment grade? Unbelievable.

The taxpayer is sitting back there going, are you kidding me? This is what goes on with our tax dollars in one of our Federal agencies? The guy who is supposed to justify all these actions with an independent review actually worked in the Administration. That is amazing that that goes on with American tax dollars. That is the point that the American people find so frustrating and so troublesome when they look at this entire situation.

Secretary CHU. When the loan program was set up, it was set up to fund innovative companies, and it was also set up with a loan loss reserve, which was specifically set aside. So this was money appropriated, not money, this is real dollars appropriated by Congress to account for losses.

And Herb Allison's report said that the moneys available for this loan loss reserve of about $10 billion, they estimate that perhaps 2.7, less than one-third, is at risk, and they also said that we don't say that they are going to lose 2.7. So it is far less than what Congress appropriated for those losses.

Mr. JORDAN. Well, Mr. Chairman, look, you can——

Chairman ISSA. Would the gentleman yield? Would the gentleman yield for a second?

Mr. JORDAN. I made my point. I would be happy to yield to the Chairman of the full Committee.

Chairman ISSA. Mr. Secretary, notwithstanding where your independent, Mr. Allison, was before, he clearly shows us that if not for Nissan and Ford, you would have had a disastrous result; that, in fact, when you pulled them out, this is an awful performing portfolio. It is only Ford and Nissan coming back that actually improves it. And he includes things in his own: a lack of clarity in lines of authority within the loan program; lack of balance between those in government experience and those with substantial private sector experience and skill in the project. As I read it, he pretty much said you didn't do that good a job, and he does give you credit for the loan loss being less, but when you take Ford and Nissan out it is more, isn't it?

Secretary CHU. Well, one can take this out, put that in, and things of that nature. He also points out——

Chairman ISSA. Well, wait a second. The reason I am asking about take them out is these are world class huge companies——

Secretary CHU. Exactly.

Chairman ISSA [continuing]. And when you take Ford and Nissan, you are not talking about these BB, CC startup companies with, quite frankly, as Mr. Jordan said, insiders, friends of the President, bundlers, and so on. So they are very different. The characteristics of the loans might be similar in their amount, but the characteristics of the companies bear no resemblance, do they?

Secretary CHU. Well, you can say that today and everybody recognizes Ford has bounced back beautifully, it is a great company.

Chairman ISSA. Ford is a 100-year-old business worldwide, and Nissan came out of World War II and has gone almost straight up for two generations. So I think, in fairness, you cannot compare auto companies to the startup electric companies and so on, can you?

Secretary CHU. The credit subsidy for the Ford loan speaks for itself, it was roughly 50 percent of the loan. So in the eyes of the OMB, who sets that credit subsidy score, they felt that it had a 50 percent of default at the time. But it turned out not to be, and we applaud Ford for doing all the things it did and it is a great company.

Chairman ISSA. We all agree on that part.

Mr. Clay, would you like a second round? The gentleman is recognized.

Mr. CLAY. Thank you, Mr. Chairman.

Last July, the Brookings Institution issued a major study providing the first comprehensive analysis of the U.S. clean energy economy. That report made a number of findings and I would like to focus on two.

First, the report found that the clean economy generates good paying jobs. According to the report, the clean economy employs about 2.7 million workers. That is more than the fossil fuel industry. The report said this: "Newer clean tech segments produce explosive job gains and the clean economy outperformed the Nation during the recession. Newer clean economy establishments, especially those in young energy-related segments such as wind energy,

solar, and smart grid, added jobs at a torrid pace, albeit from small bases."

Secretary Chu, do you agree with the Brookings report that certain segments of the clean economy, particularly those who Recovery Act moneys have been invested, offer the potential for substantial job growth?

Secretary CHU. I do.

Mr. CLAY. And the Brookings report also makes a second important key point, which is that the U.S. needs to support these key sectors to remain competitive globally. Here is what the report says: "China now leads the world in clean economy deployment. In 2010, China put into place a staggering $54.4 billion in clean energy investments. By contrast, U.S. private investment in clean energy totaled $34 billion. Now the gap is widening further."

The Brookings report also says this: "China, which now produces half of the world's wind, turbine, and solar modules, recently announced it would accelerate its clean revolution over the next 5 years and has set out aggressive growth plans for strategic emerging industries critical to economic restructuring, including multiple new energy categories, electric vehicles, and energy efficiency products."

Secretary Chu, do you agree that the sectors that might bring this Country greater energy independence, solar, wind, geothermal, advanced battery development, et cetera, are critical for the U.S. to develop to remain globally competitive?

Secretary CHU. I agree with that.

Mr. CLAY. In a press release of the company, the release of the Brookings study, a principal at the Brookings Institution commented on the U.S. Government's involvement in this sector and said this, "This is not an area where the public sector needs to get out of the way. Government leaders at all levels need to get in the game. Otherwise, we will watch the rest of the world pull away from us."

Secretary, do you agree with that statement?

Secretary CHU. I do agree because many countries, China is one of them, but there are dozens of others who recognize the economic opportunity in this clean energy, energy efficiency, and that is why these countries are investing so much. So even just to level the playing field we need to be doing something. China has shown that it simply views this as a great economic opportunity for their prosperity and future, both to be deployed at home, they are going to probably be the biggest deployer of clean energy in the world this year, but also for export market.

Mr. CLAY. So if we tamp down on our government investment in clean energy technologies, then we will lose ground to the rest of the world.

Secretary CHU. Well, I would say that we have great strength in America in invention and innovation. We have the best venture capital system in the world. We actually have great public-private finance markets in the world. And we should look to those strengths, and to the extent the U.S. Government can help those great strengths move forward, we should be doing that.

Mr. CLAY. And some people argue that the U.S. Government should not be in the business of supporting U.S. companies com-

peting with China for clean energy technology. My question for you is this: What will that mean in terms of who owns the technologies of the future and where those jobs are located?

Secretary CHU. Well, again, we made decisions in the past that have led to our preeminence in many things; semiconductors, computers, airplane, very competitive business, heavy government investments.

Again, not everyone feels this way, but I certainly am one of those who do feel this way, that going into the future these technologies, which are going to be as cheap as new forms of energy, including natural gas at $4.00 btu, whether it is this decade or a decade and a half from this, this is happening, and when that happens there is going to be a huge world market, there is a growing world market, it is over $200 billion, it is estimated to be, just for those things, in the next 10 or 15 years, over $400 billion. So it is a big market, and we have the smarts and the know-how, so we would rather be exporting than importing.

Chairman ISSA. I thank the gentleman.

Mr. CLAY. Thank you.

Chairman ISSA. I am going to now recognize myself for a second round and I am going to try to be lightning about this.

First of all, Mr. Secretary, you commented on something earlier that was important to me. Under current law, we must sell, for example, to Korea, where we have a free trade or fair trade agreement; Mexico, et cetera, et cetera. So all of our liquified natural gas that is currently scheduled to be produced and online in Louisiana and I guess there are five sites, but two are further along in Louisiana and Corpus Christi, Texas, when those come online, for example, Korea could buy and could force us to sell, while Japan cannot.

Does that seem like something that you should proactively look at to make sure that, for example, our close ally, Japan, much more heavily dependent on outside sources of energy, would have equal access to that and be able to compete for these lines? Because right now, as I understand, liquified natural gas is being sold in the futures market such that the only countries who feel comfortable bidding are those who know that there will be a guarantee of delivery.

Secretary CHU. Well, first, we are abiding by the law and, as I said, we are obligated to allow those countries which we have free trade agreements, and my understanding is that in the first liquified natural exporting plant that is being constructed, well, it is not being constructed yet, but we are awaiting——

Chairman ISSA. It is permitted, I understand.

Secretary CHU. I think they are awaiting further FERC approval, and that will take four or 5 years to complete, that these contracts and the agreements that company are essentially spoken for by the FTA countries.

Chairman ISSA. I understand. So I guess the problem is Japan can't be part of that under current law without the fear that they wouldn't get delivery. And I am concerned only because Russia has used energy as a weapon. I had the honor of being in Azerbaijan with my wife, actually, for the opening of that pipeline, which the Bush Administration backed specifically in order to piece by piece

by piece break down the fear in Europe of energy being unavailable if you didn't do what somebody else wanted.

Let me go through an earlier point, though, now. In the case of the Project Amp, we have, and I will ask unanimous consent it be placed in the record, emails exchanged with the lobbyist for that organization that verifies that Bank of America, the co-investor, has no current loans out, meaning we have a reasonable assurance that in fact they have not met their September 11th deadline to begin construction. If that is true, Mr. Secretary, will you assure us today that that $1 billion loan commitment will not be funded, since the law specifically says that they must begin construction by September 2011?

Secretary CHU. You certainly have my assurance that we are going to do what we need to do within the bounds of the law. I actually——

Chairman ISSA. The law is explicit. They had to begin construction, this is a taillight, by September 2011. We have a current assurance from the people that would have funded the other part of it that they have not.

Secretary CHU. Well, I was forwarded a note from my loyal staff behind me that said exactly what you just said, that there was a requirement to break ground on some part of the Prologis loan guarantee, and they tell me they have indeed broken ground.

Chairman ISSA. Okay, well, we will share the email exchange that they have not, and, of course, we would like to make sure they did substantially break. But it is a large amount of money for a program that has statutorily ended, and apparently you have put no money out. Ours was February 12th, so can your people assure you that they broke ground by the September statutory limit?

Secretary CHU. We will get back to you on that. We will double-check.

Chairman ISSA. Thank you. I appreciate that.

Then moving to Blue Mountain, a program in Nevada, now, this program, oddly enough, bore your own signature on the approval and no jobs were created, although it was a 1705 loan. In fact, the moneys that were disbursed as a result of the loan guarantee went to the parent company and the construction had already been done. If that is true, will you be able to seek any kind of a drawback for it, since under the statute it was estimated and your own website says created 200 construction jobs and 14 permanent jobs? Since the construction was already done on the day that the loan was approved and funded, does that fly in the face of what is on your website?

Secretary CHU. I would have to get back to you on that and the particulars about the timing.

Chairman ISSA. Okay. Most of this comes from discovery that you voluntarily delivered to us.

Mr. Secretary, I want to end mine on a note that I am particularly interested in, and I ask for 30 additional seconds to ask the question. Without objection.

Mr. Secretary, today natural gas is plentiful. We are even flurrying it. Natural gas has a per, if you will, mile of driving that is substantially less than gasoline. Estimates that I have been given are that natural gas, if used as a fuel today, and this is assuming

that you had just an out of the tank, not all the conversion costs, would be a dollar something a gallon equivalent to use natural gas at market price versus gasoline at market price.

If that is true, if the American people could have nearly a one-fourth reduction by using natural gas, and if the difference between it being viable and not viable is in fact getting the 3500 pounds per square inch compression that is typical in order to put enough of it in your tank down to 400 pounds, can you give us, and please, Secretary Chu, in language that the viewers can understand, give us the steps you believe would have to occur in order to get from where we are today, where the compression costs so much and has some danger questions and some cycle life, to one in which people could simply fill up their tank at home overnight and drive for hundreds of miles on this fuel and, as you said earlier, selecting fuel back and forth with this kind of a choice?

Secretary CHU. Well, Mr. Chairman, thank you for that. You and I both share the excitement of the potential for using American energy resources in natural gas to offload a considerable amount of our transportation needs, because that means more creation in the United States, less imported oil, less oil dependence.

So with regard to that, we are talking right now about very, very high pressures, which require a very expensive carbon fiber tank, and we would be looking at things you put inside the tank, materials where the natural gas can absorb onto the surface of very highly porous, high surface materials.

So it turns out, even though it is counterintuitive, if you have some other stuff in there and it goes and lands on a surface instead of just the free gas, you may be able to store as much or more material in the same volume, and if we could do that, that would greatly reduce the costs of the fuel tank, it would greatly reduce the pressure, it would make natural gas filling stations much less expensive.

So we are now designing. We first had a request for comment, but having realized this great natural resource, we are designing a program that says, let's invest in this research. And if it happens, and if it happens possibly in a year or three, we don't know because it is research, but that would have a profound impact on transportation not only in the United States, but all over the world, because there is a lot of natural gas now in fracking all over the world. Again, that means the whole world diversifies and that will have an effect on oil prices.

Chairman ISSA. Thank you, Mr. Secretary.

Mr. Gowdy.

Mr. GOWDY. Thank you, Mr. Chairman.

Mr. Secretary, I realized the quote I asked you about predated your swearing in, but, in all candor, you just recounted for us a conversation you had with President Bush and another member of his administration which also predated your swearing in. So I think the notion that we have a firewall at your swearing in as the time beyond which we can't ask any questions is not correct.

But I don't want to quote you incorrectly, too, and you seemed to suggest that maybe there was a word that I included in your quote that was not correct. Do you have the quote from 2008 in front of you?

Secretary CHU. No, I don't.

Mr. GOWDY. Does your staff have a direct quote from 2008 in front of them?

Secretary CHU. No, I don't. But let me go back to what you said about my service to President Bush and his cabinet. I was asked in my role as a scientist for ideas that could help diversify the use of oil in the United States so it could bring relief to Americans, and that advice I gave, and I was delighted, I was honored to be asked for that and I was delighted to give the advice. That actually has not changed at all. I am very committed to diversifying the energy supply of transportation in the United States.

Mr. GOWDY. Mr. Secretary, I was in no way, shape, or form being critical of the fact that you were gracious enough to serve two different Administrations. The fact that you would talk to folks from both parties is laudable. What I am trying to figure out, these were not the musings of a misspent youth. This wasn't a private diary that somebody got their hands on. This was a public comment that you made months before you were sworn in.

And if the quote is correct, somehow we have to figure out how to boost the price of gasoline to the levels in Europe. And other quotes you made contemporaneous with that suggest that the reason for that is to shrink demand for environmental concerns. So the notion that we have pivoted because we are in a recession, that doesn't impact the environmental concerns and why you initially advocated for higher gas prices in the first place, does it?

Secretary CHU. Well, I think you have made some logical leaps there, but let me just say that——

Mr. GOWDY. Well, then let me ask you why did you advocate for higher gas prices in 2008?

Secretary CHU. I have nothing more to add to that quote. I have said and I continue to say every action that I have had as Secretary of Energy, every action I have had as a scientist was actually to diversify the supply of energy, which ultimately, if adopted on a world basis, would actually decrease gasoline prices.

Mr. GOWDY. You had a colloquy with one of my colleagues where you all agreed that this is a worldwide commodity with prices that are set by market pressures. So I think it is fair to ask, assuming that, how would you boost the price of gasoline? If it is set by the market, how would you do it?

Secretary CHU. Excuse me, I am not trying to boost the price of gasoline. Quite the opposite. I am trying to help as a scientist develop technologies that can diversify our energy that we use in transportation not only in the United States but, if successful, those technologies could be marketed by United States companies all over the world. That would have an effect on gasoline prices.

Chairman ISSA. Would the gentleman yield for just 1 second?

Mr. GOWDY. Sure.

Chairman ISSA. Secretary Chu, did you support cap-and-trade by this Administration?

Secretary CHU. I did.

Chairman ISSA. And that would necessarily increase dramatically the cost of carbon, including gasoline, correct?

Secretary CHU. Well, I think the estimate of the cost of gasoline was, I think, about 30 cents, something like that.

Chairman ISSA. Thank you for yielding.

Mr. GOWDY. I am not trying to cross-examine what you said in 2008; I am trying to figure out—I assume that you meant it at the time you said it, and I assume, because you are a thoughtful, precise person, that you put some thought into it before you said it. And I am just trying to understand why you felt that way in 2008, when gasoline prices were almost identical to what they are now.

Secretary CHU. Again, we keep returning. I really have nothing more to add. And if you look at all my actions, what I have done as Secretary of Energy, I think everything is quite toward the other side. How do you help the American public? How do you actually help in real long-term solutions and mid-term solutions, and, quite candidly, a little bit here and there, and by that I mean on short-term solutions. Let me give you an example——

Mr. GOWDY. I am not going to interrupt you, but I do have one more question. I am going to let you finish that, but I have one more question.

Secretary CHU. Go ahead with your——

Mr. GOWDY. No, no, I don't want to cut you off.

Secretary CHU. Okay. I spent a great deal of personal time trying to help stop a leak in the Gulf of Mexico. I spent a lot of time trying to help the Japanese with their nuclear reactors. They have secondary effects on the prices of oil. When the Japanese stopped generating electricity from nuclear, they have to go to natural gas, coal, and oil. Had there been more significant environmental impacts in the Gulf, that could have had an effect on the development of offshore oil.

So if you look at what I do, I can attribute in all those ways to help moderate those——

Mr. GOWDY. I actually am not questioning your motives, Mr. Secretary. I am just wondering how a 30-second swearing in ceremony could have called someone to pivot from advocating for European level gas prices to now doing everything within his power to lower gas prices. That just strikes me as being a fair question.

But let me ask you my last one. Loan guarantees shall be subject to the condition that the obligation is not subordinate to other financing. Why do you think that was put in the statute?

Secretary CHU. I think because when you initiate a loan, the Congress felt that they did not want to put the taxpayer behind any loan, that they actually have essentially, to use a colloquial expression, first dibs on repayment back.

Mr. GOWDY. And that rationale would be equally sound at a restructuring, correct?

Secretary CHU. No. The reason it would not be sound at restructuring is at a restructuring you restructure because the company is in stress of some kind.

Mr. GOWDY. That just strikes me that would be all the more reason to want to protect the taxpayer, because if the company were doing well, then you may have private investors or you may have an alternative form of getting your loan. Only if the company is not doing well would you need to renegotiate and subordinate taxpayers, which just strikes me a company not doing well has all the more reason for that clause I just read to you, to protect the taxpayers.

Secretary CHU. Well, let me try to explain. When a company is not doing well, typically what they would want is they would seek extra capital to ride something out. There might be a setback, there might be a number of reasons. This happens all the time in the private sector. So they need extra capital.

Now, if you are a private investor, you come in and you say, well, look, this company is not doing well and you want me to put in extra capital, and yet you want me to be second in line? There is no way I can do this. So those in the investment community understand this very well and that is why when the company is not doing well you want to use whatever your means to maximize recovery of whatever the government put in, and it may turn out—there are other possibilities, you could take warrants, things of that nature.

But as Herb Allison said in his hearing, if your intent is to maximize taxpayer recovery in these situations, this is one of the tools you should allow to remain open.

Chairman ISSA. I apologize, but we are going to have to bring this to a close. I promised the Secretary that we would get out.

The Ranking Member has asked for 30 seconds. The gentleman is recognized for 30 seconds.

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

I wanted to clear up something from earlier. When Mr. Jordan was asking questions, there was an implication that Herb Allison, who acted as the independent consultant, and he is the head of the troubled asset relief program, there was an implication that he was not an independent type of party.

I just wanted to submit for the record, Mr. Chairman, this New York Times article dated today which states that he was the Finance Committee Chairman for Senator John McCain——

Chairman ISSA. That will be entered into the record without objection.

Mr. CUMMINGS. Thank you.

Chairman ISSA. I thank the gentleman.

In closing, Mr. Secretary, I want to say you have been a great witness. We have not always agreed; we have not agreed at the end. I certainly think Mr. Gowdy makes a good point that Congress needs to look very carefully at under what cases and with what information in the future any part of the executive branch will be able to subordinate a restructuring, and there was no notification in the statute for those restructurings.

But I want to thank you for being an excellent witness. I want to close with just one pleasant thought. As we look at Solyndra and the other losses the American people are going to experience, there is one silver lining: Moore's law has begun to affect photovoltaic. And, in fact, the cost of producing electricity from the sun is getting closer and closer to a case in which we can genuinely substitute electricity made from the sun with other sources. I look forward to that day. I continue to support, as I think all of us do, the real research and development that will help get us there and limited innovation.

With that, Mr. Secretary, we thank you and we are adjourned.

[Whereupon, at 1:09 p.m., the committee was adjourned.]

Chairman Darrell Issa Hearing Preview Statement

"Oversight of the Department of Energy's Stimulus Spending"

March 20, 2012

Today the price of gasoline is approaching $4.00 per gallon, twice its level in 2009. American consumers understandably ask what the Department of Energy and the Obama Administration have done to address this. But during the Obama Administration, you might say the DOE has been DOA when it comes to delivering affordable energy to consumers.

A report released today by the Committee on Oversight and Government Reform paints a startling picture of mismanagement at the Department of Energy. From the very inception of the Obama Administration's $14.5 billion loan program, warning signs pointed to a likely loss of taxpayer dollars—these signs were largely ignored by Administration officials seemingly more interested in picking political winners and losers than addressing American consumers' need for abundant and affordable energy. There appears to be a significant amount of evidence indicating that DOE manipulated analyses and strategically modified evaluations in order to get loans out the door.

The problems within DOE were not isolated to its handling of the loan guarantee program. A second Committee report examines DOE's $5 billion Weatherization Assistance Program. It is a stunning example of how the Obama Administration has wasted millions of taxpayer dollars in a misguided effort to achieve energy savings by ultimately commissioning work that puts people's lives and homes at significant risk—the result of lax oversight and mismanagement.

By addressing the issues raised at today's hearing, we can help put our country back on the path to achieve these two goals and deliver real benefit to the American people.

Opening Statement

Rep. Elijah E. Cummings, Ranking Member
Hearing on "Oversight of the Department of Energy's Stimulus Spending"

March 20, 2012

Thank you Mr. Chairman, and welcome to you, Mr. Secretary. I am very glad you could be here today.

One of our nation's most important public policy goals is to move toward energy independence and energy efficiency. We all know the reasons for this: we want to enhance national security by reducing our dependence on foreign oil; we want to remain competitive with countries like China by developing innovative technologies of the future; we want to boost our economy while reducing our environmental footprint; and we want to lower energy costs for American consumers.

We all agree with these goals. So how are we doing?

First, the United States is now producing more oil than at any time in the last eight years. We are producing record amounts of natural gas, and we are now the largest producer of natural gas in the world. The Administration has approved more than 400 permits for additional drilling, but with safeguards to prevent the devastation faced by the Gulf after the oil spill of 2010.

We have also become more efficient. In 2010, oil imports to the United States fell below 50% for the first time in 13 years, and a new agreement on fuel economy standards by the Administration and U.S. auto companies will reduce oil consumption by more than 2 million barrels a day by 2025.

Regardless of how much we drill and how much we save, however, we know these measures alone will not achieve energy independence. We use about 20% of the world's oil, but have only about 2% to 3% of known reserves. We need an aggressive policy to invest in the most innovative clean technologies of the future.

And that's where the Recovery Act comes in. The Recovery Act has been extremely successful in responding to the economic crisis of 2008. It allocated more than $35 billion for more than 15,000 projects and increased the number of people employed by between 1 million and 2.9 million, according to the Congressional Budget Office.

The Recovery Act has also made significant investments in projects that boost the ability of private sector companies to innovate and produce new technologies in order to generate more energy at lower costs for consumers. These investments include electric grid improvements, advanced energy manufacturing, geothermal businesses, and hundreds of other projects.

The United States is now on track to double renewable energy generation by the end of this year, and companies supported by the Recovery Act are making amazing breakthroughs in technologies that could dramatically reduce energy costs and generate whole new industries. For all of these reasons, Members of Congress on both sides of the aisle have written nearly 500 letters in support of these broad goals and specific projects.

In addition to evaluating the overall effectiveness of the Recovery Act, one of our jobs in this Committee is to examine the procedures used by the Department and industry to determine whether they can be improved. Although the bankruptcy of Solyndra raised legitimate questions about these procedures, it did not—and does not—support unsubstantiated allegations that the Department engaged in criminal conduct or made its funding decisions based on political favoritism, pay-to-play relationships, or outright corruption.

We have to be responsible about oversight. We cannot simply attack any program that has the words "Obama" and "clean energy" attached to them. We have to base our review on the facts and strive to serve the long-term interests of the American people rather than the short-term interests of partisan politics.

For example, last week the nonpartisan Government Accountability Office issued a report with recommendations to improve the procedures used by the Department to evaluate loan guarantee applications. GAO also made this little-noticed finding: it concluded that the Department's due diligence procedures "may equal or exceed those used by private lenders to assess and mitigate project risk." I think the Department should be commended for these actions, even as it continues to become more efficient and effective.

As our Committee conducts its oversight of the Recovery Act, I hope we fairly assess the overall success of the Department's programs and focus on constructive ways to fulfill our shared goal of energy independence and energy efficiency.

From: Kim, Dong
To: Walker, Jeffrey; Walker, Jeffrey
Subject: FTSL - LCOE"s
Date: Thursday, June 23, 2011 12:34:00 PM
Importance: High

Jef-

The CRB package for the FTSL projects have differing LCOE values (pages 16 for AVSR Topaz and Desert Sun). There may be a variety reasons posed by Origination and Credit for not changing these slides out. However, Technical is accountable and held liable for the information.

Please do the following:

1. You must have a replacement page that is Technical's current analysis of the LCOE. You must have copies to pass out with you at CRB and ready for distribution.

2. You must have an explanation for differences between slides. For example, CVSR LCOE varies from 134 to 218. You must have a verbal explanation of what assumptions changed between the slides.

Someone keeps changing AVSR Technical slides to include single axis trackers as an innovation. Be clear that this not an innovation. The record will show that we did not grade this as innovative during intake review. It will not stand up to scrutiny if compared with CVSR trackers. Whoever continues to make this change needs to understand that Technical does not support the 20 percent of the CVSR field with trackers as an innovative component.

Please come see me to discuss the greater issues at hand hear.

Dong K. Kim

Director, Technical and Project Management Division (LP-30)

Loan Program Office

202- (direct)

202- cell)

From: Wheeler, Emily
To: 'Nikolas Novograd'
Cc: Hetznecker, Sarah (CONTR); Jill Dvareckas; Bessma Aljarbou
Subject: RE: Updated Comparison
Date: Monday, June 06, 2011 10:52:43 AM
Attachments: Inverter Comparison Rev 3.xlsx

All-

This is what I would like to go forward with.

Emily

-----Original Message-----
From: Nikolas Novograd [mailto:Nikolas.Novograd@FIRSTSOLAR.COM]
Sent: Friday, June 03, 2011 7:52 PM
To: Wheeler, Emily
Cc: Hetznecker, Sarah (CONTR); Jill Dvareckas; Bessma Aljarbou
Subject: RE: Updated Comparison.

Emily,

I have added additional detail to the chart. We anticipate adding CVT as an approved inverter supplier to the EPC Contract subject to the approval of DOE/Luminate.

If you have any questions, please let me know.

Nik

Office: 415-935-2488
Mobile: 415.515.9627
nikolas.novograd@firstsolar.com

-----Original Message-----
From: Nikolas Novograd
Sent: Thursday, June 02, 2011 9:00 PM
To: 'Wheeler, Emily'
Cc: 'Hetznecker, Sarah' (Sarah.Hetznecker@Hq.Doe.Gov); Jill Dvareckas; Bessma Aljarbou
Subject: RE: Updated Comparison.

Emily,

Here are the answers. Hope this is helpful.

For Agua and AVSR1, we expect to use SMA SC720CP inverters which include FRT and DVC features and are neither bi-polar, liquid cooled, nor transformerless. For Desert Sunlight and Topaz, we are considering the use of CVT inverters but have not approved them yet. It is also possible that we would use legacy GE inverters and/or SMA inverters (SMA is approved). CVT inverters are liquid cooled but not bi-polar or transformerless. The CVT inverter are likely to have fault ride-thru and the provisions to work with the plant SCADA to provide dynamic voltage control. (I haven't confirmed whether or not the legacy GE inverters would have those features.)

If you have any questions please let me know.

Nik

Office: 415-935-2488

Mobile: 415.515.9627
nikolas.novograd@firstsolar.com

-----Original Message-----
From: Wheeler, Emily [mailto:Emily.Wheeler@hq.doe.gov]
Sent: Thursday, June 02, 2011 9:40 AM
To: Nikolas Novograd
Subject: Updated Comparison.

Updated Comparison.

Emily

		FSLR			
Inverter Features		AVSR	Agua	Desert Sun	Topaz
Inverter Model		SMA 720	SMA 720	CVT/GE	CVT/GE
Bi-Polar		No	No	No	No
Liquid Cooled		No	No	Yes	Yes
Transformerless		No	No	No	No
Fault Ride Through - Frequency		Yes	Yes	Yes	Yes
Fault Ride Through - Voltage		Yes	Yes	TBD*	TBD*
DVR		Yes	Yes	No*	No*

* To be included if required by the CA ISO.

From: Frantz, David
To: Silver, Jonathan; Winters, Matthew
Subject: RE:
Date: Tuesday, February 01, 2011 1 57:00 PM

It is. Bill Pegues has it for action and he is buried this week with Millennium. He will pick it up next.

David G. Frantz
US Department of Energy
Director, Loan Guarantee Office, CF-1.3
Office: (202) 586-8361 Fax: (202) 586-7366
David.Frantz@hq.doe.gov

-----Original Message-----
From: Silver, Jonathan
Sent: Tuesday, February 01, 2011 1:54 PM
To: Frantz, David; Winters, Matthew
Subject:

Where are we with antelope valley? Isn't that a carbon copy of agua caliente?

Jonathan Silver
Executive Director
Loan Programs
US Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585
Phone: 202-287-5900
email: jonathan.silver@hq.doe.gov

Natural Gas Basics

Natural gas powers more than 100,000 vehicles in the United States and roughly 11.2 million vehicles worldwide.[1] Natural gas vehicles (NGVs) are a good choice for high-mileage fleets—such as buses and taxis—that are centrally fueled or operate within a limited area. The advantages of natural gas as an alternative fuel include its domestic availability, widespread distribution infrastructure, low cost compared with gasoline and diesel, and clean-burning qualities.

Compressed natural gas is stored onboard a vehicle in safe, puncture-resistant tanks.

What is natural gas?

Natural gas is an odorless, nontoxic, gaseous mixture of hydrocarbons—predominantly methane (CH_4). Because it is a gas, it must be stored onboard a vehicle in either a compressed gaseous or liquefied state. Compressed natural gas (CNG) is typically stored in a tank at a pressure of 3,000 to 3,600 pounds per square inch. Liquefied natural gas (LNG) is supercooled and stored in its liquid phase at -260°F in special insulated tanks. Natural gas is sold in units of gasoline or diesel gallon equivalents based on the energy content of a gallon of gasoline or diesel fuel.

How and where is natural gas produced and distributed?

Natural gas is drawn from wells or extracted in conjunction with crude oil production. Biomethane, a renewable form of natural gas, is produced from decaying organic materials, such as waste from landfills, wastewater, and livestock. In recent years, 80% to 90% of the natural gas used in the United States was produced domestically. The United States has a vast natural gas distribution system, which can quickly and economically distribute natural gas to and from almost any location in the lower 48 states.

How is natural gas used?

Natural gas accounts for about a quarter of the energy used in the United States. About one-third goes to residential and commercial uses, such as heating and cooking; one-third to industrial uses; and one-third to electric power production. Only about one-tenth of 1% is used for transportation fuel.

Is natural gas safe for use in vehicles?

Yes. NGVs meet the same safety standards as gasoline and diesel vehicles and also meet the National Fire Protection Association's (NFPA) NFPA 52 Vehicular Fuel System Code. Natural gas has a narrow flammability range and, because it is lighter than air, dissipates quickly if released. NGV fuel tanks are strong and extremely puncture resistant.

What NGVs are available?

A wide variety of new, heavy-duty NGVs are available. The Honda Civic GX is the only light-duty NGV available from a U.S. original equipment manufacturer (OEM). Consumers and fleets also have the option of economically and reliably converting existing light- or heavy-duty gasoline or diesel vehicles for natural gas operation using certified installers. See the Conversions page in the Vehicles section of the Alternative Fuels and Advanced Vehicles Data Center (AFDC) Web site at *www.afdc.energy.gov*. For the latest new vehicle offerings, also see the AFDC's light-duty and heavy-duty vehicle searches.

Clean Cities
U.S. Department of Energy

How do NGVs work?

NGVs operate in one of three modes: dedicated, bifuel, or dual-fuel. Dedicated NGVs run on only natural gas. Bifuel NGVs can run on either natural gas or gasoline. Dual-fuel vehicles run on natural gas and use diesel for ignition assist. Light-duty vehicles typically operate in dedicated or bifuel modes, and heavy-duty vehicles operate in dedicated or dual-fuel modes.

A CNG fuel system transfers high-pressure natural gas from the storage tank to the engine while reducing the pressure of the gas to the operating pressure of the engine's fuel-management system. The natural gas is injected into the engine intake air the same way gasoline is injected into a gasoline-fueled engine. The engine functions the same way as a gasoline engine: The fuel-air mixture is compressed and ignited by a spark plug and the expanding gases produce rotational forces that propel the vehicle.

On the vehicle, natural gas is stored in tanks as CNG, or in some heavy-duty

1 NGV Communications Group (www.ngvgroup.com)

vehicles, as LNG, a more expensive option. The form chosen is often dependent on the range a driver needs. More natural gas can be stored in the tanks as LNG than as CNG.

How do NGVs perform?

Natural gas vehicles are similar to gasoline or diesel vehicles with regard to power, acceleration, and cruising speed. The driving range of NGVs is generally less than that of comparable gasoline and diesel vehicles because, with natural gas, less overall energy content can be stored in the same size tank as the more energy-dense gasoline or diesel fuels. Extra natural gas storage tanks or the use of LNG can help increase range for larger vehicles.

In heavy-duty vehicles, dual-fuel, compression-ignited engines are slightly more fuel-efficient than spark-ignited dedicated natural gas engines. However, a dual-fuel engine increases the complexity of the fuel-storage system by requiring storage of both types of fuel.

How much do NGVs cost?

Light-duty NGVs cost $5,000 to $7,000 more than comparable gasoline vehicles, and heavy-duty NGVs cost more than their counterparts by $30,000 or more. The price depends on the fuel-tank capacity and whether the vehicle is produced by an OEM or converted to run on natural gas. However, government incentives are available to offset NGV costs. For more information, visit the AFDC's Incentives and Laws section at *www.afdc.energy.gov.* Due in part to the high octane rating and clean-burning properties of natural gas, some fleets have reduced maintenance and operating costs for NGVs compared with conventional vehicles.

How much does natural gas cost?

Historically, the average retail price of natural gas has been lower—and more stable—than the price of gasoline and diesel (see Figure 1), which makes natural gas a good option for fleets that use a lot of fuel. Incentives are also available to reduce the cost of operating NGVs.

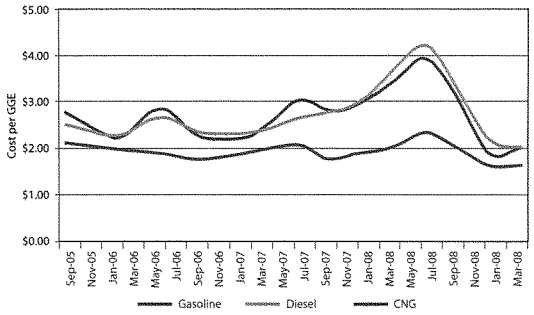

Figure 1. Nationwide Average Retail Gasoline, Diesel, and Natural Gas Prices

Where is natural gas available?

According to the AFDC, there were 827 CNG and 38 LNG stations in the United States as of February 2010. To find natural gas station locations, visit the Alternative Fueling Station Locator at *www.afdc.energy.gov/stations.*

Is it easy to fuel an NGV?

Yes. CNG vehicles are fueled with easy-to-use, pressure-sealed dispensers. CNG fueling stations can be configured to fuel vehicles at various rates. Time-fill stations fuel parked vehicles overnight, taking advantage of off-peak electricity rates and smaller compression equipment. Fast-fill stations fill vehicles rapidly using larger compression equipment and high-pressure gas-storage systems. Fueling LNG vehicles requires special procedures and training, but the process is not difficult. As with all vehicles, proper safety precautions must be taken when refueling NGVs.

How do NGV emissions compare with gasoline and diesel vehicle emissions?

Compared with gasoline and diesel vehicles, NGVs can produce significantly lower carbon monoxide, nitrogen oxide, nonmethane hydrocarbon, particulate matter, and other toxic emissions, as well as greenhouse gas emissions. In addition, because CNG fuel systems are completely sealed, CNG vehicles produce no evaporative emissions. For details, see the Natural Gas Vehicle Emissions page in the Vehicles section of the AFDC at *www.afdc.energy.gov.*

Where can I learn more about natural gas?

To learn more about natural gas as a transportation fuel, visit the AFDC's natural gas pages at *www.afdc.energy.gov.* The NGV America Web site at *www.ngvc.org* also features a wealth of information about natural gas and NGVs.

U.S. DEPARTMENT OF ENERGY
Energy Efficiency & Renewable Energy

EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov/informationcenter

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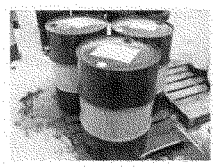
BUSINESS INSIDER

Money Game

The US Is Sitting On A 200-Year Supply Of Oil

Rob Wile | March 19, 2012 | 10,714 | 58



President Obama has said the U.S. possesses just 3 percent of the world's oil reserves, or about 22.3 billion barrels, writes Investor's Business Daily's John Merline.

However, this figure represents just proven reserves.

But one analyst believes he could be off by almost a trillion.

According to the Institute for Energy Research's calculations, the U.S. actually sits on 1.442 trillion barrels of recoverable deposits.

That's over 60 times the amount we usually hear about.

Merline writes that this larger number would be enough to meet all U.S. oil needs for about the next 200 years.

Most of that — an estimated 1.4 trillion barrels — is locked into shale deposits in the Green River Formation in Wyoming. The U.S. recently began holding public hearings about issuing permits to drill there.

One caveat is that refining capacity is nearly full-up; no new refineries have been built in the U.S. in 35 years, although that could soon change.

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September 10, 2011

Employee Lawsuit Exacerbates Issues at Livermore Lab

By JOHN UPTON

Marian Barraza, like many who have worked at Lawrence Livermore National Laboratory, considered Livermore more than just an employer. Mrs. Barraza, a soft-spoken administrator, worked at Livermore, the federal weapons research lab, for 38 years. She met her husband there. One of the couple's two daughters and many of Mrs. Barraza's friends still work there.

"The lab has been my life," Mrs. Barraza, 59, said. "I started there when I was 17 years old."

But in 2008, after the United States Department of Energy stripped a contract to run the lab from the University of California and handed it to a mostly private-sector coalition led by Bechtel, the contracting giant based in San Francisco, Mrs. Barraza was laid off.

Now, feeling as though she has been ejected from her family, Mrs. Barraza has joined some 130 former Livermore workers in suing the lab's management company, claiming that extensive layoffs were illegally aimed at senior staff members who earned the highest salaries and were closest to reaching retirement. Damages could exceed $100 million.

The lawsuit is a symptom of a troubled, multiyear effort to make Livermore,

once among the crown jewels of the nation's science establishment, relevant and cost-effective in a post-cold-war world.

Privatization of the lab's management was supposed to lead to greater efficiency and increased employment, but instead it led to cutbacks that have left the lab with around 6,800 permanent employees, down from some 9,400 in 2005.

Some scientists at the lab contend that the quality of scientific research has suffered, as evidenced by a sharp drop in the number of peer-reviewed research papers produced by lab employees.

Security risks, which had helped prompt the Energy Department to overhaul lab management, have remained a problem. And Livermore's biggest project, the National Ignition Facility, a giant array of lasers designed to fuse hydrogen atoms, has been plagued by delays, cost overruns, and heath and safety concerns.

"Everybody thought that with privatization we could save money and get more transparency," said Peter Stockton, a senior investigator at the nonprofit Project on Government Oversight who has studied the national laboratories since the 1970s. "It's done pretty much the opposite."

Bechtel officials blame inflation, increased tax obligations and a $100 million decline in federal appropriations between 2007 and 2008 for the abrupt decision to replace hiring plans with firing plans. The promised greater efficiency, they say, is still in the works.

Lawyers for the management company declined to comment on the lawsuit.

Few argue that the nation's network of federal government research laboratories — and especially Livermore and Los Alamos National Laboratory in New Mexico, the two flagship nuclear weapons labs — were not in need of change after the cold war ended.

Livermore was founded in 1952 by the University of California to provide competition for the nuclear bomb builders at Los Alamos, which the university also managed. The lab cultivated a quasi-academic atmosphere in which basic research and the esoteric engineering needed to build nuclear weapons were considered worthy ends in themselves. Budgets were rarely an issue.

But without an arms race, Livermore and Los Alamos were institutions without a mission. The federal government was still interested in the basic science, but pressure mounted for the labs to prove themselves worthy of billions in taxpayer funds.

Meanwhile, university officials who oversaw the laboratories' management contracts drew criticism for a laissez-faire approach to operational issues.

"The management of the labs was, well, my God, they just had one travesty after another," Mr. Stockton said. "The arrogance oozed from them."

Even liberal critics of Livermore's management — including the peace activists who operate its neighborhood watchdog, Tri-Valley CAREs, one of the groups hoping to see the weapons laboratory reinvented as a civilian science center — agreed that opening up the management contract to competition was a good idea.

In 2006, the Department of Energy solicited bids from contractors interested in running Livermore. It received three bids, rejected one of them, and eventually awarded the contract to Lawrence Livermore National Security L.L.C., a partnership led by Bechtel and the University of California that also includes the URS Corporation, an engineering design firm, and the Babcock & Wilcox Company, an energy and services products provider. The same group was awarded the Los Alamos management contract.

Warning flags were raised at the time about the bidding process. David Hobson, an Ohio Republican who was chairman of the House Appropriations Subcommittee on Energy and Water Development, told the Energy

Department in a 2006 letter that many potential competitors had declined to bid because they believed the fix was in.

"Unfortunately, the Department of Energy's national laboratories are not viewed as a competitive marketplace but as a playground for political patronage," Mr. Hobson wrote.

The department declined to comment. The new management company took over Livermore in October 2007, with the promise that it would improve efficiency, bolster security and increase the lab's work force from 9,411 full-time employees in 2005 to as many as 11,500.

But by 2009, the number of permanent full-time workers at Livermore had fallen to 6,900.

Meanwhile, problems that were supposed to have been addressed by the privatization effort persisted. A 2009 report by the Government Accountability Office, the investigative arm of Congress, said, for instance, that security flaws lingered at the laboratory.

Bechtel's spokesman, Jason Bohne, acknowledged that problems persisted at Livermore, but he said the management company was reducing operating costs and improving accountability through new purchasing processes, consolidation of business functions and other measures common to businesses.

"Making changes to these large, complex laboratories with firmly entrenched cultures was expected to be difficult, as change often is," Mr. Bohne said. "Some of the change is still in progress."

Since 2008, federal funds appropriated for laboratory operations have crept back up almost to the 2007 level of more than $1.2 billion, but the Livermore head count remains drastically below what it was four years ago. Lynda Seaver, a lab spokeswoman, said spending on staff and operations had fallen because of a substantial increase in management fees.

Since 2008, the companies and the Department of Energy have not disclosed details of the fees paid to the management company.

A union representing Livermore workers says the scientists who remain are fearful and are prevented from discussing problems with their research publicly. Under the terms of the management contract, such problems could limit performance bonuses payable to the management company.

"Scientists raising any issues that would put the performance bonus at risk is strongly frowned upon," said Jeff Colvin, a computational physicist and union representative at the laboratory.

Ms. Seaver said that was not the case. "Scientists have never been restricted in what they can say," she said. "Academic freedom is why many of them choose to work here."

Mr. Colvin told a National Academy of Sciences working group investigating the impacts of privatization on the national laboratories that the number of peer-reviewed articles published by laboratory scientists, which he says is a measure of productivity among scientists, fell from approximately 1,400 in 2005 to about 800 in 2010. The academy plans to publish a report to Congress in November.

As for the laid-off employees, they lament what once had been. "It was a great place to work until the contract changed," Mrs. Barraza said, weeping during a recent interview in her lawyers' Oakland office as she recalled her surprise layoff. "It's not the same place that it used to be."

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U.S. Energy Information Administration

Frequently Asked Questions

How much petroleum does the United States import?

The U.S. imported approximately 11.8 million barrels per day of petroleum in 2010 which accounted for 49% of petroleum consumed in the United States. "Petroleum" includes crude oil and petroleum products.

In 2010, the top five source countries of U.S. petroleum imports were Canada, Mexico, Saudi Arabia, Nigeria, and Venezuela. Their respective rankings vary depending on whether you consider total/gross petroleum imports or *net* petroleum imports (gross imports minus exports). Net imports from OPEC Countries accounted for 51% of U.S. net imports of which Saudi Arabia, Nigeria, and Venezuela accounted for 63% of the OPEC Countries' total net imports.

Learn More: What are the products and uses of petroleum?
U.S. Imports by Country of Origin

Top Sources of Imported Petroleum to the United States in 2010 In Million Barrels per Day (and Percent Share of Total Imports)

Import Sources	Gross Imports	Exports to Import Source	Net Imports
Total, All Countries	11.793	2.353	9.441
OPEC Countries	4.906 (42%)	0.119	4.675 (48%)
Persian Gulf Countries	1.711 (15%)	0.006	1.678 (17%)
Top Five Countries			
Canada	2.535 (21%)	0.233	2.302 (24%)
Mexico	1.284 (11%)	0.477	0.837 (9%)
Saudi Arabia	1.096 (9%)	0.000	1.096 (12%)
Nigeria	1.023 (9%)	0.017	1.006 (11%)
Venezuela	0.988 (8%)	0.020	0.968 (10%)

For more information, see:

- How dependent are we on foreign oil?
- Measuring U.S. Dependence on Foreign Oil The What, Where, and When Factors
- Refining Crude Oil: Inputs & Outputs
- Petroleum Overview graphs and data from the Monthly Energy Review
- Detailed historical data on imports and exports

[1]Based on net petroleum imports.

Last updated: October 31, 2011

Other FAQs about Crude Oil

Do we have enough oil worldwide to meet our future needs?
Does EIA have data on U.S. oil refineries and their locations?
Does EIA have data on the movement of crude oil and ethanol by rail and truck?
Does EIA have data on the type or quality of crude oil processed in U.S. refineries?

Statement of Congressman Gerald E. Connolly
Recovery Act Clean Energy Incentives
March 20th, 2012

Thank you Chairman Issa for holding a hearing on the successful and far-reaching clean energy incentives contained in the American Recovery and Reinvestment Act. As you may recall, when President Obama took office the American economy was in a free fall after the most severe economic collapse since the Great Depression. Economists urged Congress to close a $2 trillion output gap in order to reverse falling production and rising unemployment. Despite unified Republican opposition, the Recovery Act played a central role turning economic contraction into economic growth, and as a result unemployment is lower and output is higher today. The Congressional Budget Office and Council of Economic Advisers (CEA) found that the Recovery Act added up to 2.7% to GDP by the end of 2010, and CEA estimates it created 2.7-3.7 million jobs. Remarkably, this recovery in output and employment has occurred despite shrinkage in public sector employment; but for the half million-plus positions lost in the public sector, unemployment would be even lower today.

This incipient economic recovery did not merely fix a short term problem, but also made critical long term investments in infrastructure, research, and American manufacturing. The clean energy sector is a prime example. Wind energy companies employ 75,000 American workers, 30,000 of whom are manufacturing wind turbines or components. Solar firms employ some 93,000 Americans. Both the solar and the wind energy sectors employ more Americans than those who work in the coal industry. By contrast, coal employment has shrunk drastically—approximately 50% in Appalachia--over the last three decades as a result of mechanization and a shift from underground mining to mountaintop removal.

Since President Obama took office, Americans have built 22,000 megawatts of wind energy generation. The solar energy sector also grew quickly in response to the Recovery Act and other clean energy incentives. Between 2009 and 2010, the number of grid-connected solar photovoltaic installations grew 102%, and solar was the fastest growing sector of the energy market. The energy market in America also has been influenced heavily by government policy, yet fossil fuels continue to receive some 80% of federal subsidies. Despite receiving a small

minority of total incentives, the solar and wind industries have helped our economy recover from the worst recession in decades.

The Recovery Act made comprehensive clean energy investments whose benefits extend far beyond manufacturers and installers of clean energy equipment. It expanded funding for the Energy Efficiency Conservation Block Grant (EECBG) program, which helps localities reduce utility costs for local taxpayers while improving air quality. For example, EECBG funded heating, cooling, and lighting system upgrades in my community for Fairfax County government facilities which will save taxpayers money over the life of those buildings. Fairfax and Prince William counties received more than $12 million in EECBG funding alone. The Northern Virginia Electric Cooperative received $5 million to expedite deployment of smart meters, improving reliability of electricity supply while reducing demand in our region. Recovery Act funding has installed 10.3 million smart meters nationwide, and will deploy an additional 4.7 million. The Recovery Act also provided funding for cleaner diesel bus engines, conversion of part of the Fairfax County fleet to electric cars, and the first purchase of a hybrid-electric bus for the Fairfax Connector transit service. As a result of the Recovery Act, America is on track to have electric car manufacturing capacity of one million cars per year by 2015. These are just a few examples of Recovery Act investments to jump start economic growth while making long term investments in our nation's energy infrastructure and manufacturing sector.

This hearing should highlight the numerous successes of the Recovery Act. If the House majority made policy decisions based on evidence then it would be considering how to replicate the successes of the Recovery Act.