HOW OBAMA'S GREEN ENERGY AGENDA IS KILLING JOBS

HEARING

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

SEPTEMBER 22, 2011

Serial No. 112–116

Printed for the use of the Committee on Oversight and Government Reform

Available via the World Wide Web: http://www.fdsys.gov
http://www.house.gov/reform

U.S. GOVERNMENT PRINTING OFFICE

73–444 PDF WASHINGTON : 2012

For sale by the Superintendent of Documents, U.S. Government Printing Office
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HOW OBAMA'S GREEN ENERGY AGENDA IS KILLING JOBS

THURSDAY, SEPTEMBER 22, 2011

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

The committee met, pursuant to notice, at 9:30 a.m., in room 2154, Rayburn House Office Building, Hon. Darrell E. Issa (chairman of the committee) presiding.

Present: Representatives Issa, Platts, Jordan, Chaffetz, Mack, Walberg, Lankford, Amash, Buerkle, Gosar, Labrador, DesJarlais, Guinta, Farenthold, Kelly, Cummings, Towns, Norton, Kucinich, Tierney, Cooper, Connolly, Quigley, Davis, and Welch.

Staff present: Molly Boyl, parliamentarian; Lawrence J. Brady, staff director; Joseph A. Brazauskas and Hudson T. Hollister, counsels; Katelyn E. Christ, research analyst; John Cuaderes, deputy staff director; Adam P. Fromm, director of Member services and committee operations; Tyler Grimm, professional staff member; Christopher Hixon, deputy chief counsel, oversight; Justin LoFranco, deputy director of digital strategy; Mark D. Marin, director of oversight; Kristina M. Moore, senior counsel; Beverly Britton Fraser, Claire Coleman, and Donald Sherman, minority counsels; Kevin Corbin, minority deputy clerk; Ashley Etienne, minority director of communications, Carla Hultberg, minority chief clerk; Chris Knauer, minority senior investigator; Lucinda Lessley, minority policy director; Dave Rapallo, minority staff director; and Susanne Sachsman Grooms, minority chief counsel.

Chairman ISSA. This hearing will come to order.

The Oversight Committee's mission statement is, we exist to secure two fundamental principles. First, Americans have a right to know that 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.

Today we are going to talk about affordable energy, the lifeblood of America's rise in a global economy. We will touch on a number of clear issues, successes and failures. First of all, the American people know well that leveraging energy more efficiently is in fact

necessary to compete in a global environment. America produces products for a fraction of the energy used by China and other developing nations. We already are more efficient.

Yet, the Obama administration has systematically waged a war on carbon-based energy in pursuit of new "green" energy. This campaign includes aggressive regulatory programs impacting the oil, gas and coal industries that have previously been the source of job creation and economic growth here in America. And a campaign that includes an aggressive push for government-backed, taxpayer-paid for green energy and green jobs.

Unfortunately, President Obama's green energy agenda appears to be playing favorites with certain comapnies. Additionally, we are well aware that there is a lot more "green" in the way of cash and a lot less energy and jobs than anticipated. Facing the worst economic recession since the Great Depression, President Obama confronted the economic crisis with a proposal for green jobs. He cited the efforts of other nations as a rationale to subsidize our way to new technology and energy independence.

Yet as this hearing, and a report released by the committee today, will demonstrate, the other nations who have tried the same approach have experienced mixed results at best. President Obama relied on a false pretense that subsidizing green energy as other nations, such as Spain, Germany and Japan did, would result in good, high-wage jobs, when in actuality, nations such as Spain, Italy, Denmark, Germany and the U.K. have struggled with job destruction, higher energy costs and loss of taxpayer dollars as a result of pursuing such policies.

Looking back on the Obama green energy record, 3 years and billions of taxpayer dollars later, the American people have received very little return on the President's signature investment. In practice, the guise of green jobs has become a political rallying cry designed to unite environmentalists and union leaders to consolidate an ideologically based agenda. This would be okay if in fact it produced the jobs. And it didn't. It has almost meant punishing and pushing to the edge of the envelope all others. It has meant the politicization of the Bureau of Labor Statistics, which has begun using gimmick accounting methods to count green jobs.

And let me emphasize, we don't count similar carbon jobs. We don't count the other jobs. This initiative ordering the counting of green jobs is very important, because it is poorly defined.

I might mention today the staff on both sides of the dais will be counted as green jobs created under this standard. Yes, if we talk about green jobs, if we lobby for green jobs, as a matter of fact, if you are a paid lobbyist, you count for green jobs, you count as green jobs.

The agenda also has been driven by political favoritism. And there are accusations of pay to play relationships benefiting private investors on the back of public loan guarantees as in the case of Solyndra.

We are not here to investigate that today. Our mission is broader. It is seemingly at cross purposes to President Obama and his administration who have promoted traditional energy sources abroad through loans and diplomacy, while openly discouraging them at home. We cannot in fact raise the cost of our energy while

promoting other countries finding lower cost carbon-based energy and assume that we are being more competitive.

Jobs have not been produced in a sustained fashion or in the number promised. And billions of taxpayer dollars have yielded little to truly stimulate the economy. All while a vital domestic engine of growth, the U.S. energy production industry, has been choked, starved and hyper-regulated.

Addressing these shortcomings will deliver on a goal that both President Obama and members of this committee share: creating jobs and growing the economy while delivering affordable energy to the American consumer and business.

It is very clear that many of us on both sides of the aisle hoped for better than we got. Today's hearing is to come to the reality that no matter how often we hope for better, this committee has an obligation to recognize when we fail to achieve it.

I now recognize the ranking member for his opening statement.

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

Madam Secretary, it is an honor indeed, a tremendous honor to have you here today. I am sure you have testimony that goes just the opposite of what the chairman has just talked about, and I look forward to hearing it. The administration is fortunate to have your commitment to the environment, to our economy and to American jobs.

I also welcome Deputy Secretary Poneman from the Department of Energy and Dr. Hall, a good friend from the Department of Labor.

When I go home to my district in Baltimore, my constituents are clear about what they want. They want jobs. They don't care if these jobs are green, purple or any other color, as long as they pay a fair wage and give them a sense of prosperity and a hope for their children's future.

My constituents also tell me they are tired of the inflammatory rhetoric coming out of Washington, and I agree. Some Members appear to be more interested in making wild allegations for political purposes than in finding solutions to the challenges we face.

Let me give you an example. On September 8th, the chairman issued a staff report claiming the Recovery Act was a failure because it "destroyed" or forestalled one million private sector jobs. To support this conclusion, the report cited only a single study issued in May. That study was quickly discredited for its flawed methodology. Nobel laureate Paul Krugman called the underlying study "weak and dubious." He warned that it was being "seized on by people who have no idea what the issues are."

In contrast, the non-partisan Congressional Budget Office estimated in its most recent report that the Recovery Act "increased the number of people employed by between one million and 2.9 million" and "increased the number of full-time equivalent jobs by 1.4 million to 4 million." Other mainstream economists agree with the CBO.

A second example of this false rhetoric is the title of today's hearing: "How Obama's Green Energy Agenda is Killing Jobs." I guess that is President Obama. Despite this rhetoric, there is no evidence that the administration's clean energy programs are resulting in

fewer jobs. In fact, just the opposite. Developing clean energy technologies is critical to our economic survival, and our competitors know this. China is making massive investments in clean energy programs and dominating these sectors. America is losing its edge in the global marketplace. And we will lose the future ownership of these technologies and the jobs they create if we fail to support these sectors.

As a third example, the chairman appeared on national television this week and accused specific Members of Congress of crony capitalism for supporting green initiatives in their district. He called this "corruption." And he claimed that it was "endemic."

He also said this, "There has been this attitude that somehow government can weigh in with loan guarantees and money and pick winners, specific company winners and losers." But just last year, in 2010, the chairman wrote personally to the Secretary of Energy seeking a loan guarantee for an electric vehicle company in San Diego. He not only supported one company, but he endorsed the entire concept of green energy. He said this loan would help in "shifting away from fossil fuels and using viable renewable energy sources."

He said the loan would "reduce dependence on foreign oil, enhance energy security and promote domestic job creation throughout California as well as in other States."

Mr. Chairman, in terms of this loan program, it seems like you were for it before you were against it.

And according to this morning's press reports, 10 other Members on your side wrote similar letters. And I have no problem, I have absolutely no problem, with these letters or your praise for the program. But I disagree with the claim that Members who support green energy are somehow corrupt.

My basic point is this. If we are going to compete with China in the decades to come, we need to be responsible and serious in our efforts. We need to do what my constituents and your constituents and the majority of Americans elected us to do. We need to focus on creating jobs, boosting the economy and serving the interests of the American citizen.

With that, Mr. Chairman, I yield back.

Chairman ISSA. I thank the gentleman.

As a point of personal privilege, I would ask unanimous consent that the article by a division of the New York Times, put into and for the purposes of your opening statement written before it was published at 10 o'clock last night, be placed in the record. In that statement, in that article it does in fact state 10 Members targeted to say that if we ask for money already in the pipeline to be considered for various projects, that somehow we support it.

I am a supporter of green, of electric and hybrid vehicles and have no problem at all with trying to have vehicles that use more efficient electricity, whether it is from nuclear or other zero emissions. Having said that, I would object to the gentleman's—you may.

Your opening statement was clearly written in anticipation of an article not yet published and we all know it here.

Additionally, I would ask unanimous consent that the majority Oversight Reform Staff report entitled, and I will have it edited,

"How President Obama's Green Energy Agenda is Killing Jobs." Without objection, so ordered. The actual reason for this hearing today, which is in fact to find the connection between green expenditures and jobs.

Howerver, if the gentleman would like to research any of those projects, we certainly would consider hearings on that.

[The information referred to follows:]

U.S. House of Representatives

Committee on Oversight and Government Reform

Darrell Issa (CA-49), Chairman

How Obama's Green Energy Agenda is Killing Jobs

STAFF REPORT
U.S. HOUSE OF REPRESENTATIVES
112TH CONGRESS
SEPTEMBER 22, 2011

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EXECUTIVE SUMMARY

Facing the worst economic recession since the Great Depression, President Obama confronted the crisis by promoting "green jobs" as a major component of his recovery strategy. He promised that these programs would create five million jobs within ten years. He cited the efforts of other nations as the rationale to try and subsidize our way to energy independence. Yet, the other nations who tried this experiment have struggled and after nearly three years and billions of spent taxpayer dollars later, the American people have received very little return on President Obama's signature investment.

The theory behind a "green jobs" fueled recovery is also called into question by numerous sources documenting instances of inappropriate political influence affecting the distribution of government grants. Moreover, the Bureau of Labor Statistics' efforts to legitimize the notion of "green jobs" by counting these jobs as a unique job category, would create official metrics for the nascent effort.

The Obama Administration's green energy campaign has been pursued while it simultaneously implemented a regulatory agenda that is choking American businesses and restricting access to abundant domestic natural resources which have traditionally provided cheap energy that supports economic growth.

With unemployment at a staggering 9.2 percent, the ill-fated "green jobs" experiment has done little to create jobs or speed recovery; in fact, by many accounts it has destroyed jobs. This is a dangerous strategy that will drastically increase the price consumers pay for energy, hurt economic growth, and restrict job creation.

By sacrificing domestic carbon-based resources upon the altar of an ill-fated "green energy" experiment, the President has put U.S. economic security in jeopardy and wasted billions in taxpayer money at a time when our fiscal health is in peril.

KEY FINDINGS

- Three years and nearly a hundred billion dollars later, taxpayers have received little return from President Obama's investments in "green jobs;"

- Labeling an occupation as a green job does not mean it has any special economic worth;

- The guise of "green jobs" has become a political rallying cry aimed to unite environmentalists and union leaders in a deliberate effort to consolidate an ideologically-based agenda;

- Labor unions are profiting from the many so-called "green" programs because there are often "strings attached" that require hiring union workers, the payment of union-level wages and other mandates;

- Evidence suggests that the Department of Labor's Bureau of Labor Statistics (BLS) has been subjected to undue political influence to advance this agenda and is now using gimmick-accounting methods to count "green jobs" even though the term is vague, poorly defined, and has led to inaccurate counting;

- The metric of a "green job" is nothing more than a propaganda tool designed to provide legitimacy to a pre-determined outcome that benefits a political ideology rather than the economy or the environment;

- The Obama Administration's "green jobs" agenda has been driven by political favoritism and accusations of pay-to-play relationships benefitting private investors with the security of public loan guarantees, such as in the much-publicized case of Solyndra;

- The Solyndra loan guarantee was further politicized when the federal government's "investor" standing was subordinated to the interest of a private investor—one who happened to be a prominent Obama fundraiser;

- The President's effort to force a transition to "green energy" has pursued twin policies of raising the price of fossil fuels and subsidizing "green energy" at the expense of the domestic energy production sector. Domestic oil, gas and coal industries are being choked under a slew of aggressive federal regulations, despite the proven long-term, job-creating record of this industry;

- There exists an undeniable relationship between America's prosperity and its access to affordable energy sources that if ignored, will setback economic growth;

- The Obama Administration is hypocritical in its energy policy: it promotes traditional energy sources abroad through loans and diplomacy, while openly discouraging it at home;

- President Obama relied on the false pretense that subsidizing "green energy" as other nations such as Spain, Germany and Japan did would result in "good, high-wage jobs" when in actuality, nations such as Spain, Italy, Denmark, Germany and the U.K. have struggled with job destruction, higher energy costs and loss of taxpayer dollars as a result of pursuing such policies.

INTRODUCTION

Taking office amidst the worst recession since the Great Depression, President Obama confronted an unemployment crisis by focusing on the promotion of "green jobs." His goal was to put people to work in ways that improve the environment. As the President asserted in his inaugural address, "we will act not only to create new jobs but to lay a new foundation for growth."[1] He continued, "We will harness the sun and the winds and the soil to fuel our cars and run our factories."[2] This strategy built on his campaign's championing of green jobs as a means to achieve economic recovery, promising that America would create five million green jobs within ten years.[3]

A columnist for the *Los Angeles Times* recently noted that while the push to green energy is not new, having originated in the 1970s, "the mission keeps changing. Is the green energy revolution about energy independence? Or is it about fighting global warming? Or is it about jobs?"[4] While there is certainly merit in promoting both economic growth and environmental conservation, these aims are often at odds with each other.[5] Yet, "green jobs" are a key pillar in the Obama Administration's economic recovery strategy. According to the President, green energy is the current generation's equivalent of the Apollo missions, which sent a man to the moon in 1969.[6] However, the entire Apollo Program (between 1960 and 1973) cost $102.8 billion, adjusted for inflation. In contrast, the Recovery Act alone included $90 billion[7] in clean energy investments, which is on top of billions expended by the federal government since the 1970s.[8] Yet unlike the generation who supported the NASA mission, this generation has very little to show for it.

Nearly three years and billions of taxpayer dollars later, Americans have received very scant return from President Obama's investment. Recent media coverage resoundingly declared the "green jobs" experiment has been a costly failure. An August 16th editorial from *Investor's Business Daily* observed, "The Obama Administration's jobs plan was based on a greening of the economy. But the green jobs aren't materializing...."[9] Two days later, a *New York Times* article went further, "Federal and state efforts to stimulate creation of green jobs have largely failed ...."[10] The *Washington Post's* editorial board was even harsher, declaring on September 9:

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[1] President Barack Obama, Inaugural Speech (Jan. 20, 2009).
[2] *Id.*
[3] *See* David G. Taylor, *Seeds Planted for Green Jobs, but Will They Bear Fruit*, POLITIFACT.COM (St. Petersburg Times), *available at* http://www.politifact.com/truth-o-meter/promises/obameter/promise/439/create-5-million-green-jobs/.
[4] Jonah Goldberg, *America's 'Green' Quagmire*, L.A. TIMES, Aug. 23, 2011.
[5] Michael Greenstone, *The Impacts of Environmental Regulations on Industrial Activity: Evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufactures: Working Paper 8484*, NAT'L BUREAU OF ECON. RESEARCH, Sept. 2001, at 28.
[6] President Barack Obama, State of the Union Address (Jan. 25, 2011).
[7] COUNCIL OF ECONOMIC ADVISORS, EXECUTIVE OFFICE OF THE PRESIDENT, THE ECONOMIC IMPACT OF THE AMERICAN RECOVERY AND REINVESTMENT ACT, SECOND QUARTERLY REPORT (2009).
[8] Fred Sissine, et al. *Energy Provisions in the American Recovery and Reinvestment Act of 2009 (P.L.111-5)*, CRS REPORT FOR CONGRESS (Mar. 12, 2009).
[9] Editorial, *Wasted Stimulus*, INVESTORS.COM, Aug. 16, 2011.
[10] Aaron Glantz, *Number of Green Jobs Fails to Live up to Promises*, N.Y. TIMES, Aug. 18, 2011.

> "green jobs" offer a dubious rationale for federal support of clean-energy technology. To the extent that government creates jobs by subsidizing particular companies, it does so by shifting resources that might have created jobs elsewhere. Political favoritism, or the appearance thereof, is an inherent risk.... [11]

The same day, the *Wall Street Journal* lamented, "bureaucrats are betting ... on industries they may not understand... [which] invites political favoritism for the powerful few at the expense of millions of middle-class taxpayers."[12] "Promises of green jobs start withering on vine," reported the *Washington Times* the next week.[13]

Economic realities have levied an even harsher indictment of the President's green agenda. Evergreen Solar and Solyndra, Inc. now typify the problems of forcing green energy upon the American public. Just seven months ago, a headline in an industry publication, *Renewable Energy World,* read "Can Everygreen Solar be Our Sputnik Moment?"[14] Yet, after receiving millions in government support, Boston, MA based Evergreen Solar filed for bankruptcy on August 15, 2011.[15]

Likewise, the Freemont-based solar company, Solyndra – the first company to receive a Department of Energy loan guarantee – was visited by President Obama in May 2010. At this event, the President praised Solyndra as a "testament to American ingenuity and dynamism." Solydra filed for bankruptcy on September 2, 201[16] and has laid off 1,100 workers, despite having received $535 million in federal loan guarantees.[17] Solyndra's failure is evidence of the folly of subsidizing green energy combined with the folly of politicians hand-picking winners and losers in the market.

In addition to these concerns, questions are being raised as to whether DOE awards were made, or if the process was accelerated, on the basis of political favoritism. In the case of Solyndra, White House visitor logs show that "between March 12, 2009, and April 14, 2011, Solyndra officials and investors made no fewer than 20 trips to the West Wing."[18] At a minimum, it appears that the federal government's support of Solyndra was influenced by the White House.

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[11] Editorial, *Lessons from the Solyndra Debacle*, WASH. POST, Sept. 8, 2011.
[12] Review and Outlook, *The Solyndra Scandal*, WALL ST. J., Sept. 9, 2011.
[13] Ben Wolfgang, *Promises of Green Jobs Withering on the Vine*, WASH. TIMES, Sept. 11, 2011.
[14] Clint Wilder, *Can Evergreen Solar be Our Sputnik Moment*, RENEWABLE ENERGY WORLD.COM, Feb. 4, 2011, *available at* http://www.renewableenergyworld.com/rea/news/article/2011/02/can-evergreen-solar-be-our-sputnik-moment.
[15] MB Snow, *Nevergreen Solar-WSJ.com*, POLITICAL NEWS NOW, Aug. 17, 2011, *available at* http://sroblog.com/2011/08/17/nevergreen-solar-wsj-com/.
[16] Scott McGrew, *Solyndra Filing a Disaster for Obama*, NBC BAY AREA.COM, Sept. 2, 2011, *available at* http://www.nbcbayarea.com/news/local/Solyndra-Filing-a-Disaster-for-Obama-128816968.html.
[17] *Id.*
[18] Amanda Carey, *Solyndra Officials made Numerous Trips to the White House, Logs Shows*, THE DAILY CALLER.COM, Sept. 8, 2011, *available at* http://dailycaller.com/2011/09/08/solyndra-officials-made-numerous-trips-to-the-white-house-logs-show/#ixzz1Xhdr06Wf.

The purpose of this report is to examine the effectiveness of President Obama's green energy agenda as a jobs plan. The President has stated, time and again, that this agenda will result in robust job creation which will help America compete in the 21st Century. This report seeks to understand the merits of that claim. This report does not express a technology preference, rather it is the position of the Committee that American consumers should determine which energy technologies meet their needs and preferences.

Of course, we welcome and embrace all new technologies, especially those with the aim of increasing environmental conservation. However, there is an important distinction between industries that can stand on their own and make our economy stronger and those which require taxpayer assistance to survive.

This report provides evidence that the expensive "green jobs" policies implemented by President Obama have not helped Americans get back to work. The 14 million unemployed Americans – 43%, or 6 million, of whom have been without work for 27 weeks or more – deserve to understand why so much money has been spent to create so few jobs. This report also builds on earlier work of the Committee on Oversight and Government Reform ("Committee"), which demonstrated the Obama Administration has put in place numerous regulatory impediments, which have hampered job creation in the traditional energy sector.

Part I of this report deconstructs President Obama's green energy agenda to expose that it has put politics before science, allowing favored industries to succeed while punishing others.

Part II examines the ways in which the Obama Administration's green energy agenda has -- and will continue to -- negatively impact economic growth and job creation in the United States.

Part III focuses on the fundamental flaws in the Obama Administration's claim that green energy can lead to robust job creation.

PART I: OBAMA'S GREEN AGENDA DECONSTRUCTED

"Green Jobs" are a Political Construct

The concept of "green collar jobs" dates back to 1976 and suggests that the work is related to environmental improvement.[19] The phrase is a modern spin on "blue collar jobs," traditionally jobs involving manual labor, and "white collar jobs," typically office jobs involving mainly "cognitive tasks."[20] However, no one contends it is important to understand how many "blue" or "white" collar jobs there are in the labor market because those labels do not, inherently, carry any economic meaning – they are simply nominal references to broad categories of occupations. In much the same way, "green job" is simply a label that denotes work somehow related to the environment. Labeling an occupation as a green job does not mean it has any special economic worth.

"Green Jobs" Unite Democratic Factions

The idea of "green jobs" has become a major political rallying cry for environmentalists and union leaders alike. While seemingly at odds with each other – unions have, historically, been at odds with environmentalists over regulations that destroy jobs[21] – unions and environmentalists have joined forces to secure new mandates and subsidies under the guise of simultaneously bolstering the American manufacturing base and leading to conservation. Many have compared the collaboration of unions and environmentalists to the famous cooperation of "bootleggers and Baptists" to fight for prohibition.[22] Economist Bruce Yandle, who developed the analogy, explains, "Bootleggers ... support Sunday closing laws that shut down all the local bars and liquor stores [so they can sell alcohol]. Baptists support the same laws and lobby vigorously for them [for religious reasons]."[23] Similarly, union leaders support "green jobs" because much of the subsidized work is designated to be awarded to unionized workers. For their part, environmentalists benefit from having a broader base of support for policies that seek to "green" the economy. The outcome is a political alliance with incredible power.

The genesis of promoting so-called "green jobs" can be traced to a group known as the Apollo Alliance, which has been the center of gravity for the green jobs movement since 2001.[24] Its membership consists of nearly every major labor union and environmental organization in the country: the AFL-CIO, the Sierra Club, AFSCME, Greenpeace, the International Brotherhood of Electrical Workers, Natural Resources Defense Council (NRDC), the International Brotherhood

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[19] Noam Segal, *Green Collar Jobs: The Alternative Energy Industry and Labor Markets in Reviewing the Middle East: Climate Changes,* in Security and Energy and the New Challenges for EU-Israel Relations. (Roby Natanson & Stephan Stetter eds., IEPN Publication 2008).

[20] TEXAS WORKFORCE COMMISSION, LABOR MARKET AND CAREER INFORMATION DEPARTMENT, GREEN COLLAR WORKERS AND OTHER MYTHICAL CREATURES (2008) [hereinafter Texas Study].

[21] Beth Shulman, *Yes, Union Labor's message to liberals: Rumors of our irrelevance have been much exaggerated,* The American Prospect, Nov. 1, 1996 *available at* http://prospect.org/cs/articles?article=yes_union.

[22] *See e.g.* ANDREW P. MORRISS ET AL., THE FALSE PROMISE OF GREEN ENERGY 149 (2011).

[23] Bruce Yandle, *Bootleggers and Baptists-The Education of Regulatory Economist*, AEI Journal on Government and Society, 13, May/June 1983, *available at* http://www.cato.org/pubs/regulation/regv7n3/v7n3-3.pdf.

[24] Apollo Alliance: Clean Energy & Good Jobs, http://apolloalliance.org/about/ (last visited Sept. 19, 20011).

of Teamster, the National Wildlife Federation, and dozens of others.[25] Accordingly, the Apollo Alliance and other coalition efforts like the Blue-Green Alliance[26] bring together two major components of the Democratic political base – environmentalists and labor unions.

Observing the alliance of labor groups and environmentalists to mobilize support for the green jobs movement, the London-based Institute for Public Policy Research noted in July 2011:

> It enabled environmentalists to counter arguments that climate change policies are 'job destroyers'; it appealed to trade unions concerned about the outsourcing of jobs, the 'low road' strategy of many firms in the renewable energy/energy efficiency sector, and the decline of manufacturing and energy intensive industries; and it allowed politicians, particularly those on the left, to reach out beyond an 'environmental elite' to convince broader constituencies of the benefits of a green economy.[27]

Labor Unions are Profiting under the Pretense of Green Energy

While the green jobs movement clearly advances the interests of environmental special interest groups in the green jobs movement, the interests of labor unions may not be as readily apparent. However, a careful look at statutes passed in the Democrat controlled 110th and 111th Congresses reveal that unions stand to benefit from many of the so-called green programs because these programs have "strings attached … that require paying union-level wages, hampering lower cost, nonunion firms from competing for the jobs produced by the grants."[28] The left-wing magazine, *The American Prospect*, noted in September of 2007 that Leo Gerard, the President of the United Steelworkers, has played a major role in the development of the Apollo Alliance and its political influence:

> In creating a new progressive gospel that links labor and enviro[nmentalists], Gerard has built an alliance of genuine strategic importance to the Democrats—most especially because the two constituencies' current disagreement over congressional efforts to mandate fuel-efficiency standards could drive them farther apart. Long a force for labor solidarity, Gerard has become a force for Democratic solidarity as well.[29]

Another reason why Gerard and the United Steelworkers, in particular, are drawn to this coalition is the amount of steel required to manufacturer green energy products, such as wind

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[25] Apollo Alliance: Clean Energy & Good Jobs, Endorsers, http://apolloalliance.org/about/endorsers/ (last visited Sept. 19, 2011).
[26] BlueGreen Alliance About Us, http://www.bluegreenalliance.org/about_us (last visited Sept. 20, 2011).
[27] Claire McNeil & Hanna Thomas, *Green Expectations: Lessons from the US green jobs market*, 6, (Institute for Public Policy Research 2011), available at http://www.ippr.org/images/media/files/publication/2011/07/green-expectations_July2011_7756.pdf.
[28] MORRISS, *supra* note 22, at 198.
[29] Jim Grossfeld, *Leo the Linchpin*, THE AMERICAN PROSPECT, Sept. 24, 2007, *available at* http://prospect.org/cs/articles?article=leo_the_linchpin.

turbines. To the extent that manufacturers use American steel, the assumption is that the government subsidies and regulations would benefit their membership as well. As Gerard has stated, arguing for steel protections, "If we are not going to do solar panels and fluorescent bulbs and wind turbines here, the next generation of R and D will not be here."[30]

Codifying the "Green Jobs" Construct - The Role of the Department of Labor in Green Job Promotion

The Bureau of Labor Statistics (BLS), a division of the Department of Labor, is arguably the most rigorous and well-respected data collection agency in the world. Its numbers are the gold standard for understanding employment in the United States. [31] These statistics are then used by policy makers, investors, and others to make decisions that will greatly impact the economy. Accordingly, evidence suggesting that the BLS is being subject to undue political influence to advance the political agenda of the President is deeply troubling. The Green Jobs Act of 2007, sponsored by then-Congresswoman Hilda Solis (now Secretary of Labor) included a provision that directed the BLS to begin counting "green jobs."[32] Because the concept of a "green job" is so vague and not easily defined, counting these jobs this is an inherently flawed task. It is also a task vulnerable to manipulation and misrepresentation.

In recent guidance, the BLS has determined that the following jobs could be counted as "green":

1. Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources.

2. Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.[33]

While this definition may appear to be facially reasonable, the details of the BLS guidance reveal that there is little relationship between jobs classified as green and actual environmental benefit. For instance, the BLS guidance indicates that jobs which "[i]ncrease public awareness of environmental issues" are green jobs.[34] College professors that teach classes related to ecology, reporters that write about environmental issues, and policy experts at think tanks discussing environmental policy all would seem to meet this criteria and be considered green jobs. Those who "[e]nforce environmental regulations" will also count – in other words, any bureaucrat that

[30] Howard Schneider, *U.S. Steelworks Target China*, WASH. POST, Sept. 10., 2010.
[31] U.S. Bureau of Labor Statistics Home Page, *available at* http://www.bls.gov/jobs/aboutbls.htm (last visited Sept. 21, 2011).
[32] *Obama Taps Green Jobs Champion Hilda Solis as Labor Secretary*, THE DAILY KOS, Dec. 18, 2008, http://www.dailykos.com/story/2008/12/18/674657/-Obama-Taps-Green-Jobs-Champion-Hilda-Solis-as-Labor-Secretary.
[33] Bureau of Labor Statistics, Definition of Green Jobs, http://www.bls.gov/green/green_definition.pdf (last visited Sept, 21, 2011).
[34] *Id.*

works on issues related to the environment.[35] Accordingly, it appears the BLS metric is geared towards maximizing the number of jobs classified as green.

To be fair, many outside groups have attempted to come up with a definition of "green jobs" without much success. For example, the Brookings Institution ("Brookings") recently attempted to provide a workable definition.[36] However, Ken Green, a senior fellow at the American Enterprise Institute, has observed the multitude of problems with defining green jobs. Using the Brookings definition as an example, he observed:

> Brookings doesn't count people who work inside companies in environmental compliance or environmental impact reduction, but they throw in a very large number of mass transit workers.
>
> Yet whether or not mass transit is green depends on ridership levels, the power source, the age of the vehicles, which emissions you're focused on and so on.[37]

The United Nations Environment Programme and the Conference of Mayors have both put out reports attempting to define green jobs.[38] With each group's attempt at coming up with a definition, however, there is significant conflict that reveals the impossibility of this task. [39]

In addition to the challenges associated with defining a "green job," it is important to note that many of the newly defined jobs are not jobs that have been recently "created," as the Administration's rhetoric would lead one to believe, but rather "re-labeled" as green by the BLS. Marc Anderberg of the Texas Workforce Commission has observed:

> For workforce planning and development purposes, there is no point in generating nonsensical data on green collar workers merely to satisfy the media's thirst for numbers to make oversimplified reports sound credible or to provide good news that an economic development agent can paste on a bumper sticker.[40]

The reality is that pre-existing jobs are merely being counted as green-collar; they are not "new," they are simply grouped and counted with the meta-label "green."[41] In addition to the illusion that these so-called green jobs are new, the BLS admits that "the planned BLS surveys may

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[35] *Id.*
[36] Mark Muro, *Sizing the Clean Economy: A National and Regional Green Jobs Assessment*, BROOKINGS, Jul. 13, 2011, *available at* http://www.brookings.edu/reports/2011/0713_clean_economy.aspx.
[37] *Building the Ladder of Opportunity: What's Working to Make the American Dream a Reality for the Middle Class, before the Senate Committee on Health, Education, Labor, and Pensions*, 112th Cong. (2011) (statement of Dr. Kenneth P. Green, Resident Scholar, American Enterprise Institute).
[38] MORRISS, *supra* note 22, at 73-5.
[39] *Id.*
[40] Texas Study, *supra* note 20, at 2.
[41] *See id.*

identify and count some jobs twice."[42] In other words, these jobs are not putting Americans *back* to work; they are simply counting Americans already at work and sometimes counting them twice.

While the definition has very little economic meaning, by creating a "green jobs" metric in BLS's data, DOL is attempting to provide legitimacy to a political construct. It is likely that this designation will play a large role in determining eligibility for federal funds. Accordingly it will distort the market by incentivizing companies to change their currently successful business model in the hopes of garnering government favoritism. Moreover, proponents will likely point to these new, yet meaningless, statistics to claim the green economy is more viable than it actually is. Ultimately, counting green jobs jeopardizes the credibility of the BLS and makes them subject to political influence.

The Obama Administration's Green Energy Agenda Has been Driven by Political Favoritism

The Obama Administration's aggressive pursuit of its green energy agenda has raised significant questions about possible pay-to-play relationships between the Administration and green energy company officials and investors. The green energy industry's reliance on the federal government for financial backing has created a situation that places the Department of Energy in the position of picking winners and losers among different green energy firms. In several situations, companies with close financial ties to the Obama Administration have won government loans and grants despite having questionable financial strength.

The most obvious example of this favoritism comes from Solyndra, a California based solar company. President George W. Bush signed the Energy Policy Act of 2005, which created a loan guarantee program for green technology. President Obama's campaign had made green energy a priority, and the new Administration decided to place a new focus on the loan guarantee program. The Energy Policy Act's loan guarantee program was changed by The Recovery Act, and a new section was created (Section 1705) that was "a temporary program designed to address the current economic conditions of the nation. It authorizes loan guarantees for certain renewable energy systems, electric power transmission systems and leading edge biofuels projects that commence construction no later than September 20, 2011."[43] The Obama Administration moved quickly to use the loan guarantee program to fund green energy projects.

Solyndra had applied for a loan guarantee under the Bush Administration and had not received it. In fact, only days before the Obama Administration took office, the DOE under President Bush refused to approve the Solyndra application.[44] One official at the DOE worried that Solyndra would fail because even based upon Solyndra's own numbers the company would

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[42] Bureau of Labor Statistics, Green Jobs, Measuring Green Jobs, http://www.bls.gov/green/ (last visited July 13, 2011).

[43] U.S. Department of Energy, Loan Programs Office, 1705, https://lpo.energy.gov/?page_id=41 (last visited Sept. 21, 2011).

[44] Matthew Mosk et al., Emails: Obama White House Monitored Huge Loan to 'Connected' Firm, ABC NEWS, Sept. 13, 2011, *available at* http://abcnews.go.com/Blotter/emails-obama-white-house-monitored-huge-loan-connected/story?id=14508865.

no longer have any money by September 2011.[45] Despite objections from analysts at DOE and the Office of Management and Budget, the Obama Administration reconsidered Solyndra's application.

In March 2009, Energy Secretary Chu announced that the Department had approved a $535 million conditional loan for Solyndra.[46] DOE and OMB officials continued to worry about Solyndra and the government investing in the company.[47] The Obama Administration ignored the concerns and completed the loan. In September 2009, Vice President Biden announced at the groundbreaking ceremony for Solyndra that the company was approved to become the first recipient of a 1705 loan guarantee.[48] When announcing the loan guarantee, Vice President Biden claimed that "this announcement today is part of the unprecedented investment this Administration is making in renewable energy and exactly what the Recovery Act is all about."[49]

Despite the support of taxpayer funds, Solyndra continued to experience financial difficulties. Even so, the Obama Administration continued to advertise it as a success story. In March 2010, PriceWaterhouseCoopers audited Solyndra and questioned whether the company could continue due to financial problems.[50] Yet, the Administration ignored this warning and instead participated in an elaborate public relations event, where President Obama spoke at the plant and the White House released a video on its website to highlight all of the economic benefits of Solyndra.[51] The President claimed that "companies like Solyndra are leading the way toward a brighter and more prosperous future ... [T]he true engine of economic growth will always be companies like Solyndra."[52]

By the end of 2010, Solyndra needed serious help to avoid financial disaster. Government documents indicate that in December 2010 "Solyndra had only about a month of cash on hand and faced bankruptcy absent continued funding."[53] Solyndra refinanced in January 2011 with the help of DOE. This arrangement subordinated the Federal loan to the interest of a private investor.[54] This arrangement made taxpayer funds more vulnerable in the event that Solyndra were to enter into Bankruptcy protection because the private investors would receive their money before the taxpayers received a dime.

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[45] *Id.*
[46] *Id.*; *see also A History of Solyndra*, WASH. POST, Sept. 13, 2011, *available at:* http://www.washingtonpost.com/politics/a-history-of-solyndra/2011/09/13/gIQA1r5qQK_story.html.
[47] House Committee on Energy and Commerce, *available at* http://republicans.energycommerce.house.gov/Media/file/Hearings/Oversight/091411/SolyndraSlides.pdf (DOE emails from August 2009 reveal the continued concerns of DOE officials about the loan to Solyndra).
[48] Office of the Vice President, Press Release, The White House, *Vice President Biden Announces Finalized $535 Million Loan Guarantee for Solyndra*, Sept. 4, 2009.
[49] *Id.*
[50] *Emails Show White House Pressure Ahead of Solar Company Loan Approval*, FOX NEWS, Sept. 14, 2011, *available at* http://www.foxnews.com/politics/2011/09/13/gop-to-hold-hearing-on-now-bankrupt-solar-company-that-obama-once-touted/.
[51] McGrew *supra* note 16.
[52] President Barack Obama, Address at Solyndra, Inc. (May 26, 2010).
[53] William McQuillen, *Taxpayers Rank Behind Solyndra Investors Under Obama's Refinancing Deal*, BLOOMBERG, Sept. 3, 2011.
[54] *Id.*

The refinancing deal kept Solyndra functioning for only a few months before it completely collapsed. On August 31, 2011, Solyndra declared bankruptcy and dismissed over 1,000 workers.[55] Solyndra's bankruptcy will now be handled by a bankruptcy court, but the federal government could potentially lose half a billion dollars on an "investment" that produced no permanent jobs.

Solyndra's failure clearly raises questions about the administration of DOE's Section 1705 loan guarantees program. However, it appears that the mismanagement might extend beyond DOE. Solyndra was partially owned (35.7%) by the George Kaiser Family Foundation.[56] George Kaiser bundled over $50,000 for the Obama campaign in 2008.[57] Kaiser's influence with the Obama Administration enabled him to have 16 meetings with White House officials, including several immediately before DOE's decision to issue the $535 million loan.[58] Kaiser's financial ties to the Obama Administration and his White House meetings raise important questions about whether his political connections helped Solyndra secure its $535 billion loan. Especially in light of emails indicating that DOE was concerned about the loan, the Administration's decision to go ahead with the potentially risky loan that could now cost taxpayers hundreds of millions of dollars seems suspect and raises the possibility that the Administration placed political connections ahead of financial soundness.

Furthermore, DOE has funneled billions of taxpayer funds to other companies with political ties to the White House, even in the weeks after Solyndra went bankrupt. For example, DOE awarded a $275 million loan guarantee to SolarCity on September 7, 2011. SolarCity's chairman, Elon Musk, was a major donor, having donated over $40,000 to the Obama campaign. Mr. Musk has visited the White House at least four times for high level meetings.[59] DOE awarded $13 million to Solexel on September 2, 2011. Steve Westly, a major investor in Solexel, has bundled over $600,000 for Obama in the 2008 and 2012 cycles combined.[60] It remains possible that the political connection to the White House and the award of stimulus funds is entirely coincidental. However, in light of the Solyndra scandal, these ties have become significantly more questionable.

In addition to the possibility of an overt pay-to-play scheme, the Obama Administration's energy agenda has enriched scores of businesses and trade associations from government subsidization of green initiatives.[61] Bjorn Lomberg, director of the Copenhagen Consensus, describes the rise of companies angling for government assistance as the "Climate-Industrial Complex."[62] Lomberg observes:

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[55] *History of Solyndra supra* note 46.
[56] William McQuillen, *Taxpayers Rank Behind Solyndra Investors Under Obama's Refinancing Deal*, BLOOMBERG, Sept. 3, 2011.
[57] Bundlers, Center for Responsive Politics, http://www.opensecrets.org/pres08/bundlers.php?id=N00009638 (last visited Sept. 21, 2011).
[58] Carey *supra* note 18.
[59] Amanda Carey, *New DOE Loans Support Green Obama-Backers*, THE DAILY CALLER, Sept. 12, 2011, *available at* http://dailycaller.com/2011/09/12/new-doe-loans-support-green-obama-backers/.
[60] *Id.*
[61] Apollo Alliance: Clean Energy & Good Jobs, Endorsers, http://apolloalliance.org/about/endorsers/ (last visited Sept. 19, 2011).
[62] Bjorn Lomborg, *The Climate-Industrial Complex*, WALL ST. J., May 22, 2009.

> The cozy corporate-climate relationship was pioneered by Enron, which bought up renewable energy companies and credit-trading outfits while boasting of its relationship with green interest groups. When the Kyoto Protocol was signed, an internal memo was sent within Enron that stated, "If implemented, [the Kyoto Protocol] will do more to promote Enron's business than almost any other regulatory business."[63]

Lomberg also notes, "U.S. companies and interest groups involved with climate change hired 2,430 lobbyists [in 2008], up 300% from five years [prior]." A contemporary example can be found in General Electric (GE). In their recent book, *The False Promise of Green Energy,* economists Andrew Morriss, William Bogart, Roger Meiners, and Andrew Dorchak note that GE has shaped its business model to profit from government subsidies.[64] GE feels it could "bring in as much as $192 billion from projects funded by governments around the globe, such as electric grid modernization [and] renewable-energy generation."[65] GE's CEO has even stated, "The government has moved in next door, and it ain't leaving."[66]

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[63] *Id.*
[64] Morriss *supra* note 22 at 198.
[65] *Id.*
[66] *Id.*

PART II: THE OBAMA ADMINISTRATION PURSUES ITS GREEN ENERGY AGENDA DESPITE OVERWHELMING EVIDENCE THAT IT WILL RESULT IN ECONOMIC DAMAGE

The Green War on Traditional Energy

America's reserves of carbon-based energy are amongst the largest on earth. "They eclipse Saudi Arabia (3rd), China (4th) and Canada (6th) combined — and that's without including America's shale oil deposits."[67] U.S. proven reserves of oil total 19.1 billion barrels, reserves of natural gas total 244.7 trillion cubic feet, and natural gas liquids reserves total 9.3 billion barrels.[68] "That's enough oil to maintain America's current rates of production and replace imports from the Persian Gulf for more than 50 years."[69] Technically recoverable "oil in the United States is 145.5 billion barrels, and undiscovered technically recoverable natural gas is 1,162.7 trillion cubic feet."[70]

However, despite these resources, the Obama Administration seeks to fundamentally alter the American economy by forcing a transition to "green" energy. Because most alternative energy sources are significantly more expensive than traditional sources of energy, such a transition requires the Administration to raise the price of fossil fuels, while at the same time subsidizing "green energy." Only when the cost of green energy is close to the price of fossil fuels will the market sustain these technologies. The Administration has been busy pursuing these twin policies in an effort to force a "green" revolution.

This strategy should not be a surprise to the American public. During the campaign, then-Senator Obama openly declared that as part of his plan, "electricity rates would necessarily skyrocket ... that will cost money. They [businesses] will pass that cost on to consumers ...."[71] His Secretary of Energy, Steven Chu, has argued that the price of gasoline ought to be raised to encourage the sale of more-efficient cars: "[s]omehow we have to figure out how to boost the price of gasoline to the levels in Europe."[72]

While such statements seem radical, increasing the price of energy obtained from fossil fuels helps the Administration make the case for "green" energy. Substantially higher prices for fossil fuels would incentivize investment in alternative sources of energy. To this end, there is a pattern of increased enforcement, regulatory delay and new hurdles to the development of carbon-based energy across numerous agencies and approval processes.[73] The Administration's assault on traditional sources of energy is detailed in the Committee report, "Pain at the Pump:

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[67] Peter C. Glover, *U.S. Has Earth's Largest Energy Resources*, ENERGY TRIBUNE, Mar. 24, 2011.
[68] Gene Whitney et al., *U.S. Fossil Fuel Resources: Terminology, Reporting and Summary*, CRS REPORT FOR CONGRESS, Nov. 20, 2010.
[69] Press Release, U.S. Senate Comm. on Env't. and Public Works, Government Report: America's Combined Energy Resources Largest on Earth (Mar. 11, 2011).
[70] *Id.*
[71] Senator Barack Obama, Meeting with the Editorial Board of the San Francisco Chronicle (Jan. 2008).
[72] Neil King Jr. and Stephen Power, *Times Tough for Energy Overhaul*, WALL ST. J., Dec. 12, 2008.
[73] *See* STAFF OF H. COMM. ON OVERSIGHT AND GOV'T REFORM, 112TH CONG., REPORT ON RISING ENERGY COSTS: AN INTENTIONAL RESULT OF GOVERNMENT ACTION, May 23, 2011 [hereinafter Committee Report].

Policies that Suppress Domestic Production of Oil and Gas."[74] The result of these government actions are artificially constrained production of fossil fuels and energy that is more expensive for everyone.[75]

Expensive Energy is Economically Destructive

Energy is the so-called "master resource;"[76] it is pervasive and essential at every stage in the production process.[77] According to economists, "[e]nergy consumption is often used as a proxy for economic growth,"[78] and — where economists have studied the relationship empirically — they often conclude that the channel from energy use to economic growth is two directional.[79] In other words, increased energy usage is correlated with more economic growth, and vice versa. As a country's economy grows, industries develop and expand, and — as a consequence — producers demand more energy to facilitate expansion.

Economists of all stripes acknowledge the pernicious effects higher energy prices will have on Americans. Among them is Federal Reserve Chairman Ben Bernanke, who stated, "rising energy prices pose a risk to both economic activity and inflation."[80] According to the International Energy Agency's chief economist, high and increasing energy prices will threaten the fragile economic recovery.[81] The American Public Power Association (APPA) has reported green energy regulations "will set in motion a chain of events that will lead to high electricity prices, plant closures, and job losses at a time when the economy is hurting."[82] Furthermore, the Consumer Energy Alliance (CEA) released a report entitled "Energy, Jobs & the Economy: Powering America's Future," in June 2011, which found an alarming connection between high energy costs and restrictions of new economic activity.[83]

Capital that would have been invested in job creation has been siphoned off by higher energy bills. CEA found "that blockages of American energy development could cost the U.S. economy more than 500,000 jobs, and rising energy prices will cost the transportation sector $51 billion more in 2011, as compared to just one year ago."[84] CEA is suggesting that the impact of high energy prices is reflected in more than the just pain-at-the-pump. High energy prices also dampen market activity and thereby job creation.

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[74] *Id.*
[75] *Id.*
[76] ROBERT BRADLEY, *ENERGY:* THE MASTER RESOURCE (2004).
[77] Marcelo Arbex & Fernando S. Perobelli, *Solow meets Leontief: Economic Growth and Energy Consumption*, ENERGY ECONOMICS 32, 44, (2010).
[78] *Id.*
[79] *Id.*
[80] *Fed Chief Warns Energy Prices a Danger*, CBS NEWS (Apr. 14, 2009) *available at* http://www.cbsnews.com/8301-500395_162-1551995.html.
[81] International Energy Agency, *High Oil Prices Pose Threat to Global Economic Recovery* (Jan. 5, 2011) *available at* http://www.iea.org/index_info.asp?id=1737.
[82] Press Release, *CEA Report: America Needs More Domestic Energy Supplies* (June 29, 2011) *available at* http://consumerenergyalliance.org/2011/06/cea-report-america-needs-more-domestic-energy-supplies/.
[83] *Id.*
[84] *Id.*

Fossil Fuel Use Has Been a Major Driver of American Prosperity

The positive relationship between access to affordable energy sources and economic growth is undeniable; fossil fuels have been the backbone of American prosperity. As an essential factor of production, energy is, by definition, a key component of economic output.[85] By extension, the quality of life that a society achieves is proportional to the amount of energy that a country consumes, along with the efficient use of that energy.[86] Overall, countries that use more energy are also countries that are more prosperous. Although other factors — such as geography, political institutions, and natural resources — are also important in determining a society's overall prosperity, there is no doubt that energy use boosts "productivity, which boosts wealth." The development and use of traditional energy sources in the United States — which has spurred tremendous economic growth and job creation — may be the quintessential example of this strong correlation.

Carbon-based energy, or fossil fuels, are defined broadly as coal, petroleum (or crude oil) and natural gas. Since emerging in the modern era as "far more concentrated, portable, reliable and cost-effective energy carriers" than alternatives, fossil fuels have fostered economic growth in the U.S. and around the world.[87] The U.S. Energy Information Administration (EIA) credits carbon-based energy with spawning "one of the most profound social transformations in history."[88] Fossil fuels currently meet more than 80% of U.S. energy demand, with petroleum satisfying half of that demand.[89]

The expanded use of fossil fuels throughout history has facilitated the development of some of our nation's most productive industries. For example, the expanded use of coal fostered industrialization in the second half of the 19th century,[90] shifting a chiefly agricultural economy to one "based predominately on factory-based manufacturing industry...."[91] As technology improved, oil, and, to a lesser extent, natural gas, eventually surpassed coal as the biggest source of primary U.S. energy in the mid 20th Century.[92] Oil is credited with "the rise and development of capitalism and modern business" itself.[93] Today, coal, oil and natural gas form the backbone that supports the American economy.

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[85] David I. Stern, *Energy and Economic Growth*, (Apr. 2003), *available at* http://www.localenergy.org/pdfs/Document%20Library/Stern%20Energy%20and%20Economic%20Growth.pdf.
[86] James C. Williams, *History of Energy*, THE FRANKLIN INSTITUTE, (Apr. 25, 2006), *available at* http://www.fi.edu/learn/case-files/energy.html.
[87] BRADLEY, *supra* note 76.
[88] Institute for Energy Research (IER), Fossil Fuels, http://www.instituteforenergyresearch.org/energy-overview/fossil-fuels/ (last visited Sept. 20, 2011).
[89] Energy Information Administration (EIA), *Energy in Brief*, (Updated: Oct 28, 2010), *available at* http://www.eia.doe.gov/energy_in_brief/major_energy_sources_and_users.cfm.
[90] U.S. Department of Energy, A Brief History of Coal Use, http://fossil.energy.gov/education/energylessons/coal/coal_history.html (last visited Sept. 21, 2011).
[91] TIM JACKSON, MATERIAL CONCERNS: POLLUTION, PROFIT AND QUALITY OF LIFE, 24, 1996.
[92] *See* EIA, *Annual Energy Review 2009*, (Aug. 2010), *available at* http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf.
[93] DANIEL YERGIN, THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER, 13, 1992.

Businesses Don't Need the Federal Government to tell them to Use Energy Efficiently

Because energy is a "master resource," and usually comprises one of the largest input costs for the manufacturing industry, there is a built-in market incentive to use energy efficiently. History has proven this theory to be correct. Since 1970, the amount of energy needed to produce a dollar's worth of output in the U.S. has decreased dramatically.[94] More specifically, the quantity of energy needed to produce $1 of GDP today is about half the amount needed in 1970, adjusted for inflation.[95] Similarly, carbon emissions per dollar of GDP in the U.S. have fallen in half since 1970 and are nearly a third of what they were in 1950.[96] In fact, energy efficiency in the U.S. has steadily risen for at least the last two centuries.[97] This has been a result of businesses responding to market incentives to use energy as efficiently as possible.

According to the International Energy Agency (IEA), energy efficiency "can reduce the need for investment in energy infrastructure, cut fuel costs, increase competitiveness and improve consumer welfare."[98] In short, "energy efficiency investment is a sound business strategy in today's manufacturing environment."[99] Industry wide energy efficient improvements that are applied to traditional fossil fuel sources have turned America into possibly "the most energy-efficient society in human history."[100]

The correlation between energy consumption and economic activity runs in the opposite direction as well. For instance, during the economic recession from late 2007 to 2009 — the longest and most severe contraction since World War II — U.S. demand for oil shrunk 8.1% from its December 2007 peak to March 2009.[101] In total, "world ... energy consumption contracted by 1.2 percent in 2008 and by an estimated 2.2 percent in 2009, as manufacturing and consumer demand for goods and serviced declined."[102] Though U.S. energy consumption has since rebounded, it is still below long-term trends, but the U.S. EIA expects "energy intensity" will decline by an average of 1.9 percent per year from 2009 to 2035 as recovery continues.[103]

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[94] U.S. Energy Information Administration, *Annual Energy Review,* 21, (Aug. 2010), *available at* http://www.eia.gov/totalenergy/data/annual/#consumption.
[95] *See id.* (Discussing how energy consumption per dollar of GDP actually decreased from 15.89 in 1970 to 7.28 in 2009).
[96] U.S. Energy Information Administration, Table 1.5 Energy Consumption, Expenditures, and Emissions Indicators, 1949- 2009, http://205.254.135.24/totalenergy/data/annual/txt/ptb0105.html (last visited Sept. 20, 2011).
[97] Lewis E. Lehrman, *Energetic America: The Energy Policy the U.S. Needs*, THE WEEKLY STANDARD, (Sep. 29, 2003).
[98] International Energy Agency (IEA), Energy Efficiency, http://www.iea.org/subjectqueries/keyresult.asp?keyword_id=4122 (last visited Sept. 20, 2011).
[99] Christina Galitsky & Ernst Worrell, *Energy Efficiency Improvement and Cost Saving Opportunities for the Vehicle Assembly Industry,* ERNST ORLANDO LAWRENCE BERKELEY NAT'L LAB. 1 (March 2008), *available at* http://ies.lbl.gov/iespubs/energystar/vehicleassembly.pdf.
[100] STEPHEN MOORE & JULIAN L. SIMON, IT'S GETTING BETTER ALL THE TIME: GREATEST TRENDS OF THE LAST 100 YEARS 100 (2010).
[101] Steve Kopits, *Recession and Oil Demand: Looking to Recovery*, CUTTING EDGE Aug. 10, 2009.
[102] U.S. Energy Info. Admin., International Energy Outlook 2010- Highlights http://205.254.135.24/oiaf/ieo/pdf/highlights.pdf (last visited Sept. 21, 2011).
[103] U.S. Energy Info. Admin., *Annual Energy Outlook 2011with Projections to 2035*, 62, http://www.eia.gov/forecasts/aeo/ (last visited Sept. 21, 2011).

Traditional Energy Industries Have Generated Countless Jobs

In addition to this relationship between energy use and job growth, the energy sector itself is a significant source of job creation in the U.S. Today the oil and natural gas industry has grown to one of the largest employers in the country — with the amount of workers it employs larger than the populations of 15 states.[104] Most recent studies estimate that the U.S. oil and natural gas industry's total employment contribution to the national economy amounts to 9.2 million full-time and part-time jobs — 5.3% of the total employment in the country.[105]

In 2008 and 2009, industry salaries in the exploration and production sectors were more than twice the national average for all U.S. jobs.[106] The total income generated from all of these jobs adds up to $534 billion, or 6% of the nation's total labor income.[107] Each direct job in this industry also supports about three jobs elsewhere in the U.S. economy.[108] In all, the industry's total value-added contribution to the economy amounts for over $1 trillion,[109] about 7% of U.S. GDP in calendar year 2010.[110]

These job opportunities could be increasingly plentiful because of the discovery of large oil and natural gas deposits in the U.S. As highlighted in the Committee's May 2011 report,[111] the development of the shale and natural gas industry is a valuable source of this job growth.[112]

Oil and gas jobs have typically attracted new residents to the states that are fostering a climate for business investment in fossil fuels development. According to the 2010 Census, for instance, natural gas development jobs raised the population in Wyoming by 14.1% to 563,626.[113] A senior economist at the state's Economic Analysis Division confirms the increase is "a completely employment-driven population change."[114]

There is a similarly favorable outlook on job growth in North Dakota as a result of the oil available in the Williston Basin. According to one report, "North Dakota is booming. Its unemployment rate is the lowest in the country, 3.7 percent, and so many people have moved there for jobs that last year local housing officials declared a housing crisis."[115]

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[104] U.S. Census Bureau, *Annual Estimates of the Resident Population for the United States, Regions, States and Puerto Rico: April 1, 2000 to July 1, 2009*, (Dec. 2009), *available at* http://www.census.gov/popest/states/NST-ann-est.html.
[105] PricewaterhouseCoopers, LLC, *The Economic Impacts of the Oil and Natural Gas Industry and the U.S. Economy in 2009:Employment, Labor Income and Value Added*, (May 2011) [hereinafter PWC Study].
[106] Jonah Goldberg, *Drill, Obama, Drill: How to Really Create Jobs*, N.Y. POST, (Jan. 22, 2011).
[107] *See* PWC Study *supra* note 106.
[108] *Id.*
[109] *Id.*
[110] $1 Trillion is about 7% of $14.66 Trillion (GDP in 2010).
[111] *See* Committee Report *supra* note 73.
[112] Am. Chemistry Couns., *Shale Gas and New Petrochemicals Investment: Benefits for the Economy, Jobs, and US Manufacturing*, 21 (Mar. 2011), *available at* http://www.americanchemistry.com/ACC-Shale-Report.
[113] Melanie Eversley, *Natural Gas Jobs Fuel Wyoming's Population Growth*, USA TODAY, Mar. 3, 2011.
[114] *Id.*
[115] Eric Konigsberg, *Kuwait on the Prairie: Can North Dakota Solve the Energy Problem?*, NEW YORKER, Apr. 25, 2011 at 43.

A new study by Penn State University projects that, for the state of Pennsylvania alone, "the number of workers supported by the gas industry would likely hit 156,000 this year, up from 60,000 in 2009 and 140,000 last year."[116] These increased opportunities have allowed many to realize the American dream. According to recent reports, increased production of the Marcellus Shale in West Virgina has lead to a shortage of school bus drivers. Truck drivers on Marcellus shale crews are earning between $45,000- $100,000 compared to the $17,000 they used to make for driving school buses.[117] One resident attested that that at "church he's met new members recently arrived from Montana and New Mexico to make $20 an hour on Marcellus shale crews in the region."[118] However, these jobs are being threatened by bureaucratic overreach as the U.S. Environmental Protection Agency, the Department of Interior, and the Department of Energy are in a race to see which agency can regulate the process known as hydraulic fracturing the fastest.[119]

Coal mining also has the potential to generate more employment opportunities in the U.S. In 2010, the surface and underground coal mining industry supported almost 90,000 jobs across the country, the vast majority of which are located in the Appalachian region.[120] (The Appalachia region had 1,639 mining operations as of 2009, which employed 57, 979 workers).[121] Moreover, a recent study finds that every job in coal mining supports about three other jobs indirectly in the local community — from truckers and railroad workers to equipment suppliers,[122] suggesting the industry could have indirectly fostered around 300,000 jobs across the country last year.

Unfortunately, job opportunities in coal mining are less promising today due to recent regulatory overreaches by the U.S. Environmental Protection Agency (EPA) regarding its authority to oversee coal mining site permits under the Clean Water Act (CWA).[123]

At a hearing in July of this year, the Committee's Subcommittee on Regulatory Affairs, Stimulus Oversight, and Government Spending found that the EPA has enacted a de facto permitorium on CWA permits in the Appalachia region through its "enhanced review" process.[124] The 79 permits flagged for "enhanced review" are expected to produce over two billion tons of coal through operations and support 17,806 existing and new jobs and 81 small

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[116] Fredric U. Dicker, *It's a ga$! New study fuels fracking backing*, N.Y. POST, July 22, 2011.
[117] Jim Bissett, *Bus Driver: 'We Have a Crisis,'* ASSOCIATED PRESS, Dec. 12, 2010.
[118] *Id.*
[119] See Committee Report *supra* note 73.
[120] Nat'l Mining Ass'n, *Trends in U.S. Coal Mining 1923- 2010*, (June 28, 2011), *available at* http://www.nma.org/pdf/c_trends_mining.pdf.
[121] Nat'l Mining Ass'n, *U.S. Coal Mine Employment by State, Region and Method of Mining-2009*, (Oct. 29, 2010), available at http://www.nma.org/pdf/c_employment_state_region_method.pdf.
[122] Kentucky Coal Association, *Kentucky Coal Facts: Kentucky Coal Provides Jobs, Energy, Tax Revenue, and Economic Growth*, (11th ed. 2011), *available at* http://www.kentuckycoal.org/documents/Coal%20Facts%202010--11th%20Edition.pub.pdf.
[123] *Improving EPA Review of Appalachian Surface Coal Mining Operations Under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order*, U.S. Environmental Protection Agency, Apr. 1, 2010.
[124] *EPA's Appalachian Energy Permitorium Job Killer or Job Creator? Hearing Before the Subcomm. On Regulatory Affairs, Gov't Spending, and Stimulus Oversight*, 112th Cong. (2011).

businesses.[125] EPA's actions are creating massive uncertainty in the coal mining industry, putting jobs in Appalachia at risk, and threatening our domestic energy security in the process.

Other Countries Realize the Benefits of Cheap Traditional Energy

President Obama's quixotic crusade to replace energy produced by fossil fuels with energy produced from green technologies occurs as fossil fuels establish their dominant position on the worldwide stage. According to energy experts, growing global demand for energy will "secure the dominant position of fossil fuels for at least the next several decades."[126] Pursuit of the President's vision may result in slightly increased use of alternative resources, but, it will likely prevent America's entrepreneurs from successfully competing against foreign rivals who benefit from relatively inexpensive and widely available fossil fuels. Ultimately, the President's green economy makes us a less competitive nation.

In today's global economy, job creators in the U.S. must compete against manufacturers in China, Brazil, and India just to name a few. While U.S. energy consumption has remained relatively stable since 1990,[127] largely due to increased energy efficiency, our competitors have greatly expanded their consumption of fossil fuels. For example, between 1990 and 2008, China, Indonesia, and Malaysian energy consumption grew by 300 percent, due almost entirely to expanded use of fossil fuels.[128] Brazilian oil production has also increased by 300 percent over that same time period.[129] Overall, total electricity generation worldwide increased by 70 percent, while U.S. generation increased by only 35.5 percent.[130]

As noted, a shift to a green economy necessitates a shift away from traditional affordable sources of energy. Meanwhile, China is one of the best examples of a country taking advantage of this cheap energy as part of its plan to fuel rapid economic expansion. While the U.S. economy is expanding at anemic rates, China, a major U.S. competitor, has one of the fastest growing economies in the world, with 9.8 percent annual growth.[131] While news reports frequently discuss China's commitment to developing green energy, in reality the bulk of China's supply comes from traditional sources.[132] In 2007, 70 percent of Chinese energy came from coal.[133] Moreover, in order to sustain the economic growth and job creation that comes with its expansion, China plans to build 500 coal-fired power plants in the next decade.[134] That

[125] STAFF OF S. COMM. ON ENVIRONMENT AND PUBLIC WORKS, 111TH CONG., REPORT ON THE OBAMA ADMINISTRATION'S OBSTRUCTION OF COAL MINING PERMITS IN APPALACHIA, May 21, 2010.
[126] Fossil Fuels *supra* note 89.
[127] ROBERT BRYCE, POWER HUNGRY: THE MYTHS OF "GREEN" ENERGY AND THE REAL FUELS OF THE FUTURE 60 (2010).
[128] *Id.*
[129] Brazil Crude Oil Production By Year, http://www.indexmundi.com/energy.aspx?country=br&product=oil&graph=production (last visited Sept. 14, 2011).
[130] BRYCE *supra* note 128.
[131] RICHARD J. CAMPBELL, CHINA AND THE UNITED STATES – A COMPARISON OF GREEN ENERGY PROGRAMS AND POLICIES, Congressional Research Service, Mar. 30, 2011.
[132] *Id.*
[133] Louisa Lim, *China's Coal-Fueled Boom Has Costs*, NATIONAL PUBLIC RADIO, May 2, 2007; U.S. Energy Information Administration, China Energy Data and Statistics, July 2009, http://www.eia.gov/emeu/cabs/China/Background.html (last visited Sept. 14, 2011).
[134] Louisa Lim, *China's Coal-Fueled Boom Has Costs*, National Public Radio, May 2, 2007.

is roughly one coal-fired power plant per week. These coal-fired power plants will allow China to increase its energy generating capacity by approximately 53 gigawatts a year, enough energy to power approximately 50 million homes.[135]

Green Energy Offers Only the False Hope of Energy Independence

The President often argues that green energy development is necessary because America cannot rely on foreign sources of energy. At a Georgetown University speech in March 2011, he lamented, "Presidents and politicians of every stripe have promised energy independence, but that promise has so far gone unmet"[136] and stated he has a plan, namely the green energy agenda, to decrease dependence on foreign sources of energy. However, the President's argument rests on the mistaken belief that America is necessarily beholden to foreign nations. According to energy expert Robert Bryce:

> In all, the United States produces about 74 percent of the primary energy it consumes, a fact seldom mentioned by the many neoconservatives and energy posers who have been sounding the alarm about the evils of foreign energy .... And it's that power availability that has turbocharged the American economy and made it into a powerhouse.[137]

Moreover, the Congressional Research Service reports that the U.S. now has the largest energy resources of any country on the planet.[138] Accordingly, it appears that another path towards energy independence is to utilize our abundant domestic resources to their fullest capacity. Such an approach would eliminate the false need to completely overhaul our energy sector, as advocated by the President. Unfortunately, in addition to advocating for green energy, the Obama Administration has put in place barriers that prevent the expeditious development and utilization that is essential to the extraction and commoditization of these domestic resources.[139] As detailed in the Committee's May 2011 report, red tape, regulatory barriers, and permitoriums on production have effectively prevented the United States from moving toward energy independence.[140] Ironically, the State Department and other federal agencies are actively promoting the development of traditional energy sources in foreign countries.[141]

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[135] CAMPBELL *supra* note 132.
[136] President Barack Obama, Address at Georgetown University A Secure Energy Future (Mar. 30, 2011).
[137] BRYCE *supra* note 128 at 78.
[138] Glover *supra* note 67.
[139] *Supra* Section II.
[140] Committee Report *supra* note 73.
[141] *See e.g.* Global Shale Gas Initiative (GSGI) http://www.state.gov/s/ciea/gsgi/index.htm (last visited Sept. 14, 2011).

China Benefits From U.S. Pursuit of Green Energy

Despite the dominance of fossil fuels in China's energy mix, China does have a healthy renewable energy industry.[142] This industry is aided by the fact that China has a near monopoly on rare earth minerals, which gives the country a significant incentive to invest in and promote the widespread utilization of green technologies.[143] Rare earth metals are essential components of the most popular green technologies like hybrid and electric cars, wind turbines, and solar panels. For example, Neodymium is used in magnets for wind turbines and Lanthanum is used in hybrid automobile batteries.[144] Not surprisingly, China is well aware of its strategic position in this arena and recently instituted a policy restricting the ability of foreign technology companies to obtain rare earth metals.[145] There is some concern that this policy could essentially force U.S. manufacturers of green technologies to locate in China so that they may gain access to these resources.[146]

Access to rare earth metals is not the only competitive advantage that China holds over green technology. Cheap labor and production costs make China the top green technology producer. In an effort to compete with these companies and foster domestic manufacturing of green technologies, the Obama Administration has heavily subsidized manufacturers of wind and solar technology. The failure of green manufacturers to compete even when heavily subsidized, raises questions as to whether the solar industry in the United States could ever be self sustaining.

While it is clear why China, which controls 90 percent of the world market for these rare earth materials, would promote the use of green technologies, it is not clear why President Obama would, effectively, encourage reliance on China for access to these materials, in lieu of using domestically available and affordable resources. In short, a forced movement toward green energy will not lead to a new era of energy independence, but rather will make our country more reliant on China and could also encourage the off-shoring of green jobs.

The Obama Energy Hypocrisy: While Discouraging Fossil Fuel Use Domestically, the Administration Invests in Traditional Energy Sources Abroad

Despite having access to vast supplies of domestic natural gas reserves, the Obama Administration continues to create uncertainty about U.S. natural gas production while aggressively promoting its production abroad. The U.S. Environmental Protection Agency (EPA), Department of Energy (DOE), and the Department of the Interior, as well as their allies in the environmental lobby, have taken aim at the natural gas industry and more specifically the practice of hydraulic fracturing (fracking).[147] These agencies have signaled their respective interest in regulating fracking and are working on policies that will constrain the domestic industry.[148]

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[142] CAMPBELL *supra* note 132.
[143] Tatyana Shumsky, *Testing Their Metals*, WALL ST. J., Sept. 12, 2011.
[144] *Id.*
[145] Keith Bradsher, *Chasing Rare Earths, Foreign Companies Expand in China*, N.Y. TIMES, Aug, 24, 2011.
[146] *Id.*
[147] *See* Committee Report *supra* note 73.
[148] *Id.*

Meanwhile, the State Department actively promotes the process of hydraulic fracturing as a ground-breaking technology through the Global Shale Gas Initiative (GSGI). The GSGI helps "countries seeking to utilize their unconventional natural gas resources to identify and develop them safely and economically."[149] To date, countries such as China and India use the program to promote natural gas exploration.[150] Accordingly, through this initiative, the U.S. is helping our competitors expand their domestic production of natural gas, while other federal bureaucrats in the Obama Administration work to hinder our own ability to do the same.

In addition to the GSGI program, other federal agencies are working to promote expanded international use of fossil fuels. On April 18, 2011, the U.S. Export-Import Bank, an independent agency of the federal government, announced a $2.84 billion loan for a project to expand and upgrade an oil refinery[151] in Cartagena, Colombia.[152] The money would go to Reficar, the Colombian national oil company.[153] This is the second largest project that the U.S. Export-Import Bank has ever financed.[154] Previously, the bank loaned $3 billion to finance a liquid natural gas project in Papua, New Guinea.[155]

Other entities within the Obama administration have also promoted the extraction of traditional energy sources in foreign countries. For example, in August 2009, the U.S. loaned $2 billion to Brazil's state-owned oil company, Petrobras, to finance exploration of offshore oil reserves.[156] On March 19, 2011, President Obama reiterated his commitment to Brazilian offshore drilling. He stated, "We want to help with technology and support to develop these oil reserves safely, and when you're ready to start selling, we want to be one of your best customers."[157] The assistance to Brazil occurred while the Bureau of Ocean Energy Management (BOEMRE) was imposing first a moratorium, followed by a permitorium on the domestic oil industry.[158]

It appears that when presented with the option of promoting domestic energy to create American jobs and foreign investment in these sources, the Obama Administration would rather choose to assist foreign economies than our own.

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[149] Global Shale Gas Initiative *supra* note 142.
[150] *Id.*
[151] A new oil refinery has not been built in the United States since 1995.
[152] Terence P. Jeffrey, *U.S. Gov't Agency Plans $2.84 Billion Loan for Oil Refinery – in Colombia*, CNSNEWS.COM Apr. 18, 2011.
[153] *Id.*
[154] *Id.*
[155] *Id.*
[156] Review and Outlook, *Obama Underwrites Offshore Drilling*, WALL ST. J., Aug. 18, 2009.
[157] President Barack Obama, Address at CEO Business Summit in Brasilia, Brazil (Mar. 19, 2011).
[158] *See* Committee Report *supra* note 73.

PART III: FORCING A GREEN ENERGY TRANSITION WAS ECONOMICALLY FLAWED FROM THE START

It is Counterproductive to use Green Energy Mandates as a Jobs Program

Proponents of green energy present it as a win-win situation: we can help the environment and create jobs. According to the President, using the government to force a transition to green energy will result in "creating untold numbers of new jobs and new businesses right here in the United States."[159] From a political perspective, it is easy to see why the President consistently emphasizes green jobs: the unemployment rate is still above 9 percent and, according to a June 2011 report from the Bureau of Labor Statistics, the percentage of working adults is now lower than at any other point during the recession at 58.2%. Moreover, the U.S. labor force is experiencing the longest average duration of unemployment in the nation's history.[160] However, it is not at all clear that a policy favoring "green jobs" of the future will help Americans get back to work today.

One characteristic of "green jobs" often touted by the Obama Administration is the fact that green industries rely heavily on manpower, a trait that "makes them especially alluring when it comes to government-led job creation" measured in terms of jobs "created or saved."[161] However, in studies boasting green job creation, there is a troubling and consistent preference for inefficiency.[162] This is contrary to the fundamental economic principal that high labor productivity is a measurement of an efficient and healthy economy.[163] A national policy that favors energy sources that are labor intensive and produce energy less efficiently essentially diverts resources away from investment and towards these low efficiency jobs. According to a leading expert, an economy based on "high paying, low-productivity jobs ... would require an economic structure unknown in human history."[164]

While the energy sector is a very large source of employment (as noted above), it is a mistake to treat the energy industry as a government jobs program. Dr. David Montgomery, senior vice president at NERA Economic Consulting and a former CalTech professor, has explained:

> It is a fundamental error in policymaking and economics to design or justify federal support for new energy technologies as a jobs program. It subverts the entire purpose of government involvement

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[159] President Barack Obama, Remarks by the President on America's Energy Security (Mar. 30, 2011).
[160] Bureau of Labor Statistics, Employment Situation Summary, *Table A-1. Employment status of the civilian population by sex and age* (June 8, 2011) *available at* http://www.bls.gov/news.release/empsit.t01.htm.
[161] Liz Wolgemuth, *The Truth and Green Jobs*, U.S. NEWS AND WORLD REPORT, Mar. 25, 2009.
[162] *Witnesses Provide Various Definitions of Green Jobs Before House Workforce Panel*, DAILY LABOR REPORT, Apr. 4, 2009, 60.
[163] *Green Jobs and Red Tape: Assessing Federal Efforts to Encourage Employment: Hearing Before the Subcomm. On Investigations and Oversight of the H. Comm. on Science, Space, and Technology*, 112th Cong. (2011) (testimony of W. David Montgomery).
164 Andrew P. Morriss et. al., *7 Myths About Green Jobs*, PERC Policy Series, No. 44, 2009 *available at* http://www.perc.org/files/ps44.pdf.

> in R&D, and is the greatest single cause of the continued failure of energy technology programs.[165]

However, even accepting the premise that it is appropriate to base a jobs program on green energy development, the Administration fails at this objective.

The economic flaws in the theory undergirding green jobs is demonstrated in the failure of the effort to actually create a significant number of jobs. As a campaign promise, President Obama said he would help America create five million green jobs within ten years.[166] Evaluating this promise in July 2011, the Pulitzer Prize winning *Politifact* found that the President was far from fulfilling this goal.[167] Citing a White House estimate that 225,000 green jobs have been created or saved, *Politifact* states: "Even if the 225,000 number is accurate, it's clear that President Obama has a long way to go in fulfilling his pledge to create 5 million green jobs."[168]

Federal Subsidization Will Not "Spark" a Green Energy Industry in America

Advocates of subsidizing green energy often argue that high upfront costs and subsidization are necessary in order to assist a fledgling industry get started.[169] The President claims that green energy spending will "spark new jobs, industries and innovations," which will mean a "country that is safer, that is healthier, and that's more prosperous."[170] The implication in the use of the term "spark" is that we must invest in these companies now to help them become viable on their own. This implication, however, relies on the erroneous premise that the green energy sector is an "infant industry." That is, "there are infant industries that deserve protection so that they can grow up to become national champions."[171]

However, while the magnitude and ambition of the Obama administration's environmental agenda is unprecedented, the federal government has been subsidizing green energy for decades. Since 1948, taxpayers have expended billions on such projects in the form of research and development spending.[172] Professor Andrew Morriss of the University of Alabama explains: "We know the infant industries argument doesn't work because we've tried it for 200 years in different places around the world and it never works. The infants never grow up, they just get bigger and cry louder and demand more protection."[173] Furthermore, MIT professors Thomas H. Lee, Ben Ball, Jr., and Richard Tabors have noted that with regard to

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[165] Montgomery Testimony *supra* note 164.
[166] Create 5 million "green jobs," PolitiFact.com, http://www.politifact.com/truth-o-meter/promises/obameter/promise/439/create-5-million-green-jobs/ (last visited Sept. 20, 2011).
[167] *Id.*
[168] *Id.*
[169] David Sirota, *Green energy, the cost-efficient option*, SALON, Sept, 21, 2011 *available at* http://www.salon.com/news/david_sirota/2011/09/21/green_energy_truth.
[170] THE WHITE HOUSE, PLAYING TO WIN: THE GLOBAL CLEAN ENERGY RACE (2011) *available at* http://www.whitehouse.gov/ sites/ default/files/uploads/clean_energy_report_vpotus.pdf.
[171] The False Promise of Green Energy, Book Forum video, The Cato Institute, *available at* http://www.cato.org/event.php?eventid=7999.
[172] Deborah D. Stine, *The Manhattan Project, the Apollo Program, and Federal Energy Technology R&D Programs: A Comparative* Analysis, CRS REPORT FOR CONGRESS June 30, 2009, Table B-5 and B-6; *see also* Sissine *supra* note 8 at Table 1.
[173] The False Promise of Green Energy *supra* note 172.

government investment in energy, "the experience of the 1970s and 1980s taught us that if a technology is commercially viable, then government support is not needed, and if a technology is not commercially viable, no amount of government support will make it so."[174]

The Green Energy Experiment: Imprudent and Ill-Fated from the Beginning

In addition to raising energy prices, the President has directed a significant amount of taxpayer dollars to the subsidization of green technologies. On June 15, 2010, President Obama commented from the Oval Office: "the transition to clean energy has the potential to grow our economy and create millions of jobs – but only if we accelerate that transition. Only if we seize the moment."[175]

In an effort to seize this moment, the President's $825 billion[176] stimulus enacted in February 2009 heavily subsidized green initiatives, including both renewable energy and energy efficiency efforts. The stimulus included $90 billion[177] in clean energy investments with "more than $45 billion provided in appropriations for energy programs, mainly for energy efficiency and renewable energy."[178] The largest sum of stimulus money for green projects was allocated to the Department of Energy, which received at least $22.8 billion in funding for research and development, manufacturing grants, grants for state and local governments, and loan guarantees for renewable energy.[179]

Green stimulus appropriations were also provided to the Department of Defense, the General Services Administration, the Environmental Protection Agency, the Department of Labor, the Department of Transportation, the Department of Housing and Urban Development, and the Department of Education, among other Federal agencies.[180] The primary uses for this funding include green retrofitting of buildings, the procurement of green vehicles, training for green energy employees, and other efforts intended to "reduc[e] energy consumption or greenhouse gas emissions."[181] A large portion of the Federal funding for green energy initiatives comes in the form of tax breaks and credits, as the stimulus "also provides more than $21 billion in energy tax incentives, primarily for energy efficiency and renewable energy."[182] As we all know, these subsidies were all paid for by adding to our national debt, at a time when the solvency of the U.S. federal government is in peril.

In addition to instituting an institutional preference for green energy, the President has determined that the transition to the green economy take place in an expedited timeframe. The President's 2011 State of the Union Address set a goal that "by 2035, 80 percent of America's

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[174] THOMAS H. LEE, ENERGY AFTERMATH: HOW WE CAN LEARN FROM THE BLUNDER OF THE PAST TO CREATE A HOPEFUL ENERGY FUTURE, 167, 1990.
[175] President Barack Obama, Remarks by the President to the Nation on the BP Oil Spill (June 15, 2010).
[176] *See Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from April 2011 Through June 2011*, Congressional Budget Office, Aug. 2011.
[177] COUNCIL *supra* note 7.
[178] Sissine *supra* note 8.
[179] *Id.*
[180] *Id.*
[181] *Id.* at 16.
[182] *Id.* at Summary.

electricity will come from clean energy sources."[183] This goal is unrealistic based on pure technological feasibility.

The Green revolution represents a fundamental departure from the way our economy has functioned since the industrial revolution. Energy Secretary Chu has opined that "shifts in energy supplies take decades, typically half a century."[184] The President is advocating for an even more ambitious timeframe. In addition to being unproven, green technology is also barely a factor in the nation's current energy mix. In contrast to the vast reserves of fossil fuels in the U.S., discussed in Part II,[185] the latest data demonstrates that renewable[186] energy only satisfies eight percent of total energy consumption.[187] When you subtract out hydroelectric energy and geothermal energy, wind and solar energy combined provide less than 1% of our nation's energy resources.[188]

Despite the inconsequential amount of energy now obtained from renewable sources, the Administration contends that a transition to "green" energy is possible and will be economically advantageous.

Lessons from Europe

European nations have been aggressively pushing green energy for years and the Obama Administration sought to use them as an example. On January 16, 2009, President Obama stated:

> And think of what's happening in countries like Spain, Germany and Japan, where they're making real investments in renewable energy. They're surging ahead of us, poised to take the lead in these new industries. This isn't because they're smarter than us, or work harder than us, or are more innovative than we are. It's because their governments have harnessed their people's hard work and ingenuity with bold investments – investments that are paying off in good, high-wage jobs – jobs they won't lose to other countries.[189]

This nationalistic appeal has come back to haunt the Obama Administration as the European experience with green energy initiatives has proven to be a failure.

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[183] President Barack Obama, State of the Union Address (Jan. 25, 2011).
[184] Chris Zwicke, *Energy Secretary Chu Fields Questions at ECO:nomics,* Erb Institute, Mar. 9, 2010, *available at* http://erb.umich.edu/erbperspective/2010/03/09/energy-secretary-chu-fields-questions-at-economics/.
[185] Committee Report *supra* note 73 at 7 (stating "U.S. proven reserves of oil total 19.1 billion barrels, reserves of natural gas total 244.7 trillion cubic feet, and natural gas liquids reserves of 9.3 billion barrels").
[186] Renewable & Alternative Fuels, U.S. Energy Information Administration, http://www.eia.gov/renewable/ (last visited Sept. 21, 2011) (defining renewable as Solar/PV, Geothermal, Waste, Wind, Biofuels, Wood, and Hydroelectric Power).
[187] Renewable Energy Consumption by Major Source, U.S. Energy Information Administration, http://www.eia.gov/totalenergy/data/annual/pdf/sec10_2.pdf (last visited Sept. 21, 2011).
[188] *Id.*
[189] Press Release, *President-elect Obama speaks on an American Recovery and Reinvestment Plan in Ohio,* Jan. 16, 2009.

A quick review of key countries demonstrates what the U.S. can expect if it is to continue to pursue the Obama Administration's green energy agenda. In every instance, government favoritism for the clean energy industry removes capital from other sectors of the economy that could have more effectively utilized it. This favoritism has meant a lack of resources to invest in more productive industries because it has been redirected toward green. The studies show what green jobs skeptics have long maintained: an increase in the number of green jobs is not indicative of a net increase in total jobs.[190]

Spain. A well-documented study of the Spanish government's green jobs experiment conducted by Gabriel Calzada Álvarez and his colleagues at the Universidad Rey Juan Carlos produced results that the Obama Administration should find alarming. Published in March 2009, the study found that because resources were being funneled into the green energy sector, other more profitable parts of the economy suffered. Professor Calzada's study calculated that, ultimately, there were "2.2 jobs destroyed for every "green job" created."[191] Due to the subsidies expended per worker in the renewable sector, government financing the creation of green jobs led to a reduction in overall employment opportunity at a rate of 9 jobs destroyed for every 4 added.[192]

Italy. The Bruno Leoni Institute's Luciano Lavecchia and Carlo Stagnaro conducted a study to understand the impact of government efforts to promote green jobs in Italy. Their findings indicate that the value of creating green jobs is low when the factors associated with government support of the green energy sector are taken into account. They cite three paradigmatic problems with governmental initiatives to advance green jobs: the inherent decline in the overall potential for job growth, the creation of jobs that are only temporary, and the inevitable corruption and fraud tied to an industry that exists almost entirely on government subsidies. They find "the same amount of capital that creates one job in the green sector, would create 6.9 or 4.8 if invested in the energy industry or in the economy in general, respectively."[193] So the government handouts used to create one green energy job could create 6.9 traditional energy jobs or 4.8 jobs across the economy in general. The low number of green jobs created in Italy is not limited to only those jobs that will provide Italians with regular income; it includes temporary work. The study has found that the vast majority of jobs created in the green sector are not permanent, but temporary; approximately 80% of green jobs created will disappear once a project is finished.[194] Rising costs of green incentives have led to recent reforms by the Italian government to scale back the subsidy program.[195] For example, as the price of solar panels decreases with a decrease in demand for the panels Italy has found that its experiment requires reform as the incentives have become too costly and have over subsidized the sector.[196]

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[190] MORRISS *supra* note 22 at 139.
[191] Gabriel Calzada Álvarez, et al., *Study of the effects on employment of public aid to renewable energy sources*, Universidad Rey Juan Carlos, Mar. 2009, 2.
[192] *Id.* at 1.
[193] Luciano Lavecchia and Carlo Stagnaro, *Are Green Jobs Real Jobs?*, Bruno Leoni Institute, May 2010, 40.
[194] *Id.* at 27.
[195] Marco Bertacche and Alessandra Migliaccio, *Italy's Renewable Energy Incentives Need Overhaul, Enel's Conti Says*, BLOOMBERG, Feb. 8, 2011.
[196] *Italy Reveals Plan for Solar Incentive Cap*, businessGreen, Apr. 14, 2011 *available at* http://www.businessgreen.com/bg/news/2043659/italy-reveals-plan-solar-incentive-cap.

Denmark. A study on wind energy done by the Center for Politiske Studier (CEPOS) shows that, as a direct result of the Danish government's green energy initiatives, its citizens pay the highest prices for electricity in the European Union. In fact, because of "taxes and charges on electricity for Danish household, consumers make their electricity by far the most expensive in the European Union (EU)" according to the OECD.[197] These high taxes and the high cost of energy for the average Danish consumer are caused by the interference of the Danish government and its efforts to promote the renewable energy industry.

The costs of Denmark's reliance on wind power extend beyond high electricity rates as well. As the U.K.'s *Telegraph* reports, the Danish people have had enough with their government's push towards renewables: "People are fed up with having their property devalued and sleep ruined by noise from large wind turbines …."[198] All the while, President Obama and the U.S. EIA have lauded Danes for their aggressive wind power program, claiming that the U.S. would do well to keep pace with their efforts.[199]

The economic reality in Denmark tells a much different story. Denmark's GDP is approximately US $270 million lower than it would be if the wind sector workforce was employed in other sectors of the Danish economy.[200] The subsidy per wind energy worker in Denmark is equal to between 175% and 250% of the average wages in the manufacturing industry.[201] Additional problems arise from this over-subsidization, as "in the long run, creating additional employment in one sector through subsidies will detract labor from other sectors, resulting in no increase in new employment but only in a shift from the non-subsidized sectors to the subsidized sector."[202]

Germany. A study from Germany's Rheinisch-Westfälisches Institut für Wirtschaftsforschung determined that the costs of green energy outweigh its benefits. According to the researchers, the German government's preference for green energy resulted in "massive expenditures that show little long-term promise for stimulating the economy, protecting the environment, or increasing energy security."[203] The study found that there is an average price mark-up of approximately 2.2 cents per kilowatt from subsidization. [204] As a direct result, consumers in Germany pay 19.4% more on average for their electricity. Government support for green energy through the implementation of wind and solar power incentives also caused household energy rates to increase by 7.5%.[205] Subsidies for on-shore wind power are now up to 300% higher than the per kilowatt hour cost of traditional forms of energy.[206] The German government subsidizes each worker in the German green energy sector by $240,000.[207] The cost

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[197] Hugh Sharman, *Wind Energy: The Case of Denmark*, Center for Politiske Studier, Sept. 2009, 2.
[198] Andrew Gilligan, *An Ill Wind Blows for Denmark's Green Energy Revolution*, THE TELEGRAPH, Sept. 12, 2010.
[199] Kenneth P. Green, *Rotten Wind in the State of Denmark*, THE AMERICAN, July 18, 2011.
[200] Sharman *supra* note 198 at 4.
[201] *Id.*
[202] *Id.*
[203] Manuel Frondel, et al., *Economic impacts from the promotion of renewable energies: The German experience*, Rheinisch-Westfälisches Institut für Wirtschaftsforschung, Oct. 2009, 4.
[204] *Id.* at 6.
[205] *Id.*
[206] *Id.* at 5.
[207] *Id.* at 7.

of maintaining a workforce in the green energy sector is incredibly expensive, the study finds, and cannot reasonably be said to be worth the price, as it "lowers the output potential of the economy and is hence counterproductive to net job creation."[208] Despite periods of rapid growth in the solar industry, German solar companies have begun to fail due to heavy losses from stark competition and over-subsidization.[209] The very expensive and heavily subsidized photovoltaic market in Germany is one of the most expensive forms of energy but produces only small amounts of energy surviving only on the billions of dollars it receives from the German government.[210]

The U.K. According to a study done by Verso Economics, as a result of government support of green energy initiatives and the implementation of the Renewables Obligation, taxpayers in the United Kingdom (U.K.) must pay for a large amount of subsidies that "effectively raise the market prices paid for electricity from renewable sources."[211] Despite this evidence to the contrary, and on the heels of a June analysis by the U.S. based Green Alliance in June[212] that emphasized the pitfalls of unabated gas use to power electricity, U.K. Energy Secretary Chris Huhne recently outlined plans that will actually increase the U.K.'s shift towards clean energy.[213] Reports claim that "[e]nergy bills are likely to double within five years..." in the U.K. as a result.[214]

In addition to raising prices of electricity to consumers, taxpayers are at a loss of approximately £1.1 billion in the UK and around £100 million in Scotland in particular for the 2009-10 year. According to these researchers, the UK's green subsidy policies have managed to cost approximately 10,000 direct jobs in the UK and 1,200 jobs in Scotland for the 2009-10 year.[215] There is a clear net loss in the job market as a result of the government supporting green energy: "for every job created in the UK in renewable energy, 3.7 jobs are lost" elsewhere in the economy.[216] With "no net benefit from government support for the sector," the study contends, there is no acceptable reason for the UK to continue such a program.[217]

The job losses cited in the European studies above are an example of what 19th century French economist Frederic Bastiat called the economic fallacy of "the seen and the unseen."[218] In each case, governments were able to point to jobs that are created as a result of diverting taxpayer funding to green energy; this effect of was readily seen. But in each instance, the

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[208] *Id.*
[209] Spiegel Staff, *German Solar Firms Eclipsed by Chinese Rivals*, SPIEGEL ONLINE, Sept. 7, 2011 *available at* http://www.spiegel.de/international/business/0,1518,784653,00.html.
[210] *Id.*
[211] Richard Marsh and Tom Miers, Executive Summary of *Worth the Candle? The Economic Impact of Renewable Energy Policy in Scotland and the UK*, Verso Economics, Mar. 2011, 1.
[212] Green Alliance, *Avoiding Gas Lock- In*, (June 22, 2011), *available at* http://www.green-alliance.org.uk/grea_p.aspx?id=5857.
[213] Shanta Barley, *Chris Huhne Unveils Plans for Reform of UK Energy Market*, THE GUARDIAN, Dec. 16, 2010.
[214] Sean Poutler, *Energy Bills 'to double in five years' as customers are hit by switch to green power*, MAIL ONLINE, July 11, 2011.
[215] Marsh & Miers *supra* note 212 at 2.
[216] *Id.* at 1.
[217] *Id.*
[218] Frederic Bastiat, *Selected Essays on Political Economy*, http://www.econlib.org/library/Bastiat/basEss1.html (last visited Sept. 20, 2011).

negative consequences that resulted were less observable because they rely on counterfactual occurrences; these events – job creation and investment that do not take place – are the unseen effects. As Bastiat explained, "What is not seen is the work and the profits that would come from this same amount of money if it were left in the hands of the taxpayers themselves."[219]

Christopher DeMuth, a senior fellow at the American Enterprise Institute, noted that it is hard to observe all of the ways in which green initiatives distort economic behavior and destroy jobs. DeMuth notes they are stealthy and are not in the form "of taxes or scary headlines about public spending, but rather of higher prices for private goods and services and foregone employment and other opportunities. And these costs … are usually invisible to citizens and voters."[220]

In sum, governments across the world have committed to public policy follies that defy economic common sense by burdening citizens with higher energy costs and displacing and destroying jobs. The way green jobs policies have worked in practice is analogous to a policy that would tear down two neighboring homes to build one inferior house on an empty lot. No one is better off but the government is able to point to the one house it built while ignoring the other two it tore down.

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[219] *Id.*

[220] *Environmental Regulations, the Economy, and Jobs: Hearing before the Subcomm.on Env. and the Economy of the H. Comm. on Energy and Commerce*, 112th Cong. (2011) (statement of Christopher DeMuth, D.C. Searle Senior Fellow, American Enterprise Institute for Public Policy Research).

CONCLUSION

With U.S. growth rates well below desirable levels and our unemployment rate at a staggering 9.2%, it is critical for policymakers to give serious consideration to increasing economic opportunities for Americans. The Obama Administration's green energy agenda has had the opposite effect – it has worsened the state of an already struggling economy by over-regulating industries that foster job creation and misdirecting resources towards industries destined for failure.

The United States cannot afford to allow the President's energy agenda to continue. By sacrificing domestic carbon-based resources upon the altar of an ill-fated "green energy" experiment, the President has put our economic security in jeopardy. Furthermore, this experiment has has wasted billions in taxpayer money at the expense of affordable, carbon-based energy sources today. This is a dangerous strategy that will drastically increase the price we pay for energy and harm economic recovery and job growth.

While there are clearly opportunities for green energy development, as pointed out in the Committee's May 2011 report,[221] the premature implementation of "green energy" technologies will come at too steep a price for our already-struggling economy.

To the extent that any "green jobs" have been created, this has only been accomplished by shifting resources that might have generated more productive jobs elsewhere in the economy. Many European countries have learned the hard way that propping up "green energy" industries comes at the expense of private sector growth and job creation, and we would be wise to learn from their mistakes.

With the right set of policies, we can create new jobs and help fuel an economic recovery benefiting all Americans. But the Administration's push to a "green energy" economy should not continue to be touted as a jobs program; it is a program that has destroyed jobs at a time when our economy needs them the most.

[221] Rising Energy Costs: An Intentional Result of Government Action, Staff Report, House Committee on Oversight and Government Reform, May 23, 2011.

About the Committee

The Committee on Oversight and Government Reform is the main investigative committee in the U.S. House of Representatives. It has authority to investigate the subjects within the Committee's legislative jurisdiction as well as "any matter" within the jurisdiction of the other standing House Committees. The Committee's mandate is to investigate and expose waste, fraud and abuse.

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Committee on Oversight and Government Reform
Chairman, Darrell Issa (CA-49)
2157 Rayburn House Office Building
Washington, DC 20515

Chairman ISSA. Members will have 7 days to submit opening statements and extraneous material for the record.

The Chair now recognizes our first panel of witnesses: the Honorable Hilda Solis, a long-time classmate and fellow Californian, and Secretary of Labor. Mr. Daniel Poneman, who is Deputy Secretary of Energy. Thank you for being here. And Dr. Keith Hall, is Commissioner of the Bureau of Labor Statistics at the Department of Labor.

Pursuant to the committee's rule, all witnesses are to be sworn. Would you please rise to take the oath? And raise your right hands.

[Witnesses sworn.]

Chairman ISSA. Let the record indicate all witnesses answered in the affirmative.

Madam Secretary, you have been on this side of the dais, so I will only say it for the other two. Your entire opening statements will be placed in the record. The 5-minutes, fairly close, with the usual green, yellow and red, is designed for you to expand on that as you see fit. I understand that sometimes you are restricted to the words that have been cleared. But to the greatest extent possible, we would like you to use the time to go beyond the written statements, which are in the record.

Madam Secretary.

STATEMENTS OF HILDA SOLIS, SECRETARY, DEPARTMENT OF LABOR; DANIEL B. PONEMAN, DEPUTY SECRETARY, U.S. DEPARTMENT OF ENERGY; AND KEITH HALL, COMMISSIONER, BUREAU OF LABOR STATISTICS

STATEMENT OF HILDA SOLIS

Secretary SOLIS. Thank you, Chairman, and good morning, and Ranking Member Cummings and the other members of this committee. I want to thank you for the invitation to come and speak to you about the Department of Labor's efforts to help State and local governments and businesses, community colleges, non-profit groups and work force agencies provide training to prepare America's workers to succeed in the clean energy economy of the 21st century.

The authors of a recent report by the Brookings Institution estimates that 2.7 million Americans are employed in positions related to the clean economy, and that 90 percent of these jobs are located in traditional industry sectors, such as manufacturing and exports. The Recovery Act was an unprecedented investment in the green economy. Our Recovery Act investments, I believe, were wise decisions. The green economy is growing significantly faster than the national economy, and therefore, we believe, can provide a path to a more successful recovery.

The vibrancy of the green economy is not artificially propped up by Recovery Act investments. In fact, the Recovery Act investments supply simply supported the investments that private sector corporations have already made that they deem wise. Venture capitalists are voting with their dollars in favor of the future of the green economy, according to the Brookings Institution report.

As part of the Recovery Act, the Department of Labor awarded $500 million in competitive grants to fund 189 green job projects throughout the country. Our grants have several important objectives. We have aligned our grants closely with the local and regional labor market needs by requiring our grantees to partner with local businesses that place a high value on innovation.

We also are targeting our grants to serve Americans in most need of help, like veterans, disabled veterans, unemployed workers with disabilities and workers in areas of high poverty. Our grants give these populations a chance at a secure, well-paying job in the future economy as well as now.

For example, in Indiana, a partnership that included the Workforce Development, Natural Resources and Transportation Department and the National Guard provided 2,000 young people with green jobs through the Recovery Act funding.

We are starting to see some good results from our Recovery Act investments. As of June 2011, over 52,000 people have participated in our green training grant programs. We expect to eventually serve about 100,000. And about 60 percent of those participants were unemployed when they started training. The rest had jobs, they are known as incumbent workers, that needed training to ensure that they could keep their jobs. To date, well over 26,000 participants have completed their training. And more than half of them who didn't have a job when they started training now do. As these grants progress, we know that these numbers will increase.

These results are consistent with the data that shows the green economy in general. And according to Brookings, wages in the green economy are 13 percent higher and provide these good wages to workers in many cases with lower skills. In fact, according to Brookings, almost half of all green jobs are held by workers with a high school degree or less. Yet they are more likely to make good wages or better wages than other low-skilled workers.

For the most part, there are no low-wage jobs in the green economy. Our efforts didn't end with the Recovery Act, however. Our Green Jobs Innovation Fund program is building on the success of our Recovery Act program. We just awarded six grants totaling $38 million. One of those grants went to Jobs for the Future, which is serving over 1,000 unemployed and lower-skilled workers in seven cities. The innovative programs use both workers and employers as equal partners in expanding the green jobs pipeline.

Serving today's youth is critical to our green jobs effort, because they are suffering, especially our youth, unprecedented high numbers of unemployment. And I am especially proud to work with the Office of Apprenticeship, which has worked with employers to identify several new occupations for a very important program, known as wind turbine technician, energy auditors and well-drilling operators. With us today in the audience are Scott Grant and Charlie Kauffman and Jerry Robinson, who are local D.C. area employers that partner with the Department of Labor to provide green apprenticeships.

Our DOL Youth Build program is also training young people for the growth industries of the future, such as in green construction. For example, at Case Verde Youth Build in Austin, Texas, youth are being trained to install solar panels, and youth are also build-

ing energy-efficient and affordable homes in East Austin. In the audience today we have Eric Rodriguez and Cornelius Stark, who are learning green building techniques through our Youth Build program located here in Washington, DC.

Our Job Corps program has trained more than 15,000 students over the past few years in green training jobs. For example, at Clearfield Job Corps Center in Utah, 14 students graduated in our green training program and they all found jobs. The Department is upholding the administration's commitment to accountability and transparency in the programs. We continuously monitor our green investments to make sure that they are achieving all of their objectives.

But I would like to underscore, because I know my time is running out, that we do everything we can to help provide better monitoring tools. We do that on a regular basis. And if we do find that there are issues or problems, then we will assign staff at the national level and regional level to oversee to make sure that we get on course. But keep in mind, these partnerships are driven by business, industry, by data that is generated from the local and regional area. So it isn't driven down by the Federal Government. It actually is coming up from the bottom where we find that there is a need to build jobs, there is a lack of training or skills. But it is all market-driven.

So with that, Mr. Chairman, thank you.

[The prepared statement of Secretary Solis follows:]

Statement of Secretary Hilda L. Solis
U.S. Department of Labor
before the Committee on Oversight and Government Reform
United States House of Representatives,
September 22, 2011

I. Introduction

Good morning Chairman Issa, Ranking Member Cummings, and distinguished members of the Committee. Thank you for your invitation to participate in today's hearing on "green energy" and the role that green energy plays in economic growth. I appreciate this opportunity to discuss the Department of Labor's efforts related to green jobs, especially in assisting governments, nonprofit groups, and other workforce agencies to provide training to empower workers to acquire the skills they need to succeed in green industries, as well as traditional industries that are "greening."

As we all know, this is a difficult time for American workers and businesses. The current combination of prolonged high unemployment and record numbers of job-seekers out of work for 6 months or more has had profound effects on the labor market. This transformation has created significant barriers for individuals attempting to replace a job they have lost, find their first job, or advance in their careers. But these barriers are not insurmountable.

To achieve a sustained economic recovery, we must out-educate, out-innovate, and out-build our global competitors. It is essential that millions of workers find jobs that pay family-sustaining wages. Green industries, including green energy, provide a pathway for some of these individuals to get good jobs, and to keep and advance in those jobs over the long term.

II. The Demand for Green Jobs Workers

The scope of the "green jobs" sector is broad – these jobs are in every state and every Congressional district. They are not limited to those industries directly involved in the energy sector, like wind or solar electricity or other forms of renewable energy. A majority of green jobs are actually traditional jobs that have been "greened" by new processes, equipment, and technology. The Brookings Institution, in collaboration with the Battelle Technology Partnership Practice, recently published a report entitled *Sizing the Clean Economy: A National and Regional Green Jobs Assessment.* The authors estimated that 2.7 million Americans are employed in positions related to the "clean economy" and that 90 percent of these jobs are located in traditional industry sectors, such as manufacturing. In fact, the report's authors note that more workers are employed in clean economy jobs than are employed in providing fossil fuels. Although much smaller in size than traditional industry sectors, green energy is growing rapidly: these sectors grew at a rate of 8.3% between 2003 and 2010—almost double the growth rate of the overall economy during that time.

The greening of traditional industries is driving innovation in clean and efficient technologies. The jobs emerging from the greening of our economy are good jobs that often pay higher wages than otherwise comparable jobs. However, workers in many traditional fields will need training to retool their existing skills to meet the needs of the green economy. Also, like many other sectors, green and greening industries are being confronted with a graying of the workforce as many of these workers begin to enter retirement age. The New York Times reported last December that "about half of electric utility employees are expected to retire in the next 5 to 10 years."[1] The increasing skill and labor requirements individuals need to succeed in these evolving careers and the looming retirement of experienced workers contribute to the current and future need for skilled workers in green industries.

III. Department of Labor Investments in Green Skills and Training

As part of his 2011 State of the Union address, President Obama expressed a long-term commitment to green energy. The President set a goal that 80 percent of America's electricity will come from clean sources by 2035. He also has put forward measures to ensure that the U.S. is the first country to put one million advanced technology vehicles on our roads. These commitments, coupled with private sector investments, will expand our clean energy economy, producing new green jobs in new green industries. Employers will need skilled workers to fill these jobs. Within the Department of Labor, the Employment and Training Administration (ETA) has the primary role in achieving the goal of preparing workers to participate in this expansion. ETA supports successful worker transitions in the changing economy by administering programs that provide employment assistance and job training to individuals in new and emerging fields, including green energy, to meet the current and future needs of employers.

ETA assists States and local areas to better understand labor markets, identify potential skill gaps among workers in the local area, and facilitate the matching of employers with the workers they need. ETA also provides workers with the tools and employment and training services they need to find good jobs. A national network of approximately 3,000 One-Stop Career Centers serves as the cornerstone of the public workforce system. These One-Stop Career Centers bring partner programs together to provide employers, individual job seekers, and workers access to services at one site. ETA also oversees a system of competitive grant programs. Each of these competitive programs has unique eligibility requirements and purposes. Through these grants, the Department promotes strategic partnerships that identify and creatively address labor market demands.

Since 2009, Congress has invested, through the Department's training grant programs, in green skills training and related activities to prepare American workers for careers with solar, wind, biofuels, and other clean-energy providers. Funding from the American Recovery and Reinvestment Act of 2009 provided the largest investment. The Department has also made investments that build upon the Recovery Act, and has encouraged the workforce investment system to support its efforts to align existing programs with green technology and practices.

[1] Zeller, Tom. "Utilities Seek Fresh Talent for Smart Grids." *New York Times*. December 29, 2010. Available online at <http://www nytimes.com/2010/12/30/business/energy-environment/30utility html>.

The Department's experience with these investments illustrates the demand among States and local areas for strategic partnerships that will increase workers' access to green skills training and provide better labor market information.

a. The Recovery Act

The Recovery Act was an unprecedented investment in the green economy. As part of the Recovery Act, Congress provided the Department with $500 million for competitive grants to fund projects "for research, labor exchange, and job training projects that prepare workers for careers in the energy efficiency and renewable energy industries."[2] The Department used these funds to support 189 projects throughout the country.

Recovery Act funds made possible five competitive grant solicitations related to green industry sectors.

- State Labor Market Information Improvement grants: These grants, totaling $48.8 million, support the collection and dissemination of labor market information, and enhance the labor exchange infrastructure to provide career opportunities within clean energy industries. Thirty state workforce agency grantees have employed strategies that enable job seekers to connect with green job banks and help ensure that workers find employment after completing training.
- Green Capacity Building grants: These grants, totaling $5.8 million, increase the training capacity of sixty-two Labor Department grant recipients through a variety of strategies, and provide training opportunities to help individuals acquire jobs in expanding green industries.
- Energy Training Partnership (ETP) grants: These grants, totaling $99.7 million, fund twenty-five projects ranging from approximately $1.4 to $5 million each for training programs that prepare workers for a range of careers including: hybrid/electric auto technicians, weatherization specialists, wind and energy auditors, and solar panel installers.
- Pathways Out of Poverty grants: These grants, totaling $147.7 million, fund thirty-eight projects through which targeted populations are receiving recruitment and referral services; basic skills, work-readiness and occupational skills training; supportive services to help overcome barriers to employment; and other services at times and locations that are easily accessible.
- State Energy Sector Partnership and Training (SESP) grants: These grants, totaling $187.9 million, are designed to achieve a number of goals, including: (1) creating an integrated system of education, training and supportive services that promotes skill attainment and career pathway development for low-income, low- skilled workers leading to employment in green industries and (2) supporting states in implementing a statewide energy sector strategy. Thirty-four awards ranging from approximately $2 million to $6 million each were made to state workforce investment boards and their partners.

[2] *American Recovery and Reinvestment Act of 2009*, Div. A, Title VIII(6), P.L. 111-5 (Feb. 17, 2009).

Three of these grant programs — Energy Training Partnership, Pathways Out of Poverty, and State Energy Sector Partnership and Training — were geared towards providing training and placement services in the energy efficiency and renewable energy industries. Additionally, the Department has emphasized within the design of these grant programs the importance of serving populations most in need of services. For example, the Pathways Out of Poverty grants are targeting services to populations that include veterans, unemployed individuals, high school dropouts, individuals with criminal records, individuals with a disability, and disadvantaged individuals within areas of high poverty. The Department of Labor targeted areas of high poverty by encouraging applicants to focus project efforts in communities located within one or more contiguous Public Micro Data Areas (PUMAs) where poverty rates were 15 percent or higher. PUMAs are geographic areas designated by the U.S. Census Bureau.

Many of the Department's green training grantees have embraced the importance of strategic partnerships and are developing new approaches and strategies that benefit the public workforce system's dual customers—employers and jobs seekers. For example, in Detroit, Michigan, one grantee, the Southwest Housing Solutions Corporation, convenes employer advisory committee meetings every six weeks to seek out collaborative efforts with organizations such as the United Way and the Michigan Department of Transportation to facilitate placement of their program participants. These employer networking events and other regular meetings between employers, training managers, and grantee staff are building integrated approaches to expand the workforce system's capacity to support and spur green job growth.

These programs and partnerships are starting to show results. As of June 2011, over 52,000 people have participated in our Recovery Act-funded green training grant programs. Approximately 60 percent of these individuals were unemployed when they entered the program and needed training to find a new job; the remaining 40 percent were incumbent workers who already had a job but needed to upgrade their skills. To date, our data show that over 26,000 program participants have completed their training. Approximately 15,000 of those individuals did not have a job upon program entry. Of those individuals without a job when they started the program, 52 percent have found work so far, with 83 percent of these individuals obtaining employment in the same industry or occupation for which they trained. We expect these numbers to continue to rise.

In addition to the targeted investments, the Recovery Act also provided short-term increased funding for several of the Department's already existing programs. This influx in funding largely benefited traditionally hard-to-serve populations, such as at-risk youth, low-income adults, and older workers. For example, in Indiana, funding was used by a partnership of organizations that included the Department of Workforce Development, Indiana Department of Natural Resources, Indiana Department of Transportation, and Indiana National Guard to provide 2,000 youth with green work experience at Indiana Department of Natural Resources worksites. These work experiences led participating youth to complete work-readiness goals, obtain part- and full-time positions, and enroll in post-secondary school or training programs.

I have had the opportunity to see these training investments in action as I have traveled throughout the country. In July, I visited the Santa Clara Valley Transportation Authority. The Authority has developed a fleet of 90 hybrid buses that were built in Hayward, California. The

Department has partially funded a partnership between the Authority and the Amalgamated Transit Union to train Authority workers. I met workers who have found new, sustainable jobs that support their families, such as Peter Reyes, who was laid off from his job in the banking industry and is now working as hybrid bus driver.

In April, I visited Viking Drill and Tool, a grantee in Minnesota. Viking has partnered with the Blue Green Alliance in St. Paul. Their grant is helping to fund the GREENPower program. The GREENPower program is training manufacturing workers to fill the jobs being created in the clean energy economy. The grantees designed GREENPower training to increase workers' skills, including by teaching workers green manufacturing techniques and processes, to make them employable in the green economy. I met with workers who have already gotten new, better jobs as a result of their new skills. I heard from Viking's management about the cost savings their business has realized through their efforts at conserving and recycling. In addition to saving on energy and materials consumption, the company also has lowered its waste disposal costs. Instead of paying to dispose of the oil it uses as part of its production process, Viking is now reclaiming, and then reusing, up to 50 barrels of that oil every day. That is 50 barrels the company does not have to buy each day. At the suggestion of a worker, Viking has also been able to save on packing material costs by recycling used cardboard boxes turning them into packing fill. Viking's president was justifiably proud to note that his company is more competitive as a direct result of the company's participation in GREENPower.

These are just some of the examples of the investments to date that are making a difference for workers and employers across the country.

b. Building on Recovery Act Investments

While the largest influx of funding for green job training was provided through the Recovery Act, Congress has continued to provide the Department with resources to build upon the Recovery Act investments. As an example, last year Congress provided funding for the Department to establish the Green Jobs Innovation Fund. Under this fund, the Department recently awarded six grants totaling $38 million to programs designed to expand the pipeline of workers with the skills needed for green jobs through evidence-based strategies that leverage Registered Apprenticeships, pre-apprenticeship programs and community-based partnerships to build sustainable green career pathways.

One of the Green Jobs Innovation Fund grants went to Jobs for the Future, Inc., based in Boston, Massachusetts. This past July, Jobs for the Future began its plan to serve over 1,000 participants spread among several cities across the country. The grant will leverage the grantee's expertise in green sector training and the capacity of its affiliates to enhance and expand green career pathway training programs for unemployed, dislocated, and lower-skilled incumbent workers. This innovative program has a "dual customer" orientation – meeting both the pressing workforce needs of employers as well as the needs of workers seeking career advancement opportunities in those sectors.

c. Building on the Strong Record of Success in the Department's National Programs

In addition to the training and related grants that comprise most of the Department's direct support of potential green job workers, the Department's "national programs" have been working to adapt participants in existing, non-green-job-specific programs to the new green economy. Funding for some of these initiatives has come through the Recovery Act, while others represent initiatives within regular programmatic appropriations. For example, at the request of and working with employers, our ETA Office of Apprenticeship has identified several new occupations as apprenticeable occupations, including Wind Turbine Technician, Energy Auditor and Analyst, and Geothermal and Well Drilling Operator.

The Department's YouthBuild program targets out-of-school youth and provides an alternative education pathway to a high school diploma or GED. YouthBuild programs are at the forefront of training low-income youth in green construction techniques, preparing youth for green jobs in the building industries. In some instances, such as Casa Verde YouthBuild in Austin, Texas, youth are being trained in occupations that are green job specialties, such as solar panel installation, while building energy-efficient, affordable homes in East Austin for first time homebuyers. Several programs, including ReSource YouthBuild in Burlington, Maine, and Comprehensive Community Solutions in Rockford, Illinois, offer de-construction certifications. Most YouthBuild programs have modified their construction training programs, incorporating cutting-edge, energy efficient and sustainable building practices. Youth leave the program with skills that will enable them to seamlessly incorporate green building practices into any future construction job they may have.

The Department's Job Corps program also trains the next generation of American workers for the next generation of American jobs. It has trained more than 15,000 students in green training programs, including in areas such as advanced manufacturing, construction, solar panel and photovoltaic installation, and SmartGrid technology. For example, at the Clearfield Job Corps Center in Utah, 14 students recently graduated from green training programs, including Renewable Resources, Overhead Line Construction, and Advanced Automotive. Each of these students has already found a job.

Further, the formula programs funded under the Workforce Investment Act's (WIA) Adult and Dislocated worker programs have successfully incorporated green skills training. For example, performance data reported for the second quarter of Program Year 2010 show that participants who completed the WIA Adult and Dislocated Worker programs and received training in green occupations had better outcomes than those who received training in non-green occupations.[3]

IV. Leveraging Information and Measuring Long-Term Effectiveness

To maximize the impact of the Federal investments in green industries, the Department established an online Green Jobs Community of Practice. This online community serves as a tool for identifying and sharing best practices related to green jobs skills and training to improve program practices for workforce system customers. The Community of Practice hosts a variety

[3] Workforce Investment Act Standardized Record Data

of stakeholders including other Federal agencies, the public workforce system, grantees, and green employers. Posts made to the site receive hundreds of views and over 8,600 users have registered on the site. This site also has been used by the Department as a vehicle to provide technical assistance. Additionally, feedback that was obtained through this online community helped shape the development of the Green Jobs Innovation Fund.

To ensure that the Department's green jobs-related grants lead to the most effective outcomes, the Department also has launched three evaluation projects. The first evaluation is an implementation study of the four Recovery Act-funded "training and placement" grant programs. This study will examine all 152 of these grants, to understand in-depth, their implementation, explore the extent to which these grantees employed promising practices that could advance the field, and evaluate whether successful grantee outcomes are associated with these practices. The Department expects to receive a final report in July 2012. The second evaluation is an impact evaluation of four grantees – two of which are green jobs related. This will rigorously test whether investments in training for green jobs using specific training approaches make a difference in participants' future earnings. An interim report is due in March 2014, with the final report due September 2017. The third evaluation, currently in the early stages of data collection, will study the implementation and outcomes of the State Labor Market Improvement Grants. This final report is expected in the fall of 2012.

Throughout all of our efforts to help workers prepare for and obtain green jobs, the Department has remained cognizant of its responsibility to be a good steward of public funds. Therefore, we have emphasized accountability and transparency. The Department continuously monitors and evaluates our green investments to make sure that they are achieving their objectives and are the best use of the funds. On a quarterly basis, the Department aggregates data reported from grantees to ensure that programs are serving the intended workers and achieving the positive outcomes that workers and taxpayers expect. Measuring the effectiveness and ensuring the transparency of our investments in job training is of paramount importance to the Department.

V. Green Initiatives Beyond Job Training

In addition to the Department's work furthering green skills training and labor market information, the Department also recognizes that green jobs are not good jobs unless they are safe. The Department's Occupational Safety and Health Administration (OSHA) is committed to helping workers and employers ensure the safety of the often new processes, techniques, and materials implemented in green jobs. For example, OSHA recently awarded a grant to the Sustainable Workplace Alliance to conduct free training classes about hazards involved with spray polyurethane foam, a weather insulating and sealing agent that contains a chemical that could cause work-related asthma. Further, OSHA has developed a website that provides information on OSHA requirements that apply to green energy industry sectors, including wind, biofuels, solar, and other renewable energy sources.

OSHA also has provided educational material and compliance assistance to employers in the green energy industry at numerous meetings and conferences. For example, in April 2010 OSHA hosted a Small Business Forum, "Green Jobs: Safety and Health Outlook for Workers and Small Employers." The Forum focused on strategies that small businesses can use to reduce

safety and health hazards in their green workplaces. Just last month, OSHA signed an Alliance agreement with the American Wind Energy Association to partner with the wind industry on developing compliance assistance materials on hazards in that industry.

VI. Conclusion

The Department has taken a comprehensive approach to supporting green industries, including green energy, and the greening of other industries by helping States and localities provide a pipeline of skilled workers to meet the current and future needs of employers. Our approach relies on strategic partnerships at the Federal, State, and local levels. The investments Congress has made through the Department are part of a wide array of public and private efforts to invest in the clean energy economy of the future. Green industries are both an important part of our immediate economic recovery and a permanent component of a successful 21st century economy.

Chairman ISSA. Thank you, Madam Secretary.
Secretary Poneman.

STATEMENT OF DANIEL PONEMAN

Mr. PONEMAN. Chairman Issa, Ranking Member Cummings, and distinguished members of the committee, thank you for the opportunity to appear before you today to discuss the Department of Energy's program to strengthen our energy security, to advance clean energy innovation, to create jobs for the American people and to make the United States more competitive in the global economy.

Since unlike Secretary Solis, I am not yet known to the committee, I will allow myself a brief introduction. I have spent over 35 years working in the national security arena, including 6 years working for President George Herbert Walker Bush and President Bill Clinton at the National Security Council. I spent a number of years in the private sector as well, before returning to public service in 2009 at the Department of Energy.

Worldwide, between $5 and $10 trillion are spent on energy every year. This is an enormous market that is expected to increase dramatically in the coming years as developing countries like China and India continue to grow.

Countries around the world are already moving aggressively to develop and deploy the clean energy technologies that will be needed to meet the growing global demand. Just last year, global clean energy investments reached $243 billion, an increase of 50 percent from 2009. And the pace of growth shows no sign of slowing.

There is a significant economic and employment opportunity to be seized by the companies and the countries that successfully innovate and compete in these clean energy industries. This is a race. It is a race to develop the technologies and the domestic manufacturing capacity that will drive job creation and set a foundation for the future prosperity of the United States.

Our competitors are stepping up, and they are playing to win. The United States once led the world in clean energy investments. Now we rank third, behind China and Germany. So we have a choice to make today. We can compete in the global marketplace, creating American jobs and selling American products, or we can resign ourselves to importing the technologies of tomorrow from abroad.

I believe that we can and must compete. That is why, under President Obama's leadership, we have taken unprecedented steps to deploy American innovation and to make sure that the United States is a leader in the global energy economy of the future. Through our investments in clean energy, we are creating hundreds of thousands of new clean energy jobs and catalyzing investments by the private sector, while reducing our excessive dependence on energy imports and saving money for families and businesses across the country.

This is a race that we can win. But we must recognize that it is not a race that can be won overnight. It is going to take a sustained commitment to build a competitive clean energy industry in America, especially as our companies are forced to compete against foreign competitors like China that are providing their companies with significant State support. To meet this challenge, we have fo-

cused our investments in three main areas. First, advancing innovation through research and development; second, expanding American manufacturing capacity; and third, enabling the deployment of innovative, clean energy technologies at commercial scale when private financing is not widely available.

These efforts will continue to be essential in growing our economy, moving private capital off the sidelines and expanding new industries in the United States. They have helped to put hundreds of thousands of Americans back to work.

Even as we face difficult budget choices, the Government can and should continue to play a role in supporting American companies and helping them to compete globally. American jobs today and in the decades to come depend on it.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Poneman follows:]

Testimony of
Deputy Secretary Daniel Poneman
U.S. Department of Energy
Before the
Committee on Oversight and Government Reform
U.S. House of Representatives

September 22, 2011

Chairman Issa, Ranking Member Cummings, and Members of the Committee, thank you for the opportunity to appear before you today to discuss the Department of Energy's (DOE) programs to strengthen our energy security, to advance clean energy innovation, to create jobs for the American people, and to make the U.S. more competitive in the global economy.

In the U.S., we spend more than a trillion dollars a year on primary energy.[1] Worldwide, between five and ten trillion dollars are spent on energy every year. Energy represents a large and growing segment of the global economy.

The demand and corresponding markets for energy worldwide are expected to increase dramatically as the economies and the middle classes in countries like China and India continue to grow. As global demand for energy grows, the need to secure affordable energy resources will continue to drive demand for clean energy technologies in nations around the world.

This is not just something that will happen five, ten, or twenty years down the line. This is happening today. Countries are moving aggressively to develop and deploy the clean energy technologies that will transform the global energy economy in the coming decades.

Global investment in clean energy reached $243 billion in 2010, up 50 percent from 2009.[2] And the pace of growth shows no signs of slowing.

Take the solar energy industry for example, just one segment of the broader clean energy economy. The International Energy Agency projects that solar power will grow steadily, and could grow to produce nearly a quarter of the world's electricity within four decades.[3] That would require the manufacturing of trillions of dollars-worth of equipment in solar technologies, including more than $3 trillion in solar panels alone — a significant economic and employment opportunity to be seized by the companies and countries that successfully innovate and compete.

This is a race. It is a race to capitalize on the tremendous economic and job growth potential in these industries. It is a race to develop the technologies and the manufacturing capacity that will be a foundation for the future prosperity of the United States.

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[1] http://www.eia.gov/totalenergy/data/annual/txt/ptb0105.html
[2] Pew Charitable Trusts (2011), "Who's Winning the Clean Energy Race? 2010 Edition."
[3] http://www.iea.org/papers/2010/pv_roadmap.pdf and http://www.iea.org/papers/2010/csp_roadmap.pdf

Our competitors are stepping up and they are playing to win. The United States once led the world in clean energy investments. Now we rank third, behind China and Germany.[4] So we have a choice to make today -- we can compete successfully in the global marketplace — creating American jobs and selling American products — or we can resign ourselves to importing more of the technologies of tomorrow from abroad.

We are therefore taking measures to successfully compete in these emerging global industries and to diversify our energy portfolio by investing in clean energy. We are deploying American assets, innovation, and technology so that we can safely and responsibly develop more energy here at home, be a leader in the global energy economy, and compete for the new jobs of today and of tomorrow.

Over the past two and a half years, under President Obama's leadership, we have taken unprecedented steps to begin building America's clean energy economy.

This is a race, and it is a race we can and should win. But we must also recognize that this is not a race that can be won over night. It is going to take a sustained commitment for the U.S. to build a competitive foundation in the clean energy economy.

And we must recognize that in many cases, American companies are forced to compete against foreign companies with significant state support. China, for example, is providing considerable financing and other support to Chinese solar manufacturers, and Germany, Italy, and other countries are using a range of other policies to promote renewable deployment.

That is why our efforts at the Department of Energy and across the federal government play such an important role in helping our companies succeed and growing our economy.

It is why we have supported a broad portfolio of energy technologies that are creating jobs for U.S. workers and strengthening our energy security. This includes efforts across the Administration to safely expand access to oil and natural gas resources; to restart our domestic nuclear industry; to support the launch of new carbon capture and storage projects; to deploy a new fleet of electric and alternative-fuel vehicles; to develop advanced biofuels and more efficient engines to reduce our dependence on oil; to improve the efficiency of America's homes, buildings and factories to save money for consumers and businesses; to deploy renewable energy resources like wind and solar that will diversify America's energy portfolio; and to modernize this country's electrical grid.

These clean energy investments by the federal government and the private sector are building the foundation for new industries in America and improving our ability to take a leadership role in defining the future of the world economy.

[4] Pew Charitable Trusts (2011), "Who's Winning the Clean Energy Race? 2010 Edition."

Role of Government

Some have questioned what role, if any, government should play in the development of new energy technologies. After all, the fountainhead for innovation and entrepreneurial activity is the private sector, not government. And the vast majority of energy assets — from power generation and our air, sea and land transportation fleets to the manufacturing base that builds them and the service sector that operates them — lie in private hands.

But there are certain things the private sector cannot reasonably be expected to do in a free market economy, including undertaking investments in clean energy research and development that have high technology risks, or pursuing projects that primarily confer national benefits beyond the return to shareholders, such as enhancing national security or decreasing pollution.

Smart government policies can play a crucial catalyzing role in promoting research and development and supporting emerging technologies. Research and development creates knowledge whose benefits are not fully captured by the individuals and businesses who pay for the research. Government investments in early-stage technologies, which private investors are often unwilling to fund due to technology and market risks and long payback periods, therefore have played an important and accepted role in American innovation. By supporting this innovation through grants and other programs, government can help secure broader benefits for the economy as a whole.

For example, the Department of Energy invested over a hundred million dollars in developing technology to unlock unconventional gas from shale deposits in the late 1970s and early 1980s when private companies showed little interest in that opportunity; this nation now is more secure as a result, obtaining over a quarter of our natural gas supplies from shale deposits.

And while venture capital and private equity have invested in innovation and the development of some clean energy technologies, commercial lenders have been generally unwilling or unable to underwrite the large-scale, risky, long-payback loans that are necessary for first movers to deploy and validate clean energy technologies at scale. Government policies – in the form of grants, tax credits, and loan guarantees – can help address the market and technology risks of bringing innovative technologies to scale by supporting projects that demonstrate the real-world feasibility of a new technology to potential financers.

Congress has long recognized the compelling policy rationale of investing in early stage energy technologies. Indeed, Congress recognized the need to help overcome the market barriers to investment in innovative energy technologies by creating DOE's Title XVII loan programs in the Energy Policy Act of 2005 and subsequently creating and funding the 1705 program in the American Recovery and Reinvestment Act of 2009.

To be clear, the private sector will ultimately make the decisions and investments that will drive the transformation to a clean energy future for America. But the public sector has a role to play, as it always has, as a leader by example in implementing clean energy and deploying energy efficient technologies, and as a catalyst in unlocking the ingenuity and capital of the American marketplace.

Not all of the energy technology endeavors we invest in will succeed. This is expected. Innovation requires an inherent risk due to the newness of technology and the difficulties scaling up and overcoming market barriers. But we must innovate. Innovation is the key to competitiveness. By pursuing a diverse portfolio of technologies, we work to identify promising innovative technologies and bring them online to address the energy challenges we have and to meet demand around the world.

By advancing innovation through research and development, supporting commercialization of new technologies, promoting American manufacturing capacity, and enabling the deployment of innovative clean energy technologies at commercial scale, we can create a strong and successful clean energy industry in America that will support new jobs and industries in the years ahead.

Innovation

As Bill Gates, the Founder and Chairman of Microsoft, said recently, "We have seen time and again the catalyzing role the federal government can play in technological breakthroughs — GPS, the Internet, and commercial aviation to name a few — with important societal and economic benefits. Today, there is no more important issue deserving of increased government research funding than clean energy."

I could not agree more. The federal government has a critical role to play spurring innovation and supporting research and development efforts for the technology breakthroughs needed to win the clean energy race.

The private sector is generally not willing to invest in early-stage innovative technologies without a strong signal of market demand. These are technologies, however, that could create entire new industries and generate enormous benefits for the country, just as the Defense Advanced Research Projects Agency's (DARPA) investments led to the Internet, which along with subsequent technology and business developments drove enormous gains in our productivity and economic growth by changing the way we lead our lives.

That is why, as part of the Obama Administration's renewed commitment to research and development, the Department of Energy launched the Advanced Research Projects Agency-Energy (ARPA-E) to develop game-changing clean energy technologies. Based on the DARPA model, ARPA-E invests in cutting-edge, high-risk technologies that, if successful, could transform the global energy economy by fundamentally changing the way we use and produce energy.

To date, the Department of Energy has supported more than 120 individual projects under ARPA-E, including projects to develop improved energy storage devices for the grid; intelligent building systems; next generation vehicle batteries that could make longer range electric cars that are cheaper than today's gasoline cars; and groundbreaking new liquid fuels that could be produced by bacteria from a combination of carbon dioxide and chemical energy or electricity.

Even after just two years, many of ARPA-E's projects are already generating additional private sector investment. For example, eleven of the projects receiving $39.1 million in ARPA-E

funding have collectively garnered more than $200 million in follow-on funding. Also, several new ventures have already formed spin-off companies from ARPA-E-funded projects, creating yet more new technologies, products, and jobs.

The Department of Energy is also focused specifically on advancing innovation in the solar energy sector, where we face some of the toughest competition from abroad. Building on the success of some of the Department's previous solar energy research investments, this year Secretary Chu launched the SunShot Initiative, an ambitious effort to make solar energy technologies cost-competitive with fossil energy by the end of the decade. Whoever can bring installed solar energy to a competitive price point relative to other sources of power generation will gain a major competitive edge in solar manufacturing. We want that competitive edge to propel companies to invest in production capacity and research laboratories here in the U.S.

By focusing on the full solar energy system, from solar cells and modules to the mounting devices and the permits that are needed for installation, the SunShot Initiative will help spur American technology innovation, while developing ways to help keep solar manufacturing here in America.

An example to show you what I mean:

Through the Photovoltaic — or PV— Incubator program, the Department of Energy invested relatively modest sums — $56 million between 2007 and 2010 — in twenty innovative solar energy start-up companies. Those investments enabled technical advances that helped the companies to scale their technologies and, to date, these same firms have attracted more than $1.3 billion in private investment — a 25-to-1 leveraging of the Department's contribution. According to information provided by these companies, they already employ more than 1,200 people in high-tech jobs — a number that is poised to grow rapidly as new manufacturing facilities come online.

Another example: Semprius is a solar startup company based in Durham, North Carolina, that manufactures high-concentration photovoltaic solar modules. It got its start with a DOE-supported research project at the University of Illinois. It was awarded a $3 million PV Incubator grant in 2010. Earlier this summer, the company announced its plans to build a new high-tech manufacturing facility in Henderson, North Carolina, which is expected to create more than 250 full-time jobs over the next five years. The announcement of the new facility followed on the heels of news that Siemens recently participated with others in a $20 million investment in the company, bringing needed private capital off the sidelines and into the economy.

The success of the company so far and the hundreds of jobs it is creating in a hard-hit community in North Carolina shows the tremendous benefits that can come with strategic federal investments in innovation.

Manufacturing

As Secretary Chu often says, our motto can and must be, "Invented in America, made in America, and sold around the world." While the United States has long been the world's leader

in manufacturing, we have lost the lead in some areas such as clean energy manufacturing, where other countries have invested heavily. With strong leadership, we can regain lost ground and establish new footholds in the competition for clean energy manufacturing. That is why the President has focused on expanding U.S. manufacturing capacity by launching the Advanced Manufacturing Partnership and other programs so that the products we develop here are built here.

The investments that we made under the Recovery Act have played a critical role in rebuilding U.S. manufacturing, reviving supply chains across the country, and putting people back to work. Take the example of the domestic battery manufacturing sector for electric vehicles. As part of the President's efforts to dramatically reduce America's dependence on oil through vehicle electrification, alternative fuels, and increased fuel efficiency, the Department of Energy made key investments in advanced battery and component manufacturing plants across the country, along with a select number of electric vehicle manufacturing facilities. These plants, all of which are under construction now, are responsible for thousands of construction jobs. Once complete, they will support thousands of direct manufacturing jobs in their communities, according to recipient companies' estimates.

In 2008, the United States was producing virtually zero batteries for electric vehicles. As a result of the investments we have made, by 2015 the U.S. will have the capacity to produce enough batteries and components to support one million plug-in hybrid and electric vehicles per year, approximately 40 percent market share in this emerging automotive industry, which employs Americans all across the country.

In addition to creating manufacturing jobs and expanding the supply chain, these investments have also helped cut the cost of producing electric vehicle batteries, a key factor in reducing the overall cost of electric vehicles. Because of new high-volume manufacturing and technological improvements, 100-mile range batteries that cost $33,000 in 2008 are anticipated to cost about $16,000 by the end of 2013 and $10,000 by the end of 2015.[5]

It was by no means a given that these companies were going to establish their manufacturing facilities in the U.S. In fact, we faced tough competition from many of our European and Asian competitors. For many of these companies, it was the support from the federal government through DOE grants under the Recovery Act and through the Advanced Technology Vehicle Manufacturing (ATVM) Loan program that helped these and other companies make the decision to bring their commercial-scale manufacturing facilities to America.

As an example of the impact of DOE grants, Mary Ann Wright, Vice President and Managing Director of the Business Accelerator Project at Johnson Controls, Inc., testified before the House earlier this year and said, "In August 2009 we were awarded a Recovery Act matching grant to create an advanced battery manufacturing industry in the United States. This grant, along with significant incentives from the State of Michigan, played a key role in our decision to build a manufacturing plant for advanced batteries in this country. Without this support from the DOE, we would have likely expanded our manufacturing footprint in Europe or Asia. As a result of the

[5] http://www.whitehouse.gov/files/documents/Battery-and-Electric-Vehicle-Report-FINAL.pdf

Recovery Act grant, we also re-located our electronics engineering from France to Holland, MI creating new, high quality jobs."[6]

And she's not the only one. David Vieau, the Chief Executive at A123 Systems, a DOE grant recipient, told a reporter, "This money was instrumental in the decision to put manufacturing in North America. We think that without this, it's very unlikely that plants of this size and nature would have been happening in the U.S."[7]

Based on numbers from the company, there are now more than 1,000 Michigan-area residents trained and working at two new A123 Systems facilities. It's easy to forget that each of these 1,000 workers has their own story of the impact this has had on their lives. Today we are releasing a video based on an interview with one of the A123 Systems employees, Annette Herrera. She talks about her struggles finding a job, her gratitude to have found one, and the joy she finds in this new profession. Her story is available on the Department's website, and there are workers like Annette all across the country.

In addition, Nissan received an ATVM loan to build a new manufacturing facility for the all-electric Nissan Leaf vehicle in Smyrna, Tennessee. The company reports that between 700 and 800 construction workers are on the job building the facility. The retooling work is just starting to modify an existing vehicle assembly line to enable the assembly of up to 150,000 Nissan Leafs annually in addition to the other Nissan vehicles currently being assembled in Smyrna, Tennessee. Once construction is completed, Nissan expects that the plant will support more than 1,300 permanent jobs.

The workers at each of these manufacturing plants are doing their part to rebuild America's automotive industry, reduce our dependence on oil, and help U.S. companies to succeed in the global market.

Supporting Private Sector Commercialization Efforts

In addition to investing in research and development and helping to expand U.S. manufacturing capacity, the government often has a role to play in commercializing emerging technologies, particularly where private financing is not sufficiently available to support investment at commercial scale.

The Department of Energy has undertaken a number of steps to help the private sector successfully move technologies from the laboratory to the market, to create new jobs, and to get capital flowing back into the economy.

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[6] Testimony of Mary Ann Wright, Vice President and Managing Director, Business Accelerator Project, Johnson Controls, Inc. Johnson Controls, Inc. before the United States House Select Committee on Energy Independence and Global Warming (March 10, 2010): http://globalwarming.house.gov/files/HRG/031010recovery/wright.pdf

[7] http://www.wjlx.com/news/headlines/102780214.html)

Here are just some of the many actions we are taking to facilitate the growth and success of America's clean energy companies, to support private sector efforts to commercialize new products, and to address ongoing challenges faced by clean energy investors and entrepreneurs:

- **Spurring the deployment of commercial-scale manufacturing and power generation projects through loan programs**

In nascent industries, there are often technology and market risks that private sector lenders cannot or will not underwrite. As mentioned above, Congress recognized the need to help overcome the market barriers to investment in innovative energy technologies by creating DOE's Title XVII loan programs in the Energy Policy Act of 2005 and subsequently creating and funding the 1705 program in the American Recovery and Reinvestment Act of 2009. This program offers loan guarantees to innovative clean energy manufacturing or power generation projects in those instances where private financial markets have been unwilling in many cases to take the risks associated with bringing innovative technologies to scale and has been crucial to the deployment of renewable energy technologies. Additionally, the 1703 loan program also supports nuclear and advanced fossil energy projects, and the ATVM program provides loans for more efficient vehicles and components as previously mentioned.

Our loan programs are today supporting a diverse portfolio of more than 40 companies that plan to employ more than 60,000 Americans directly and give us a chance to compete and succeed in the global clean energy race.

The projects are spread across the country, and reflect an array of clean energy and automotive technologies, including wind, solar, advanced biofuels, geothermal, transmission, battery storage, and nuclear. They include:

- Three solar manufacturing projects;
- Two electric vehicle manufacturing facilities in the U.S.;
- The world's largest wind-farms;
- Two of the world's largest concentrated solar power facilities;
- The first new nuclear power plant expected to begin construction in the U.S. in the last three decades; and
- The world's first flywheel energy storage plant.

Cumulatively, these projects will generate more than 35 million MWh of clean energy each year — enough to power over three million households, or more than all the households in Arizona.[8] And they will avoid over 20 million tons of CO_2 annually — more than is produced by the nearly four million registered vehicles in Louisiana.[9] These environmental and national security benefits come hand in hand with job creation.

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[8] Sources: EIA 2005 Residential Energy Consumption Survey, Table US8; U.S. Census Bureau, American FactFinder, 2010.

[9] Sources: U.S. Environmental Protection Agency, Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle; U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2008, Table MV-1 (December 2009).

- **Promoting capital investments in renewable energy projects**

Imagine being eligible for a tax credit to deploy renewable energy technologies that would contribute to our national security, reduce emissions, and create jobs, but you could not receive the credit because you did not owe enough in taxes. That was the situation for many developers interested in investing in American renewable energy projects who could not claim the investment tax credit or production tax credit for otherwise eligible projects, thus inhibiting economic activity. In response, Congress created the 1603 program under the Recovery Act, which provides payments-in-lieu-of-tax credits for renewable energy projects. The program, which is administered by the Treasury with support from the Department of Energy, has spurred investment in a broad range of renewable energy projects — from large-scale wind farms to a small solar array on the top of a dentist's office, and everything in between. Since 2009, the program has catalyzed $20 billion in private capital to support nearly 20,000 renewable projects, with projects in place in every state in the nation and the District of Columbia. All told, these projects are generating enough clean energy to power more than 3 million homes, or enough energy to power all the homes in Virginia.

It is important to recognize that these projects would have been eligible for the existing investment tax credit or production tax credit, but through the 1603 program, investors without a current tax liability can receive an immediate payment that frees up capital once a project is completed, instead of carrying over the tax credit to a subsequent year. And in many cases, we have seen developers reinvest the capital back into projects, further stimulating the economy and creating more jobs.

- **Promoting energy efficiency and clean energy improvements**

As part of the Better Buildings Initiative, President Obama set an ambitious goal of reducing energy use in the commercial buildings sector 20 percent by 2020. This could generate nearly $40 billion in savings every year. [10] The Initiative, which is co-led by the President's Council on Jobs and Competitiveness and former President Clinton, calls for tax incentives, innovative financing, increased training and better policies, codes and regulations, and performance standards.

President Obama also issued a challenge to university presidents and private sector CEOs across the country to come together to invest in the energy efficiency of their facilities. These investments are good for their bottom-line, good for the economy, and good for the planet.

The President also is leading by example. As the largest U.S. energy consumer, the Federal Government has a tremendous opportunity to reduce energy consumption in the approximately 500,000 buildings it owns and more than 600,000 fleet vehicles it operates. That is why the President signed Executive Order 13514 to help move the nation towards a clean energy economy by practicing what we preach and improving the government's energy efficiency while expanding our use of clean energy, further driving market demand to support clean energy jobs.

[10] http://www.whitehouse.gov/the-press-office/2011/02/03/president-obama-s-plan-win-future-making-american-businesses-more-energy

Energy efficiency improvements in the industrial and residential sectors also can deliver tremendous savings and economic benefits while creating jobs that cannot be off-shored.

For example, the Texas Medical Center in Houston, the world's largest medical center, recently celebrated the completion of an energy-efficient, 48 megawatt combined heat and power system, which channels energy that conventional electricity generation plants would waste as heat back into the system to power things like the air conditioning, space heating, chilled water – or even to generate additional electricity. The Medical Center projects that the new system, which was funded in part by a $10 million Recovery Act grant, will help save about $200 million in energy costs over the next 15 years. According to the electricity company on site, the Thermal Energy Corporation, the project supported approximately 400 jobs directly associated with construction of the combined heat and power plant.[11]

In addition, DOE's Weatherization Assistance Program uses best practices and technologies to help low-income households save money by saving energy. Since 2009, DOE has already helped make the homes of more than 500,000 low-income families more energy-efficient. On average, these families save more than $400 on their energy bills in just the first year, in addition to providing significant non-energy benefits like keeping homes warmer in the winter and cooler in the summer.[12] Program recipients in all 50 states and the U.S. territories reported over 14,000 jobs across the country with additional jobs generated in the supply chain.

- **Streamlining processes to move technologies to market faster and cheaper**

Earlier this year, the Department launched the "America's Next Top Energy Innovator" challenge, which gives start-up companies the opportunity to exercise options agreements to license groundbreaking technologies developed by the Department of Energy's national laboratories for $1,000 each and to build successful businesses. As part of this effort, the Department reduced both the cost and the paperwork requirements for start-up companies to obtain licensing agreements for the thousands of patents and patent applications held by our 17 national laboratories.

As Vice President Biden explained when announcing the first commercial agreement under the program, "Now, more than ever, America's future competitiveness depends on our ability to innovate and our capacity to live up to our rich history of technological advancement. This kind of public-private partnership fosters extraordinary innovation, allows brilliant ideas to develop, and gives businesses the tools they need to bring technology to the market."[13]

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[11] http://energy.gov/articles/world-s-largest-medical-center-now-among-most-energy-efficient, http://www.texasmedicalcenter.org/root/en/TMCServices/News/2009/11-15/10+Million+Awarded+for+TECO's.htm

[12] http://weatherization.ornl.gov/pdfs/ORNL_TM-2010-66.pdf

[13] http://energy.gov/articles/vice-president-biden-visits-national-renewable-energy-laboratory-announces-first-agreement

The Colorado-based startup US e-Chromic, LLC, will be using a technology developed at the Department's National Renewable Energy Laboratory (NREL) to create a new thin-film window material that makes windows more energy-efficient while reducing cooling costs for consumers.

Supply Chains

In both manufacturing and large-scale deployment, the indirect jobs created can be at least as significant as the direct jobs that result from a specific grant or loan. As a result of the Administration's comprehensive approach to building America's clean energy future, we have seen supply chains across the country reenergized in new ways.

When we discuss supply chains, we are referring to the entire flow of commerce among manufacturers and their suppliers. This includes equipment and product suppliers that provide materials, software, hardware, etc., for a specific project.

For example, last year the Department awarded a $117 million loan guarantee to build the Kahuku wind farm in Hawaii that will supply clean electricity to roughly 7,700 Oahu households per year. The project employed 200 workers during construction, using wind turbines that were built in Cedar Rapids, Iowa. The project also features a state of the art energy storage system supplied by a company in Texas. All told, the supply chain reached 104 U.S. businesses in 21 states.

Additional economic development also results from new workers joining a community or having additional resources to spend.

That's what we see happening in Gila Bend, Arizona, a town of about 2,000 residents that sits nearby three large-scale solar facilities under construction. So far, about 850 construction workers are working near the town, bringing with them millions of dollars in economic benefits. One of the owners of a local lunch spot in town — Little Italy — explained that because of the work, the restaurant's business is up at least 20 percent from the previous summer.

Policy Direction

The government also has an important role to play setting policies that can provide direction and signal stability to the market.

For example, since 2009, President Obama has led the effort to establish aggressive fuel efficiency standards for vehicles that will dramatically reduce the amount of oil and gasoline needed to power America's cars and trucks. By working in partnership with auto manufacturers, autoworkers, environmental groups and other stakeholders, the Department of Transportation (DOT) and the Environmental Protection Agency (EPA) have been able to propose and implement a series of historic standards, the first of which are already in effect for the cars and trucks rolling off assembly lines now.

These standards establish a framework for the private sector to succeed. They encourage manufacturers and auto companies to continue to innovate by providing clear direction for the

market. With that policy direction, companies can move forward with investments that make commercial sense and create jobs.

For instance, with the certainty of new fuel efficiency levels in the coming years, Ford Motor Company has begun the process of retrofitting and upgrading 13 factories across Illinois, Kentucky, Michigan, Missouri, and Ohio to produce more fuel-efficient vehicle models. The company is employing 33,000 people in these efforts.

And earlier this summer, President Obama took the additional step of announcing fuel efficiency standards for passenger vehicles out through 2025, which would provide the market with policy certainty over the medium and long-term. Under the President's leadership, DOT and EPA, along with the State of California and thirteen of the world's largest auto companies, worked together to forge an agreement that will require performance equivalent to 54.5 miles per gallon by 2025. This agreement represents the single most important step the nation has taken to reduce our dependence on oil. Together with the standards signed last year, the new fuel economy standards will save American families $1.7 trillion dollars at the pump over the lifetime of the programs. And they will save consumers thousands of dollars at the pump. It will help spur American innovation and exports and create new jobs here at home.

Similarly, minimum efficiency standards for residential and commercial appliances have helped to drive innovations in product design and manufacturing that reduces the energy used in a particular product, and saves money for consumers on their energy bill. Since 2009, the Department of Energy has finalized new efficiency standards for more than thirty household and commercial products, which are estimated to save consumers a total of $300 billion through 2030.[14]

Conclusion

Today, we find ourselves in challenging times, facing hard budget choices, and we must act to reduce the federal deficit. As a result, some people argue that we should reduce our investments in clean energy. Others argue that the best thing the government can do is "get out of the way" of business, and let the free market work.

However, the government can and should play an important role in supporting and catalyzing the private sector in the circumstances I have described today. The government's role in investing in science and innovation applies even – or at times especially – in times of national stress. And even as we focus on job creation now, we must do so with an eye to the future. This is part of America's heritage and part of what makes America great.

Let me give a few examples. The Civil War threatened to sunder the Nation, and produced the greatest threat we have ever faced to our Nation's survival. And yet, even during its darkest hours, we planned for the future.

[14] http://energy.gov/articles/department-energy-joins-manufacturers-environmentalists-announce-new-efficiency-standards

The Congress passed the Morrill Land-Grant Colleges Act in 1862. States were given federal lands whose sale or income would be used to support educational institutions for agriculture and industrial learning.

Much of the support went to colleges that helped improve agricultural productivity. What was later to become Iowa State University was the first institution, followed by others. There is now at least one land-grant institution in every state and territory of the United States, as well as the District of Columbia.[15]

Also in 1862, President Lincoln signed the Pacific Railway Act. Substantial public financing was given to two private companies — Union Pacific Railroad Company and Central Pacific Railroad Company — to lower the investor risk in building railroads in unsettled territories. In 1869, the first Transcontinental Railroad was completed at Promontory Summit, Utah.

In 1863, Lincoln signed the law that created the National Academy of Sciences. The bill stated "The Academy shall, whenever called upon by any department of the Government, investigate ... and report upon any subject of science ..." Even in a time of the gravest national challenge, President Lincoln recognized that we needed our best scientific minds working to make sure that we have the knowledge base to innovate and compete. Science and these investments and policies paved the way for an economic boom that enabled us to become an economic superpower. Science and investment in research and development continue to be critical to our economic competitiveness today.

Other countries are now moving to try and pass us, and they have identified the clean energy economy as holding greatest prospects for the future. But we should not surrender our economic leadership in these industries to foreign competitors.

No one can match the American innovation machine, but we need to make sure that our universities, labs, companies, and their workers have a fighting chance to translate that potential into productivity.

As the President has said, "The countries that lead the 21st century clean energy economy will be the countries that lead the 21st century global economy. I want America to be that nation."

Maintaining our leadership in research and development and making investments in clean energy are critical to winning the future. To vouchsafe our future prosperity and the U.S. jobs that depend on it, America can and must win the clean energy race.

By supporting the President's vision to out-educate, out-innovate, and out-build the rest of the world, we can assure our leadership in the global clean energy economy and leave a better world for our children and our children's children.

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[15] http://ext.wvu.edu/about_extension/land_grant_system

Mr. CHAFFETZ [presiding]. Thank you.
Dr. Hall, you are now recognized for 5 minutes.

STATEMENT OF KEITH HALL

Dr. HALL. Mr. Chairman, members of the committee, I am pleased to be here today to provide a summary of activities underway in the Bureau of Labor Statistics to measure employment in green jobs. BLS is, as you know, an independent statistical agency that is the principal Federal source for information on employment and unemployment, inflation, wages and benefits, worker safety and productivity. Our mission is to provide relevant, accurate, timely and objective statistical data to help inform policymakers and the public.

All of our data products, including the upcoming green jobs data, meet these high standards. To protect our impartiality and independence, we take no role in policymaking and do not conduct policy analysis ourselves.

BLS received funding beginning in the fiscal year 2010 to develop and implement the collection of new data on green jobs. The goal of the BLS green jobs initiative is to develop information on the number of and trend over time in green jobs, the industrial, occupational and geographic distribution of the jobs, and wages of workers in these jobs.

To measure green jobs, BLS first had to develop and objective, measurable definition. BLS began by reviewing work done by other national statistical agencies, such as Statistics Canada and EuroStat, as well as work done by various State labor market information offices and by non-profit organizations. Looking at these studies, BLS found the common thread running through the various definitions is green jobs help to preserve or restore the environment or conserve natural resources.

BLS engaged in extensive outreach and consultation with other Federal agencies with expertise in various aspects of the jobs and then published a draft green jobs definition in the March 2010 Federal Register notice. BLS received about 150 comments on this proposed definition, as well as additional feedback from Federal stakeholders, including the Departments of Energy, the Environmental Protection Agency and the Council on Environmental Quality and an interagency discussion organized by the Office of Management and Budget in April 2010.

In a September 21, 2010 Federal Register notice, BLS announced its final definition of green jobs for the purposes of statistical data collection. Under this definition, there are two different types of jobs that qualify as green jobs. First are jobs and business establishments that produce goods or services that benefit the environment or conserve natural resources. BLS refers to these as green goods and services jobs.

The second is jobs in which the work performed makes the production process of business establishments more environmentally friendly or use fewer natural resources. BLS refers to these as green technologies and practices jobs.

The first step for BLS in measuring green jobs and services was to identify sectors and industries within which goods and services that directly benefit the environment are produced. In total, BLS

identified over 300 detailed industries as well as defined by the North American Industry Classification System where green goods and services are produced. Some examples are the utility sector, which produces electricity from renewable Resources, the manufacturing sector, which produces Energy Star certified appliances, the agriculture sector, which produces organic crops, the construction sector, which provides weatherization services and the professional and business sector, which provides environmental consulting services.

The next step for BLS currently underway is to conduct a green goods and services survey to identify the proportion of each industry that is engaged in producing green goods and services. This survey was sent out in May 2011 to a sample of 120,000 business establishments in the industries identified as producing green goods and services. The survey presents these business establishments with a description of green products or services classified in their respective industries and asks respondents to estimate the share of establishment revenue accounted for by green outputs.

Based on the survey, BLS will produce data on green goods and services employment for the United States by industry and for States by industry sector. The first estimates will be available in early 2012.

To measure green technology and practices jobs, BLS is conducting a special employer data survey collection called the Green Technologies and Practices Survey. Businesses in any industry that may use green technologies and practices, regardless of the nature or "greenness" of their outputs, are potentially included. Therefore, the Green Technologies and Practices Survey will be sent to a sample of about 35,000 business establishments selected from all U.S. industry sectors. Respondents will again be presented with descriptions of various types of Technologies or practices that benefit the environment or conserve resources and asked to indicate which, if any, are utilized by the establishment. We should have estimates on that survey by mid-2012.

[The prepared statement of Dr. Hall follows:]

Statement of

Keith Hall
Commissioner
Bureau of Labor Statistics

September 22, 2011

I am pleased to be here today to provide a summary of activities underway in the Bureau of Labor Statistics (BLS) to measure employment in "green jobs." BLS is, as you know, an independent statistical agency that is the principal Federal source for information on employment and unemployment, inflation, wages and benefits, worker safety and productivity. Our mission is to provide relevant, accurate, timely, and objective statistical data to help inform policymakers and the public. All of our data products, including the upcoming green jobs data, meet these high standards. To protect our impartiality and independence, we take no role in policy making and do not conduct policy analysis ourselves.

BLS received funding beginning in Fiscal Year 2010 to develop and implement the collection of new data on green jobs. The goal of the BLS green jobs initiative is to develop information on (1) the number of and trend over time in green jobs, (2) the industrial, occupational, and geographic distribution of the jobs, and (3) the wages of the workers in these jobs.

To measure green jobs, BLS first had to develop an objective, measureable definition. BLS began by reviewing work done by other national statistical agencies, such as Statistics Canada and Eurostat, as well as work done by various State labor market information offices and by nonprofit organizations. Looking at

these studies, BLS found the common thread running through the various definitions is that green jobs help to preserve or restore the environment or conserve natural resources. BLS engaged in extensive outreach and consultation with other Federal agencies with expertise in various aspects of jobs and then published a draft green jobs definition in a March 2010 *Federal Register* Notice. BLS received about 150 comments on this proposed definition as well as additional feedback from Federal stakeholders, including the Department of Energy, Environmental Protection Agency, and the Council on Environmental Quality, at an interagency discussion organized by the Office of Management and Budget in April 2010. In a September 21, 2010, *Federal Register* Notice, BLS announced its final definition of green jobs for the purposes of statistical data collection. Under this definition, there are two different types of jobs that qualify as green jobs:

- Jobs in business establishments that produce goods or provide services that benefit the environment or conserve natural resources. BLS refers to these as green goods and services jobs.
- Jobs in which the work performed makes the production processes of business establishments more environmentally friendly or use fewer natural resources. BLS refers to these as green technologies and practices jobs.

The first step for BLS in measuring green goods and service jobs was to identify sectors and industries within which goods and services that directly benefit the environment are produced. In total, BLS identified over 300 detailed industries, as defined by the North American Industry Classification System, where green goods and services are produced. Some examples are:

the Utilities sector, which produces electricity from renewable sources; the Manufacturing sector, which produces Energy Star-certified appliances; the Agriculture sector, which produces organic crops; the Construction sector, which provides weatherization services; and the Professional and Business Services sector, which provides environmental consulting services.

The next step for BLS, currently underway, is to conduct the Green Goods and Services survey to identify the proportion of each industry that is engaged in producing green goods and services. This survey was sent in May 2011 to a sample of 120,000 business establishments in the industries identified as producing green goods and services. The survey presents these business establishments with a description of the green products or services classified in their respective industries and asks respondents to estimate the share of establishment revenue accounted for by the green outputs. BLS determined through pretesting that establishments could easily and reliably report this information; however, establishments that produce both green and non-green outputs had difficulty in directly reporting the number of jobs linked to the former. Thus, to estimate green jobs, BLS will assume that the share of employment working on green goods and services is equal to their share of revenue. This, of course, is an approximation that will hold exactly when certain conditions are satisfied, namely, that an establishment's production processes for producing green and other goods exhibit constant returns to scale, as is assumed by input-output models, and use similar inputs in similar proportions.

Based on the survey, BLS will produce data on green goods and services employment for the U.S. by industry, and for States, by industry sector. The first estimates will be available in early 2012. To provide information on the change over time in green goods and services employment, BLS will update green employment estimates quarterly using administrative records of the Unemployment Insurance system and will re-administer the Green Goods and Services survey annually. To provide an occupational profile of green goods and services employment and wages, BLS has augmented the existing Occupational Employment Statistics survey by adding establishments sampled for the Green Goods and Services survey. This occupational profile will be released by BLS in the fall of 2012.

To measure green technologies and practices jobs, BLS is conducting a special employer data collection called the Green Technologies and Practices survey. Businesses in any industry may use green technologies and practices, regardless of the nature or "greenness" of their outputs. Therefore, the Green Technologies and Practices survey will be sent to a sample of about 35,000 business establishments selected from all U.S. industry sectors. Respondents will be presented with descriptions of various types of technologies or practices that benefit the environment or conserve resources and asked to indicate, which, if any, are utilized by the business establishment. Examples of such practices are producing energy from solar panels for use within the business establishment, redesigning product packaging to reduce use of plastics, and re-using scrap materials.

At business establishments that use such practices, respondents will be asked to provide information about the number of employees who spend at least half their time engaged in this work, and their occupations and wages. Again, BLS

determined through pretesting that establishments could easily and reliably report this information with minimal burden. The survey will be sent in September 2011. National data by industry sector and occupation on employment in green technologies and practices jobs will be available in mid-2012.

The budget increment BLS received in 2010 also included a small funding increase for the BLS Employment Projections program to support the development of career information on green jobs. In 2010, BLS published "Careers in Wind Energy." So far, in 2011, BLS has published "Careers in Solar Power" and "Careers in Green Construction." These articles are published on-line on a new green careers web page and were featured on both the BLS and the Department of Labor's public home pages, on the Employment and Training Administration's Workforce-3-One green jobs site, and other venues. To date, the wind energy article had about 78,000 page views since it was published in September 2010, while the solar power article had about 42,000 views since its publication in mid-June, and the green construction article had 18,000 views since its publication in July. Additional articles on green careers will be released periodically.

I will be happy to take any questions that you may have.

Mr. CHAFFETZ. Thank you. Appreciate that.

I will now recognize myself for 5 minutes.

Mr. Poneman, starting with you, would you consider hydroelectricity as a renewable energy source?

Mr. PONEMAN. Thank you, Mr. Chairman. Yes, we have a continuous flow of water and absolutely, it keeps flowing.

Mr. CHAFFETZ. So would that fit, potentially, the definition of what a green job would be, or be in that category of green jobs?

Mr. PONEMAN. Mr. Chairman, I defer to my distinguished colleague who has done more etymological study of how we define green jobs. But certainly in terms of low carbon renewable resource, hydroelectric fits right in the pocket.

Mr. CHAFFETZ. Dr. Hall, would that fit your definition?

Dr. HALL. Yes, it would. One of our categories of green goods is energy from renewable resources.

Mr. CHAFFETZ. And you would consider hydroelectric power as renewable?

Dr. HALL. Yes.

Mr. CHAFFETZ. Madam Secretary, would you consider hydroelectricity as renewable?

Secretary SOLIS. Yes.

Mr. CHAFFETZ. One of the frustrations and questions is this idea that it has created, as you said, Mr. Poneman, "hundreds of thousands of new jobs." I have a difficult time seeing that. A, we don't have a definition of what that is. So how do we come to this conclusion? I ask that rhetorically, as a follow-up. But I think one of the difficulties, at least you see for myself, is this claim, this exorbitant claim of hundreds of thousands of jobs, yet there is not even a definition of what those jobs are going to be.

If we had the Department of Interior here, they would take great exception to the idea that hydroelectricity is renewable. To me, I come to the same conclusion as you do, I think it is renewable. But it is one of the challenges and we do need to straighten it out. The administration is on very dramatically different pages on this. And it affects the States, particularly out west, who have a lot of these resources.

Madam Secretary, I would like to go through this, and I am looking at your written statement here. You picked various items out for your verbal comments.

In the Recovery Act, on page 3, it says that there was $500 million for competitive grants. And then as you picked out some of the statistics, on page 4, paragraph 3, talking about the 52,000 people have participated in the Recovery Act, I want to make sure I am doing my math right. I am skipping down to the bottom there, it says approximately 15,000 of those individuals did not have jobs upon program entry. Of those individuals without a job when they started the program, 52 percent have found work with 83 percent of those individuals obtaining employment in the same industry or occupation in which they were trained.

That number, as best I can calculate, comes out to 6,225. We congratulate and we are happy for them and their families. One of my concerns is, if we are spending $500 million to get people trained, and the conclusion is 6,200 people, that is roughly $80,000 per person.

Secretary SOLIS. Actually, if I could respond, Mr. Chairman, what I would want to remind you is that our programs are intended to train individuals, incumbent workers, those that are currently on the job, as well as assisting those that have been unemployed, displaced. So think about the automobile worker who just lost their job, now does not have any ability to find transition into something else similar. So we will attract them, get them into programs that will, precisely for this reason, look at new techniques that they could engage in through our training programs. And maybe now will be involved in hybrid automobile development. And many have made that transition.

So there is that, how could I say, ability for individuals to make that transition. It is a little more clear; in other industries, it is a lot harder. I will tell you again, though, our funding is for training. And based on——

Mr. CHAFFETZ. Was I inaccurate, I am sorry to interrupt, but was I inaccurate in my numbers in the assessment? We are talking about $80,000 per person.

Secretary SOLIS. I think that is actually a little higher. We look at it more as someone who is enrolling in a community college. The training program typically runs that amount.

Mr. CHAFFETZ. But I wonder if you can actually document that it actually went out and found a job. It didn't create any jobs. It trained them, and you can argue the validity of needing to do that.

Secretary SOLIS. It trained people to also keep those jobs, because many employers are actually laying people off if they didn't have higher credentials, because they wanted to remain competitive. So that is a part of our program that we are offering.

Mr. CHAFFETZ. I have just a few seconds here. In your written testimony you talked about a Clearfield Job Corps, wonderful organization, based in my State, outside of my district. But one of the things in your written testimony is saying that the 14 students recently graduated from green training programs, including renewable resources, obviously that sounds green, overhead line construction and advanced automotive. Those don't sound quite as green as maybe we would be led to believe. If you could help me understand why that would be categorized as green, I would appreciate it.

My time is expired, and I yield back. Actually, now I recognize the ranking member, Mr. Cummings, for 5 minutes.

Mr. CUMMINGS. Were you going to answer that question, Dr. Hall, the question he just asked? Could somebody answer that question? I think it is a good question.

Secretary SOLIS. I would say that many of our training programs provide a variety of services. So while not all these programs received, how could I say, more than 50 percent of the money that they get is not all dedicated to just green. What is happening, though, all our programs, Youth Build and Job Corps, have been told to change their curriculum. So we have students that are enrolled in programs to be, say, automobile mechanics or diesel mechanics. And they are learning new technology. In many cases, they are using new refined fuels, things of that nature.

So yes, they are learning some of that new aptitude. But across the board, I would say many of the programs continue to provide somewhat traditional training. But we are emphasizing, and keep

in mind we have only had this program in place now for less than 2½ years. So we are making that transition, and we want to do better, we want to make sure that our young people, especially, get that upgraded skill set that they are going to need to make them more competitive.

Mr. CHAFFETZ. Thank you. I will now recognize the gentleman from Maryland.

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

Madam Secretary, are we training people to get into careers? Is that part of it? I am just curious. I know there are people in my district that were able to take advantage of some training programs, so that they established a career, so that they weren't laid off. And maybe they were in a job, and that job, in other words, in this economy we are having a lot of employers who have learned to do more with less people. Could you just comment very briefly, because I have a number of questions?

Secretary SOLIS. Congressman Cummings, what we see is that many of our students, for example, those that are here today, in the Job Corps and Youth Build program, receive several different credentials and certificates. So they are being trained for a career and a profession as opposed to just one job as someone who is just, say, a bricklayer. They are actually taught different kinds of segments of the construction industry, which includes renewable. And also electricity, you get a whole set of different credentials that you can earn while you are in that program.

Mr. CUMMINGS. On July 13th, the Brookings Institution issued a major study providing the first comprehensive analysis of the U.S. green economy. I am going to ask unanimous consent to put the Brookings report into the record.

Chairman ISSA [presiding]. Without objection.

[The information referred to follows:]

INFORMATION ON GREEN INITIATIVES FOR OVERSIGHT COMMITTEE MEMBERS, BY REGION AND STATE

Democratic Staff
Committee on Oversight and Government Reform
U.S. House of Representatives

Prepared for Ranking Member Elijah E. Cummings

September 22, 2011

http://democrats.oversight.house.gov/

Mr. CUMMINGS. Thank you.

This 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 some 2.7 million workers more than the fossil fuel industry. The report also goes on to say, 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 to the base, albeit it from small bases.

Madam Secretary, do you agree with the Brookings report that certain segments of the clean economy offer the potential for explosive job growth? And do the other panelists agree? And I want to go back to what the chairman was saying, and it was implied by Congressman Chaffetz, too, that your numbers aren't accurate. I need you to address that. Is that a fair statement?

Chairman ISSA. I think it is very fair to say that we think it is completely——

Mr. CUMMINGS. I want to make sure that they address that. Because you have been accused of something here, and I want you to clear it up. I think that is going to be part of the basis of this hearing, and what those folks over there are writing about.

Secretary SOLIS. Right. Congressman, I want to reiterate that through our Recovery Act programs, our job training programs, we have already trained 52,000. The initial grants are——

Mr. CUMMINGS. And that is a fact?

Secretary SOLIS. Yes. And we potentially, in the next coming year and a half, possibly, we will see up to 96,000 that will be targeted. So they will go through our credential programs.

At this point in time, as of June 30, 2011, 26,000 workers have completed training, and about 15,000 who were unemployed workers and 11,000 who were what we call incumbent workers, so they had job, but were being trained in our programs as well, and over 22,000 have received a credential.

And I would say that approximately half of that 15,000 or so did get new jobs. We are tracking that as we continually roll along here. What we are finding is the average cost to provide the training averages, again, about the cost it would be to attend a community college.

Mr. CUMMINGS. The Brookings report also made a second key point, which is that the United States needs to support these key sectors to remain competitive. 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 has widened 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, industrial, critical industries, critical to economic restructuring, including multiple new energy categories, electric vehicles and energy efficient products.

Do you have a comment on that?

Secretary SOLIS. Mr. Cummings, I would just say that you can't compare $54 billion of investments from China as opposed to $500 million that I had for the first time in the Recovery Act. And my role is to provide training and skill assistance. It is not to find a job. That is why venture capitalists, that is why corporations, that is why business individuals make those decisions. They are actually making the risk to increase our capacity to go in the green sector.

I would say that, just to remind folks, back in 2007, George Bush signed into law the Green Jobs Act program. He believed in it, as well, as well as many people that have been invested in this area for now more than a decade. I would just say it is something that we are obviously needing more assistance, more support. If we can compete with our friends in other countries, I think in the future it will bode very well for us.

Mr. CUMMINGS. Thank you, Mr. Chairman.

Chairman ISSA. I thank the gentleman.

I now recognize myself. Madam Secretary, I am going to be brief. It is only $500 million, which in Washington is small dollars. Our point, I think accurately, Mr. Chaffetz made it well, and I am just going to summarize it, you spent $500 million, you spent a lot of it on people who already had jobs. Of the people who didn't have jobs, you have about 6,000 who got jobs, at least as of today. And those jobs include people who are basically just working on modern diesel trucks and other things, which are—no, you said it yourself in your own testimony, it is broad training.

So the statistics of the 6,200 or so who actually got jobs who didn't have jobs can well be on the periphery of what most people would consider to be green jobs. As a matter of fact, if they left that training and came to work for Mr. Cummings and they are here on the hearing today, they probably will end up being counted as green jobs.

Which means I go to Dr. Hall. Dr. Hall, you have the big bucks. Was Solyndra and their 1,000 jobs counted in your assessment, I mean until they went bankrupt and laid everyone off?

Dr. HALL. Well, what will——

Chairman ISSA. No, that is a yes or no, if you don't mind.

Dr. HALL. Okay. I don't know.

Chairman ISSA. That is the third answer, and it is always a good one, if you don't.

Your counting of these jobs, though, clearly includes people who are not in fact designing and building solar panels or doing other things which are truly green energy production, correct? It goes well beyond green energy production. Your figures include people who are working in the environmental, how to be kinder to the environment, that is in the written proof we have here, correct?

Dr. HALL. Yes, one of our categories that we are collecting data is environmental compliance education and training and public awareness.

Chairman ISSA. Okay, so as the Government creates, just a bit more bureaucracy that forces more people to have to do more EPA compliance and studies and wasteful, sometimes, restudying, that all counts as green, right? So if the Government simply infinitely

burdens business so they have to get a whole bunch more people to do a lot more studying to keep the Government happy, that counts as green jobs, correct?

Dr. HALL. Well, one of our surveys is the green technology and practices survey. So we are looking at establishments——

Chairman ISSA. But we are looking at the accuracy of your numbers here today. We already have the proof that it costs a fortune to get very few jobs. Now we look at those jobs and find out that those jobs are broadly defined, so that you have a lot less real jobs created than even the pitiful numbers that it is showing. Now, when people want to tell me there is 2.5 million, one of the problems is, yes, you get more money for working in green subsidized industry. You get more, and there are more people.

But you know, the cost of producing electricity from solar electrics is so inefficient and expensive that you subsidize the production, you subsidize the development and then you subsidize the use. So what a surprise, you can afford to pay 13 percent more.

Let me just ask Mr. Poneman, Secretary Poneman, because you are the closest thing to somebody who has been in private enterprise here. China is doing all the things Mr. Cummings said. But they are not using green energy to do it. They are building more coal plants and buying more American coal than any other customer. The number one exporter of coal to China is us. The number one importer of coal in the world is China from us.

So they are building windmills so we can subsidize them and buy them. They are building solar panels so we can subsidize and buy them. They are using low cost energy to be more competitive in selling us high cost energy. Isn't that basically the model at least as of today?

Mr. PONEMAN. I would not presume to speak for the Chinese model, Mr. Chairman. But for——

Chairman ISSA. But you do know, it is not a secret, they are using coal-fired and nuclear to produce all that green stuff. They are not using solar panels to make solar panels.

Mr. PONEMAN. They are now the world's leading producer of solar panels and——

Chairman ISSA. Producer, seller and exporter, correct?

Mr. PONEMAN. As far as I know, sir, yes.

Chairman ISSA. Okay, so they are a great manufacturing nation.

Mr. PONEMAN. Right.

Chairman ISSA. They are the number one manufacturing nation in the world. They took that from us while we were diddling around having higher costs of energy and bragging about the fact that if you have an inefficient form of energy rising, such as solar panels, for pure energy, and there are some places in which solar panels make a lot of sense. But in fact as a mainstream energy source, what we are doing is raising the cost of our energy while China is becoming, has become, the world's greatest manufacturer out from underneath us.

Mr. PONEMAN. I can speak to the U.S. side. What we are doing, Mr. Chairman, is we believe we can reverse that trend.

Chairman ISSA. You are going to reverse it with higher cost energy?

Mr. PONEMAN. No, no. We are going to reverse it with innovation, with the financial markets we have, with the best entrepreneurs in the world. And we are in the process of doing it, sir.

Chairman ISSA. It is amazing to me that you would say the financial markets. Mr. Cummings would probably be rather upset if you said our great financial markets after the hearings we have held since 2008. My time is expiring. This hearing is about the accounting for jobs. And hopefully as we go through this, both sides will focus on the jobs that are in fact not created, or in fact are only created through subsidies.

With that, I recognize the gentlelady from the District of Columbia.

Mr. PONEMAN. Might I just respond to the last comment?

Chairman ISSA. No, there wasn't a question. Thank you.

Ms. Norton.

Ms. NORTON. Yes, Mr. Chairman, and this is about the accounting for jobs. And this is a very important subject, because this is the next iteration of the world economy. You don't get anywhere if you have already drawn your conclusions with a title that says how Obama's green jobs agenda is killing jobs. We want to know, we want ot find out the answers. This is supposed to be an investigative committee.

When it comes to government investment and innovation, let's not pretend that that is new. That is as old as the American economy. The rail was laid before there were trains and people enough to go there, because of government investment. So that is something we have done, laid to your part of the country, Mr. Chairman, when there were very few people out there like yourself.

You say in your testimony, at page 3, there are certain things that the private sector cannot reasonably be expected to do in a market economy, including undertaking investments in clean energy, etc., that primarily confer national benefits beyond the return to shareholders. That was the case with the rail industry, that obviously is the case with this new technology. The old industrial economy is now limited in its growth.

So let's look, since many in this committee already know the answer, let's look to a genuine investigation. The Economic Policy Institute issued its report that concluded that the Recovery Act's investments at approximately $93 billion through the end of 2010 boosted overall GDP by $146 billion and created nearly one million jobs.

Now, I recognize that China is a command economy, we are a market economy. And when we invest, it is a little more difficult than when they do. But they are underwriting billions of dollars in green technologies, trying to get out of the old coal economy that they are using. Because they have nothing else they can use.

Is China also killing jobs by making such massive investments? Or are they cornering the market in these new clean technologies? Mr. Poneman?

Mr. PONEMAN. Thank you, Congresswoman, for the question. It is a great danger that this great race that we are embarking on to build the energy of the future will not be built in America. What the investments we are trying to make are doing are trying to reverse that trend. In 1996, we produced 43 percent of the world's

solar panels. We now produce 6 percent. We can reverse that with the kind of smart investments that we are trying to make under the Recovery Act and under the authorities that have been granted by this Congress.

I want to be clear for the record that China is in fact using domestic solar as well as all the coal and nuclear. The fact of the matter is, they are using tremendous amounts of all kinds of energy and I think it would be a tragedy if we were to cede the playing field to our foreign competition in building the jobs for the future that should be here in America.

Ms. NORTON. Yes, precisely, because these are new and shareholders want to see a return on their investment. Private industry has never gone whole hog in leading the country. It has always been the other way around. What is the experience of other governments around the world in pursuing the green jobs agenda? Are they trying to corner the market as well and get ahead of us?

Mr. PONEMAN. The governments that have been most active, Congresswoman, are the governments putting the largest dollar investments in. We have now slipped to third place in the world. We lost a place in just a year. We have been behind China. Now Germany has surged ahead of us.

We can reverse this, but we are going to have to be really focused on moving capital into these new clean energy technologies.

Ms. NORTON. Can either of you say that what you have seen of green jobs has done more to kill it than to make or encourage green jobs in our country?

Secretary SOLIS. Madam Congresswoman, I would just say on my visits around the country, I have actually seen job growth. And in areas where I have seen depressed and blighted communities come back to life, because now there are solar panel institutes, organizations that are actually compiling these kinds of materials and actually making production and creating jobs in areas that have been blighted. Not just that, but also in lithium batteries and also other new hybrid vehicles, even our automobile industry has been renewed. We have more jobs now in that area, and a potential for more cars that are going to be fuel efficient.

So I do see that happening. But we can't compete with China and others when government, state-owned funds are being used and you are looking at small portions being utilized for training. Just to go back to the statement that the chairman said, our funding runs in cycles. So you can't produce a great number of job training participants in a matter of 1 year. It takes a cycle. You have to ginny up 6 months, then you get people into the training, the curriculum, you get the location. And these grants run anywhere from 2 to 3 years.

So we are barely in the mid-point of our cycle. We expect to go up to 96,000 participants.

Chairman ISSA. We now recognize the gentlelady from New York, Ms. Buerkle, for her questions.

Ms. BUERKLE. Thank you, Mr. Chairman, thank you for calling this very important hearing, and thank you to our panelists this morning for being here.

I just want to take exception, the chairman was, this line of questioning on coal. I think it is slightly disingenuous for you all

to sit there and compare China as being the standard bearer for alternative energy and production of solar panels when in fact we have had people here from the coal industry, and we have heard first-hand the obstacles that are being put in their way for the production of coal.

So we can't compare apples to oranges. We in this country are impeding the use of coal production and the use of coal, and in China, they don't have those standards. Those impediments are not put in the way of them and the use of coal. And they are using it then to produce these solar panels, which they can produce much more cheaply, as we have seen in Solyndra. So that is just a comment I wanted to make.

I think it is very important to acknowledge, number one, when we talk about the fact that China and these other governments are infusing money into the industry, this is the United States of America. And we let the free market rule. It isn't a question of what the government can prop up. I think that is a real important distinction we should make here this morning.

Now I will get to my questions. Thank you. Secretary Solis, can you just give me your definition of a green job?

Secretary SOLIS. I believe that the Bureau of Labor Statistics outlined what we have been using as a guide for our program. So we look at opportunities where we can define through legislation what has been used typically as a green job. So something that conserves energy and also can recycle and also renew, renewable energy, something that is going to reduce our savings in terms of our efficiencies there.

So we use that, we use what the BLS and what other data is out there. Typically we have also used what the Workforce Investment Act research guidelines have provided us, even before we began to take on this role of defining what green jobs are.

Ms. BUERKLE. Do you have one specific definition of a green job?

Secretary SOLIS. I would say that what we look at in terms of our definition is exactly what the Bureau of Labor Statistics has outlined. So it is very large, we know it is broad, and we know that there are different sectors across the board that are impacted. So yes, you could have a business that is involved in providing maybe renewable energy, but you also have accountants and other individuals, financial folks that are also a part of that industry.

Ms. BUERKLE. Thank you.

I want to just get into some of your testimony and what you have talked about here today. The certificates, or the credentialing that is given to a student who completes the program, how long is the program?

Secretary SOLIS. The programs vary. We have programs that can run in length from say 6 weeks, 6 months to 1 year, depending on the kind of credential that you are seeking. And in many cases, for example, we have students here in the Job Corps program, they are enrolled typically in the program anywhere from 1 year to 2 years.

During that timeframe, they can select which certificates they would like to be enrolled in to obtain that particular degree or certificate.

Ms. BUERKLE. And that certificate or that credential, is it recognized in the industry? Is it recognized by unions?

Secretary SOLIS. Yes.

Ms. BUERKLE. Who recognizes it and what is it called?

Secretary SOLIS. There are standards that are established, and we go by what has already been established through our department. And typically, in the apprenticeship program, for example, we have new definitions, new criteria that is actually being set up that I believe the BLS could probably elaborate a little bit more on in terms of looking into new industries like wind power, solar and other areas that are now becoming more of our vocabulary.

Ms. BUERKLE. I also want to follow up with some of your testimony with regard to the wages that a green trainee is paid versus a regular trainee. Can you just, what is the starting wage for a green trainee?

Secretary SOLIS. It depends. You could have someone who is working, say, at minimum wage, and typically move up because of certificates, say, in LED, lighting and what have you. Those are, I think, one of the highest standards right now. If you can get those certificates, you actually will make a lot more money. And those salaries are obviously a lot higher than minimum wage.

Ms. BUERKLE. Do you know what the average starting salary is for one of these green trainees?

Secretary SOLIS. It depends on what field you go in, weatherization can be very different from someone who is also doing, say, installation of solar power panels, and also re-metering someone's home and putting them into a new electricity grid system. But I would tell you that overall, and according to the Brookings findings that I referred to, that the salaries are anywhere from say, 10 to 13 percent higher.

Ms. BUERKLE. Thank you. I see I am out of time. I yield back, and thank you, Mr. Chairman.

Chairman ISSA. I thank the gentlelady. Thank you.

We now recognize the gentleman from Cleveland, Ohio, Mr. Kucinich, for 5 minutes.

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

I would like to address my questions to Mr. Poneman. Because they also may relate to some information that Secretary Solis has, if you would like to join in, you can tell me.

The main purpose of this committee is to be able to get the facts. And I just want to make sure I have my facts correct here. The loan guarantee to Solyndra was approved under a Bush administration program, the Energy Policy Act of 2005, is that correct?

Mr. PONEMAN. Yes, sir.

Mr. KUCINICH. According to the September 14th testimony of Jonathan Silver, who is the current head at the Department of Energy's loan guarantee program, one, the Solyndra application was filed with the Bush administration in 2006; two, 2 years of extensive due diligence had been done by the Bush administration before President Obama took office; and three, before President Obama took office in late January 2009, the Bush administration had already set a time-line of March 2009 for issuing a conditional loan guarantee commitment to Solyndra. Is this factual so far?

Mr. PONEMAN. I was not here yet, but that is my understanding, sir, yes.

Mr. KUCINICH. Okay, and when the Department of Energy conditionally approved the Solyndra loan guarantee in March 2009, it was doing so under a schedule established by the Bush administration, is that correct?

Mr. PONEMAN. That is my understanding.

Mr. KUCINICH. And when Solyndra met those conditions, it was the closing of the deal that occurred in September 2009, the closing of the conditional loan guarantee commitment that had been scheduled by the Bush administration, they scheduled it for March 2009, for the closing?

Mr. PONEMAN. My understanding, Congressman, is that the credit committee remanded the project for more work, and that they expected that more work would produce the answers that were then reviewed in March.

Mr. KUCINICH. Thank you. Now, the Department of Energy has approved dozens of other loan guarantees under this program, is that correct?

Mr. PONEMAN. Yes, sir.

Mr. KUCINICH. And there is another solar energy company, First Solar, that has received a number of those loan guarantees, is that correct?

Mr. PONEMAN. We are in the process of conditional commitments moving to financial close, First Solar has been in that pool, and I don't know which of the applications have gone to final close and which are conditional.

Mr. KUCINICH. But in fact, the loan guarantees that First Solar has received or is expected to receive by the September 30th deadline total approximately 10 times the amount that was guaranteed for Solyndra, is that correct?

Mr. PONEMAN. I would have to check and get the precise numbers for you, but that is easily done.

Mr. KUCINICH. Would you get those for the members of the committee?

Mr. PONEMAN. Absolutely.

Mr. KUCINICH. Because according to a September 19th article in the Bloomberg News Service, First Solar, a company based in Tempe, Arizona, has "achieved record efficiency for a thin film solar cell, and will incorporate the advance into its manufacturing technology next quarter to outpace cost reductions by Chinese rivals and compete against fossil fuels without government aid."

It seems to me this would be consistent with what the Bush administration Energy Policy Act of 2005 was intended to accomplish. Do you have any comment on that?

Mr. PONEMAN. I would just say, sir, that scale is incredibly important in driving down solar panel prices. And so to the extent that they can build out at a much larger scale, it would have a tendency to drive down those prices and improve our competitiveness, yes.

Mr. KUCINICH. My staff just handed me some facts here about the First Solar loan guarantee amount, and I have First Solar, Inc., $680 million, First Solar, Inc., this is called Desert Sunlight, $1.8 billion, First Solar, Inc., Topaz Solar Generation, $1.9 billion. Just

wanted to make sure that we understand that while the rest of the world looks to the future and prepares for it by ramping up dramatically its green sector, we are busy holding hearings like this, which end up impugning the President's expensive economy.

Anyone who has listened to me for more than 15 seconds knows that I am probably the last Democrat who is an apologist for this administration. But this thing is really about our economy and this is about need and this is about the urgency. That should command our attention here above all else. I think that we actually have bipartisan support, judging from the record, for green energy programs. That is part of the path to the future to move the American economy.

So as we move through this hearing, I hope that we can summon the same kind of energy to focus on how we can create millions of jobs with green and wind, solar, micro technologies, put America back to work.

Thank you, Mr. Chairman. Thank you.

Chairman ISSA. Thank you, Mr. Kucinich.

We now go to the gentleman from Michigan, Mr. Walberg.

Mr. WALBERG. Thank you, Mr. Chairman. I appreciate the opportunity to ask questions.

I just can't let the statement that was put out earlier that we can never count on private sector manufacturing to lead the way in technology and growth. That is just unbelievable, in a country that has had the agricultural, industrial revolution, technological revolution, here. And that did not come from government. Henry Ford, in Michigan, down the road from me and my district, didn't produce the assembly line with the government mandating that, or even giving special money for it at the time.

So that is frustrating to hear, Mr. Chairman, as we talk about these green jobs.

I would like to do a followup question to Commissioner Hall. Do you count blue collar jobs?

Dr. HALL. Sure. We don't make any distinction between what kind of jobs.

Mr. WALBERG. You don't count white collar jobs then?

Dr. HALL. We count all the jobs. If an establishment is producing a green output, a green good or service, we count all the jobs in that establishment.

Mr. WALBERG. So then as we talk about green collar jobs today, what is the point of counting green jobs, or even making that metric? Why are we giving official legitimacy to such a dubious metric?

Dr. HALL. We do make an effort, we do make an effort in our second survey, our Green Technology and Practices survey, also they are trying to count, people have jobs whose main job is green. So we have a green—we will capture some of that.

Mr. WALBERG. You may capture that, but it seems to me we want jobs. And attentiveness to green seems to be frustrating some of that.

Let me ask Secretary Solis, and thank you for being here. How much of the green jobs training money has gone to organized labor since 2009?

Secretary SOLIS. All of our grants have allowed for union participation. So if we had partnerships with businesses as well as labor,

they were also involved in that. So the purpose here is to create the opportunities for the slots, as I said, so that we could train people.

Mr. WALBERG. Do we know how much money has gone to labor for green jobs since 2009?

Secretary SOLIS. Well, I would say, depending on the different programs, because not all of them were just exclusively labor, I mean, that is not a number that I have.

Mr. WALBERG. Do we know the percentage increased or decreased over time of green jobs going to labor?

Secretary SOLIS. Green job participation comes about because of the partners that apply for the grants. So you could have, for example, IBEW, for example, who did get a grant in partnership with the industry. And if you were to look at who is being trained, they could have been union members that were taking advantage and getting upgrades, or new individuals coming in. But they were working in partnership with the corporate community, the management side of it, that actually provides also for the additional training and scale.

Mr. WALBERG. Is there any evidence that these particular organizations, labor organizations, have expertise in training people in green jobs?

Secretary SOLIS. Absolutely. IBEW is one of the premier apprenticeship programs and groups that actually provides very, very good credentialed programs. They actually have been the leaders, even before we gave them funding for these programs.

Mr. WALBERG. I would love to see the percentage, then, since 2009, of green jobs, training programs going to labor.

Secretary SOLIS. Where we have had labor participation?

Mr. WALBERG. Labor participation.

Secretary SOLIS. Because they are joint. They are joint. They are not exclusively for labor, they are joint.

Mr. WALBERG. Do the best you can, and I would appreciate seeing that.

Secretary SOLIS. Thank you.

Mr. WALBERG. Just had the largest contact of information that I have ever had about rare earth. And I turn to Mr. Poneman for this. China produces nearly 90 percent of the world's rarest earth metals, many of which are used in green technology, such as wind turbines, hybrid car batteries and so forth. Recent Chinese policies have restricted access to these resources for American companies. How can American green companies obtain these necessary rare earth metals to manufacture in green technologies with that going on?

Mr. PONEMAN. Thank you, Congressman. I just want to make one comment to be clear. I am not sure what the reference was to, but we believe that the free market of the United States of America is the most powerful engine of economic growth the world has yet seen. So I want to make sure we are clear, we think it is a tremendous driver.

Mr. WALBERG. I appreciate that.

Mr. PONEMAN. On rare earths, this is a critical problem. We have looked at this deeply, and we have to do a number of things. Number one, we have to see where we can get production up in other

places outside of China. Number two, we have to look at things that can be done in the processing of these rare earths, which sometimes have toxic issues, to make sure that we can use our technology to get access to them cleanly and safely. And third, we have to see if there are ways in which there are places where so far they are intrinsic to the product if we need to start finding alternatives to those rare earths.

Mr. WALBERG. But we are losing market share, we are losing opportunity for jobs by delaying this activity, when in fact we are using them in our products, up until China holding us back. With that, my time is expired. I appreciate your comments.

Chairman ISSA. I thank the gentleman.

We now go to the gentleman from Tennessee, Mr. Cooper, for 5 minutes.

Mr. COOPER. Thank you, Mr. Chairman.

You and I both know that the Chinese are watching this hearing. They are probably pleased. What they are seeing is more partisan bickering. Now, we don't know if the Chinese bicker, because they make their decisions in private.

We are also seeing, I think, a false conflict between fossil fuels and renewable fuels. And that suits certain partisan motivations at this time in our democracy.

I think most Americans are for the lowest cost fuel, period, including externalities. So far in this hearing, no one has made reference to the fact that you can barely breathe the air in Beijing, China, and other major cities. You can cut it with a knife.

I am from coal country, I love coal. I want it to work. But we have also created a false sense that coal is the unsubsidized fuel. Mr. Chairman, you and I both know that coal has been subsidized for decades. In my area, clean coal has been subsidized for decades. I wish some of those efforts had been more productive, because it is hard to clean up coal. Maybe it is still possible. I haven't given up trying.

But we are blessed with vast coal reserves. But it is hard to clean up that fuel.

Now, global warming may be more controversial on your side. Most scientists agree that global warming is happening, and may even have a man-made cause. So carbon-based fuels, that is an externality.

So Mr. Chairman, as you pointed out in an earlier letter on behalf of a constituent, and I by no means blame you for those efforts, it is very important that we don't create false conflicts between fuels, and that we make rational decisions about the best way to go. It has been established by testimony here today that the Chinese vastly subsidize renewables, more than we do by five or ten fold or larger, because we don't really know the Chinese numbers.

Now the Germans are subsidizing it more than we are. Now, I would prefer the free market work entirely on its own. That would be great. We in Tennessee are blessed because a company called Hemlock, a private sector, American company, a subsidiary of Dow Chemical Co., not a dewy-eyed idealist in this field, has located thousands of green jobs in Tennessee. And I hope that Dr. Hall is counting those jobs. Volcker, the leading German producer of solar panels, has also created thousands of green jobs in Tennessee. And

no one is ever quite sure why they located in the State, but perhaps the lack of a State income tax in Tennessee had something to do with it. And those States that want those green jobs, maybe they can have a more efficient State government and attract more industries.

So there are some real opportunities here, Mr. Chairman, to help America have more energy choices, help us pick the lowest cost choices, including the externalities. Because nobody wants to live in a polluted, dirty air environment. No one wants to ruin the planet. And experimental Technologies take time, they take effort. And I don't know the stats, because they are not included in this hearing, but coal may have been one of the most subsidized fuels ever, if you look at the decades that we have spent subsidizing clean coal technology.

So let's do our best to try to make rational decisions for the country. Hopefully we can get back on the right path. I think that again, one of the worst parts of hearings like this is that the Chinese see us fighting, they see the partisanship and they say, hey, maybe state capitalism, their version, is working better than our version. And that should please them. We have to make sure that democracy works better. And more balanced hearings, I think, can help us do that.

Thank you, Mr. Chairman.

Mr. CUMMINGS. Would the gentleman yield?

Mr. COOPER. I would be delighted to yield to the ranking member.

Mr. CUMMINGS. I thank the gentleman for his statement, because I think that you really put a focus on what we need to be focused on.

But I want to go back to the Secretary. Madam Secretary, you were talking about training and that you see your role as making sure that people are trained. As a matter of fact, you said so that private industry can do its thing.

And thing, Mr. Poneman, I have read your statement and you specifically say that, you said after all, the fountainhead for innovation and entrepreneurial activity is the private sector, not the government. I am reading from your written testimony.

So define your role again for us, so we will be clear, as you see it as labor in this.

Secretary SOLIS. It is to provide assistance, to facilitate the placement of employment and to make sure that we provide the necessary skills that industries, employers want. And that is where the gap seems to be. We are changing from a very heavily manufacturing and industrial society to one that is emerging into a cleaner, efficient, we are seeing robotics, we are seeing so many new applications. Technology in and of itself has reformed the way we do business. You need fewer employees to get things done. That also has an impact.

But those individuals with more certificates, with more advanced training in the STEM area are the ones that have lower rates of employment. So our impetus is to make sure that we can spread the training and education so that everyone has choices, and not just a job but a career and a profession.

Mr. CUMMINGS. Thank you. Thank you, Mr. Chairman.

Chairman ISSA. Thank you.

We now recognize the gentleman from Florida, Mr. Mack. And could you yield me 30 seconds?

Mr. MACK. I would be happy to yield to the chairman.

Chairman ISSA. Mr. Poneman, I am going to be very brief. Mr. Kucinich went on for quite a while, apparently reading off of your Web site that has a time-line on Solyndra's loan. Don't you think it is disingenuous for that time-line to be quoted, when in fact what is missing from that time-line is January 13th,when the Bush administration recommended killing that loan, and January 26th, when the Obama administration brought it back to life and funded it? Of 2009, in other words, one of the last acts of the Bush administration was to kill Solyndra as not a good idea. One of the first acts of your administration was to put it back in. And it is not on the site. Don't you think that is disingenuous?

Mr. PONEMAN. With all due respect, Mr. Chairman, I don't think there is anything disingenuous.

Chairman ISSA. So you will leave out, so that a distinguished member of this committee can misconstrue what actually happened and state before this committee without your objecting that basically, this was all a time-line and they would have happened under Bush? I am sorry, but I don't have any more time and you don't have an answer on that.

Mr. Mack.

Mr. MACK. Thank you, Mr. Chairman. Before I begin, I want to show a quick little video.

[Video shown.]

Chairman ISSA. If the gentleman will suspend, can we get that brought up to full volume before we begin again? I don't think anyone could have heard Vice President Biden. I apologize, audio and video is not always as good as it could be here.

[Video shown.]

Mr. MACK. He is saying that is full volume.

[Video shown.]

Mr. MACK. All right, well, since we really can't hear, basically what the Vice President has said is that they are going to, this loan, this company, there was going to be 1,000 permanent jobs. So Mr. Poneman, are those jobs still permanent?

Mr. PONEMAN. Regrettably, no, Congressman. But I want to be very clear about one thing.

Mr. MACK. That is okay, let me just—well, go ahead.

Mr. PONEMAN. On January 9th, the credit committee remanded for further consideration an additional due diligence to the Solyndra loan, it deferred it without prejudice, explicitly without prejudice. It did not in fact kill that transaction.

Mr. MACK. Let me say this, then. Considering that when the Vice President made this announcement in September 2009, the Department of Energy already was worried about Solyndra, was it appropriate for the Vice President to promise that these jobs were permanent? Was it appropriate for that?

Mr. PONEMAN. Congressman, at the time the Vice President made those statements there was every hope that those jobs would remain permanent, and we are trying to build a new economy that will have many more jobs like it.

Mr. MACK. Didn't DOE and OMB have models showing that Solyndra would run out of money it needed to sustain itself by September 2011?

Mr. PONEMAN. I am going to have to see the specific studies that you are talking about, Congressman. But as many startups have challenges, Solyndra obviously was no exception.

Mr. MACK. We will make sure we get those to you.

Mr. PONEMAN. Thank you very much, sir.

Mr. MACK. The record is pretty clear on that.

Secretary Solis, in your prepared testimony, you talked about a gentleman named Peter Reyes. Who is Peter Reyes?

Secretary SOLIS. Congressman Peter Reyes is an individual that I met when I was touring a facility, a transportation facility up in San Jose. He was a worker there who was telling me about his experience. He worked in the banking industry, lost his job after many years and was trying to get into a new job. He was picked up by our training programs that we offer in the State of California, in San Jose, and became a part of the production there and actually is now a driver for one of their hybrid buses. So now he is making money, he is back at work.

Mr. MACK. Did the U.S. taxpayers pay for that training, for his training?

Secretary SOLIS. In part, yes. Yes, we did, along with the State.

Mr. MACK. But here is the real question. What makes driving a hybrid bus a green job and driving another bus that is not a hybrid bus not a green job? I mean, bear with me here for a minute. Driving a bus is driving a bus, right? You turn the wheel, you push the gas, you use the brake, you use your blinkers.

Secretary SOLIS. Pardon me but if you go back to the argument that is being made of how you substantiate the green industry, the vehicles that were built there are hybrid vehicles. They are fuel efficient. They are built in Oakland, CA. And these bases are being driven by individuals.

Mr. MACK. Yes, but this is the bus driver. Here is the problem that I think people are having, that I am having. How can you call this a green job? If you sit in a chair, if I am sitting in a chair that was made out of green material, does that make my job green?

Secretary SOLIS. He is in an industry——

Mr. MACK. He is driving a bus, and to count it as a green job, we have heard on the committee from both sides. We want to be able to make some determinations here. But before we can make those determinations, we have to get at whether or not the information that you are giving us is accurate.

Secretary SOLIS. It is accurate.

Mr. MACK. No. Driving a bus, just because it is hybrid, doesn't make it a green job.

Secretary SOLIS. Mr. Congressman, would you rather have that person unemployed?

Mr. MACK. No, I would rather have them working.

Secretary SOLIS. The taxpayers would have to pay for that, he is now paying taxes.

Mr. MACK. No, I would rather you not try to smooth this thing over and make it a green job, when it is a job. Of course we want jobs.

Secretary SOLIS. It is an industry that is green.

Mr. MACK. But we don't want you to pull the wool over the eyes of the American people——

Secretary SOLIS. I am not.

Mr. MACK [continuing]. And tell them it is a green job when it is a job. And that is the problem here.

Secretary SOLIS. It is in the green sector.

Mr. MACK. So the administration wants to spend all this money creating green jobs, but yet you will count things that is a job.

Secretary SOLIS. The industry itself where he is employed is fuel efficient. They are using new technology——

Mr. MACK. Is his job green?

Secretary SOLIS [continuing]. And the training he received—yes, it is.

Mr. MACK. Driving a hybrid bus? So if somebody is driving a bus that is not a hybrid, is that a green job?

Secretary SOLIS. I would ask you to refer to the definition——

Mr. MACK. No, answer my question.

Secretary SOLIS [continuing]. That BLS has provided us.

Mr. MACK. If someone drives a bus that is not hybrid, is that a green job. You can't answer it.

Secretary SOLIS. Transportation is used——

Mr. MACK. It is only a green job if it fits into your sales pitch.

Thank you, Mr. Chairman.

Chairman ISSA. I thank the gentleman and the gentlelady.

We now go to the gentleman from Chicago, Mr. Quigley, for 5 minutes.

Mr. QUIGLEY. Mr. Chairman, I yield to the ranking member.

Mr. CUMMINGS. Mr. Poneman, did you finish answering the chairman's question? There was a question that you were trying to give an answer to.

Mr. PONEMAN. Yes.

Mr. CUMMINGS. Are you straight? Did you get it out?

Mr. PONEMAN. Yes, sir, I just wanted to be clear that the matter was remanded without prejudice for further due diligence. And it was not killed outright.

Mr. CUMMINGS. And just one other question to Secretary Solis, could you just further elucidate on what you were just saying with regard to the truck driver? I understand that he is working for the industry.

Secretary SOLIS. Bus. Yes, yes, and it is a transportation authority that has employed energy efficient vehicles that were purchased and manufactured in California. I would say to you, yes, this is a green sector job. It is one where he received training, I did outline that BLS, again, and BLS does in their analysis define mass transit industry as part of the green sector. So I don't understand why someone is trying to say that I am misleading the public, when we are not.

Mr. CUMMINGS. I yield back to the gentleman, and thank the gentleman for yielding.

Mr. QUIGLEY. Yes, reclaiming my time, Mr. Cooper did a good job discussing the fact that these other industries are subsidized too, talking about coal. Clearly, we know all too well about gas and oil and the subsidies there.

The nuclear industry was massively subsidized, particularly at the beginning, given direct subsidies, patents, limits on liability, extraordinarily cozy oversight process. All these industries are difficult to get going, and we have to recognize that.

But if the panel could take a few minutes and recognize, in addition to the subsidies to the existing manufacturers of energy, there is also a cost that we are not taking into consideration. I live in Chicago, which is the asthma morbidity and mortality capital of the United States. We have two coal-burning power plants from the 1950's that are literally causing deaths there. So at least we could touch on the fact that there are alternative costs, not just the subsidies to these industries and to the green industries.

Mr. PONEMAN. Thank you for that question, Congressman. And it responds also I think to Congresswoman Buerkle's question as well.

We have massive amounts of coal in this country, and we are going to continue using it. It still provides about 45 percent of our electricity. But as you suggested, Congressman, we have to clean it up. Under the Recovery Act, we are investing $3.4 billion in just that task, so we can get clean coal competitive, and clean our environment at the same time. As we are sitting here today, Secretary Chew is in an international meeting discussing carbon sequestration with other countries, so we can not only be competitive but get the best technology deployed so we can clean up the coal and continue to get the electricity from it, but also preserve our health.

Mr. QUIGLEY. Thank you.

Let me move on to something else. The American Energy Council, Innovation Council led by Bill Gates, is urging us in Congress to make smart Federal investments in clean energy research and development. Now, he is backed by many other CEOs, including Bank of America Chairman Chad Holliday, CEOs and COOs who are asking Congress to infuse our economy through Federal investment in these sorts of programs. So I guess if you don't necessarily believe what you deem a liberal Congressman from Chicago, there are national experts in private industry, industry leaders who agree with what you are trying to do.

Mr. PONEMAN. Congressman, this is a very important study. Because these are innovators, these are the people who not only know that private capital is the driver of innovation and growth, but they have actually done it successfully and they say where there are certain market imperfections, that is the place for government to play a stimulative role, correct those imperfections and help get the new green economy built and win America's future.

Mr. QUIGLEY. Thank you, Mr. Chairman. I yield back. I yield to Mr. Connolly.

Chairman ISSA. The gentleman yields.

Mr. CONNOLLY. Thank you for yielding.

The premise of this hearing is, how Obama has, the green energy program has killed jobs. So how many jobs have you killed, Secretary Solis?

Secretary SOLIS. We have actually helped to create jobs. And in that we are training individuals.

Mr. CONNOLLY. So the premise is wrong?

Secretary SOLIS. In my——

Mr. CONNOLLY. Are you familiar with the Council of State Governments that says in one quarter alone we created, last year, we created 51,000 green jobs? That is not the Obama administration saying it, it is the Council of State Governments. I would ask that this be entered into the record at this point.

Chairman ISSA. Without objection.

Mr. CONNOLLY. I thank the Chair.

Chairman ISSA. At this time I would like to ask unanimous consent that we include in the record, based on testimony, the email produced by OMB from January 13th, which says in part, "After canvassing the committee, it is a unanimous decision not to engage in further discussions with Solyndra at this time." Also, the January 26th email, which says in part, well, I will just leave it as, it goes the other way, and the March 10th one which says in part, "DOE is trying to deliver the first loan guarantee within 60 days from the inauguration. The prior administration could not get it done for 4 years."

Without objection, so ordered.

Mr. CUMMINGS. No. Objection. Only because I don't have it.

Chairman ISSA. Well, you don't have something until I ask to have it put in the record. It has been produced.

Mr. CUMMINGS. Well, I mean, I can't. I object to something that I don't see. I just want to see it.

Chairman ISSA. Here you go.

I ask unanimous consent to——

Mr. CUMMINGS. I object until I can see it.

Chairman ISSA. Mr. Poneman, are you aware of these emails?

Mr. PONEMAN. No, sir, I am not.

Chairman ISSA. Even though they were DOE emails?

Mr. PONEMAN. I did not arrive until, I was sworn in in May, sir. But I would be happy to review anything you wish to have reviewed, sir.

Chairman ISSA. Okay. I would ask you to verify these for the record. I will mention in part, if the gentleman has no further objection, that they were produced to the Energy and Commerce Committee, and these are copies we received from them.

With that, we go to the gentleman from Texas, Mr. Farenthold, for 5 minutes.

Mr. FARENTHOLD. Thank you very much. And I did want to talk a little bit about the green jobs.

I am all for jobs, whether they are green, brown, pink, purple, yellow. It doesn't matter. But it seems like, again, and certainly as somebody from Texas, this really hits close to home, that we are focusing on green jobs at the expense of the traditional oil and gas industry and traditional petrochemical, coal, and the like. I am a supporter of an all of the above energy policy, but we see all of this effort going into what is a green job and what is not a green job in generating energy, which is the key to this economy.

So I want to ask Mr. Poneman, the CRS has reported that the United States has access to more energy and natural resources than any other country in the world. Do you agree with that?

Mr. PONEMAN. I would have to see the study, sir. But we have tremendous Resources in hydrocarbons, natural gas, oil and coal as well as the other resources.

Mr. FARENTHOLD. Do you believe we should forsake those resources for green energy?

Mr. PONEMAN. Absolutely not, Congressman. I am glad you called for an all of the above policy. We strongly believe in that, and I think we are putting everything in place to promote our hydrocarbon sector as well as these. We need all of these energy sources.

Mr. FARENTHOLD. How do you then explain some of the policies that we see coming out of this administration with the slow-down in leasing, the permitorium on offshore drilling, a call for punitive taxes on the oil and gas industry?

Mr. PONEMAN. Congressman, I think we actually have a very strong policy. Of course, we, and I am sure you as well, want us to exploit these resources safely and to take into account best practices and learn the lessons from Macondo. But we are proceeding with offshore and onshore leasing. I have just participated in a new interagency committee the President mandated to look at Alaskan resources. And we intend to have a very robust policy. We had the Secretary of Energy Advisory Board just look at the natural gas sector and make sure that as we proceed with a prodigious shale gas resource that we proceed in a responsible, open, transparent manner so we can continue to enjoy the confidence of the American people.

Mr. FARENTHOLD. So you are suggesting that some of these new technologies for the shale gas that have been used in Texas for as much as 60 years aren't fully understood?

Mr. PONEMAN. I am saying that I think we have a very good report in from an expert committee that talks about things we could do to improve the public transparency so we have a wide——

Mr. FARENTHOLD. Well, let me go on, because I have another line of questioning and I have used up more than half my time already. Mr. Poneman, are you acquainted with a gentleman by the name of Steve Spinner?

Mr. PONEMAN. It does not ring a bell.

Mr. FARENTHOLD. Well, a Department of Energy spokesman told the Los Angeles Times last Friday that Mr. Spinner acted as a liaison between the Recovery Act office and the loans program office. His LinkedIn profile claims that he reported to the Secretary and was responsible for strategic operations of loan and loan guarantees, including renewable energy. As the Deputy Secretary of Energy, you didn't know him?

Mr. PONEMAN. No, your references, I think I may have met him, yes. I am not sure.

Mr. FARENTHOLD. So you didn't interact with him frequently, though?

Mr. PONEMAN. It would have not have been somebody I dealt with well enough to remember, no.

Mr. FARENTHOLD. Well, Mr. Spinner was the CEO of a sports and fitness company and an investor in internet companies before working at the DOE. So no one ever questioned his qualifications to come to the DOE?

Mr. PONEMAN. I don't know that, sir, but I am happy to check.

Mr. FARENTHOLD. Were you aware that Mr. Spinner was also a bundler for President Obama, raising over $500,000 for Obama's 2008 campaign roll?

Mr. PONEMAN. No, sir.

Mr. FARENTHOLD. All right. Thank you very much. With that, I will yield back.

Mr. MACK [presiding]. Thank you. Actually,would the gentleman yield?

Mr. FARENTHOLD. Sure.

Mr. MACK. Again, I want to follow back upon this question about green jobs. I think we want to, whether it is like someone earlier said, we just want to create jobs. But we certainly don't want to make an appearance to the American people that a program is working by padding the statistics. Madam Secretary, with all due respect, the idea of counting a job as a green job for driving a hybrid bus is, when people watch this hearing, it is offensive. It is offensive because they know that they are not being told the truth. And they want the truth. The American people are smart. And if you give them the truth, they can determine whether or not this is a good thing or not.

But if you pad the numbers to try to make it look better for you, at the expense of the taxpayers, it is offensive. So we want to have a debate about whether or not it really is working. But when you pad the numbers in such a way, it is very difficult to have a debate about that. My time is expired.

The gentleman from——

Mr. CUMMINGS. You just called her a liar, basically.

Mr. MACK. I didn't say that.

Mr. CUMMINGS. Yes, you did. Let her answer.

Mr. MACK. Mr. Welch, you are recognized for 5 minutes.

Mr. WELCH. Thank you, and I will start out by letting you answer the question.

Secretary SOLIS. Thank you, Mr. Welch. I would just say again, in reference to the BLS, they do identify mass transit, this industry, as a part of the green service area. When it reduces pollution or conserves natural resources, that is exactly what the buses are doing. That is exactly what the vehicles that were built in California and were remanufactured, this is a whole new industry. And I think that it is a positive direction that the President has outlined that we should be making investments in.

Mr. WELCH. Right, thank you.

I agree with many of my colleagues on both sides of the aisle that any job, we need energy, any jobs we can create in the energy sector, we should. Governmental policy is very active in the carbon-based energy field. There is now some activism in the so-called green sector.

By the way, China, as I understand it, is making massive investments and creating hundreds of thousands of jobs.

I also think it is a fair question that Mr. Mack asked, how do we do the accounting. People want to have credibility on it. I have no reservation whatsoever trying to figure out, what do you want to call a green job. Some are more questionable than others. That probably is true in the carbon energy field as well.

But it is a fair point, I think, and I would encourage our Department to work so that we are all talking off the same page.

But I just want to give an example of something that is really working in Vermont. There is a lot of focus on Solyndra, got to get to the bottom of it. I understand one of the issues there is that the investments that China made really plunged the price of solar panels, and it created a real advantage for China, which manipulates its currency to the detriment of manufacturers here. That might be an issue that we want to work with together. Because whether you are doing solar panels or you are making batteries, if there is a currency manipulation by China that is putting our hard-working manufacturers at a disadvantage, we have to get together on that. I would like to work with my colleagues to see if we can get more manufacturing jobs here.

But this is a Vermont story. It is a great story, Vermont scale. I recently visited a DOE grant recipient, it is called Neighbor Works in Rutland. It received a $4.5 million grant. There was a lot of excitement. In Vermont, we have contractors out of work, like we have all around America.

And what Neighborhood Works has done is started a revolving fund with that grant to help provide home energy efficiency retrofits. We have gotten 150 homes retrofitted, 170 in progress. The goal is 1,000 by the end of the 3-year grant. That is 5 percent of the entire housing stock in Rutland County. So it is a big deal for us.

And it is saving the homeowners about $913 a year. That is real money in Rutland County. And when I was there, I got a tour of actual work that was being done in some of these old buildings. And I was also at a class where we had scores of local contractors who were getting updated on what they could do to get basically in their market.

So I just want to cite that. It is not Solyndra scale, but it is real-world scale in Rutland, Vermont. It has local people doing the administration. It has local homeowners who are lining up to get the opportunity to retrofit their homes and save the money. And it has local contractors who are desperately looking for work.

So let me just ask you, let me say thank you that is working. Secretary Solis, can you tell me if in your survey it is the case that it is the construction workers that are probably getting hit harder or as hard as any other sector in our economy, and how this plan might be helpful to them?

Secretary SOLIS. It is very true. In fact, we have in the audience here some individuals who represent the business industry and apprenticeships where they are retrofitting commercial buildings and homes. And we have individuals here that are also working in other segments in, say, hospital care where they are learning to conserve and re-use and provide other efficiencies. Efficiency is one of the definitions that the BLS has outlined. So yes, it falls very much in line with that. And we are going to see more jobs like that created.

We are making the transition from blue collar to green. That is what it is. So it still could be very intensive, manufacturing, construction, yes. But there is a new component to it.

Mr. WELCH. Last year when I served on Energy and Commerce with you, Mr. Barton was extremely helpful in trying to push energy efficiency. I hope we can find some common ground and do that here. So I thank you. I yield back.

Mr. MACK. The gentleman's time is expired. Mr. Lankford is recognized for 5 minutes.

Mr. LANKFORD. Thank you.

And thanks for being here, and the conversation, this is a big deal. Obviously we are tracking jobs, this is important to us, and how it is done and how we classify it. This is a new category that has been created, green jobs. Obviously you all are struggling through how to define whether, if someone changes from an incandescent bulb to fluorescent bulb, now they are suddenly a green job, where last week they were a janitorial job, now they are a green job janitorial job. All those dynamics fit into this as we are trying to find a clear definition to really get a real handle on what this is.

So I appreciate the work you are doing on that. And I press on, because we want to have a good definition that we can all agree upon at the end of the day. We have to determine where these dollars are going.

Mr. Poneman, let me ask you as well as about clean energy. How are you defining, is there a list that is working from the Department of Energy, these are clean energy sources?

Mr. PONEMAN. No. We don't do it that way, Congressman. We are trying to build a future. We are trying to build, as your colleague was saying, all of our energy Resources, absolutely including those that have no and low carbon and everything from nuclear and hydro through the renewables.

Mr. LANKFORD. Okay, so I am assuming solar is a clean energy, wind is a clean energy, hydroelectric, clean energy.

Mr. PONEMAN. Yes.

Mr. LANKFORD. Biofuels. Would geothermal be considered a clean energy source?

Mr. PONEMAN. Yes.

Mr. LANKFORD. Natural gas use?

Mr. PONEMAN. It is better than coal, because of course it only has half of the greenhouse gas emission. So that is a significant improvement in terms of the greenhouse gas emissions.

Mr. LANKFORD. Based on where we are with research and the progress we are making, in the next 20 years, could we be at a spot 20 years from now on our current trend in where things are moving to have 80 percent of America's energy be produced by clean sources?

Mr. PONEMAN. Electricity. We believe, the President has called for this, by 2035 we can have 80 percent of our electricity from clean sources, yes.

Mr. LANKFORD. And where would you define clean sources? Is that natural gas power plants, solar, wind? Where is that coming from?

Mr. PONEMAN. Obviously anything that has zero carbon emissions, that counts completely. Then for example if something has half the greenhouse gas emissions of coal, as natural gas does, as a matter of logic, I would impute that much to it.

Mr. LANKFORD. And that is the challenge, is that obviously he has called for that in the State of the Union Address. The challenge then is, how do we define what energy sources are in, what is out on that one. So at this point, has it been defined, this is the clean energy source, so this is going to be included in that 80 percent target?

Mr. PONEMAN. I think when we contemplate getting the 80 percent, it would give that kind of credit to natural gas, as well as of course the carbon free sources would be counted as well.

Mr. LANKFORD. What about solar? What percentage do you think of electricity will be produced by solar 20 years from now?

Mr. PONEMAN. It depends. We have the sunshine initiative, we are trying to drive down costs so it would levelize the cost of electricity from solar is the same. We think it is growing. We have 887 megawatts that went in last year, that was double the year before, 435. So it is going up.

Where exactly it is going to be in 2035, I couldn't tell you.

Mr. LANKFORD. The challenge that I go back to, because when I heard the President say that in the State of the Union on address, my mind immediately went back to 1979, and I remember President Carter making a very similar statement. I went and researched that and pulled that, and in 1979, President Carter said, by the year 2000, 20 percent of America's electricity will be produced by solar power. That was the initiative in 1979. Obviously we are not at that point, and we are 11 years after that target. So we are going to have to greatly expand what is clean energy to be able to hit some of these targets we are talking about with this 80 percent number.

Mr. PONEMAN. It is an ambitious goal, sir, but I believe it is one we can reach.

Mr. LANKFORD. Well, it is one that we have heard before, obviously, in 1979. By the way, I am not against solar power or wind or all that. I hope my car runs on pinwheels 1 day. That would be great.

But in reality, what we really have is functioning traditional fuels. I am concerned that there is this push toward the green energy jobs to the detriment of traditional energy sources that could be successful in things.

Let me just mention one thing, too. Our committee has asked you for some documents on a subcommittee study that you put together on hydraulic fracking from the Department of Energy. Do you know when those documents are going to be completed, coming back to our committee?

Mr. PONEMAN. I do know, sir, some documents have been provided.

Mr. LANKFORD. Right. Some have. Just the complete set, do you know when those are coming?

Mr. PONEMAN. I know that our staff is working with yours, and I am happy to talk to them when I get back to the Department. I am sure they are engaged and we want to make sure that you get those.

Mr. LANKFORD. Obviously, it has been months in the process of their request on that. We would like to have that done. There are a lot of folks in the natural gas industry that are very concerned

about the number of studies and committees that are suddenly rising up on hydraulic fracking.

Mr. PONEMAN. Right.

Mr. LANKFORD. Mr. Farenthold mentioned before, in Oklahoma, we have used hydraulic fracking since 1949. We have done it more than 100,000 times, we have fracked the earth in Oklahoma. We have great water, beautiful land and air. It is a great State to be able to be in for our natural resources there. And we have experienced what happens with natural gas fracking and with oil fracking, we have seen it.

Even you had mentioned in your testimony about since 1970, the Federal Government has been involved in helping with the fracking process, and the technology of that. Our State Department currently is helping governments all over the world learn how to be able to frack, while at the same time, DOE and EPA and others are studying fracking to determine whether it is safe here and how to regulate it more and that.

So this push and pull between, are we pushing green jobs so quickly and in studying and trying to put boundaries around traditional energy that we are going to choke off traditional energy and try to force the rise of green energy, that is part of my concern. If we are going to do all of the above, we have to do all of the above and make sure that we are doing them all well.

Mr. PONEMAN. On that last point, sir, it is an excellent point. We have a prodigious gas resource we are getting from having only had 1 trillion cubic fee of shale gas in 2001, we are now over a quarter of our natural gas comes from those tight shale gas deposits. The critical thing, as I think we all agree is, we have to make sure we do it in a way that is transparent and open so the American people can continue to have confidence in that prodigious energy resource.

Mr. LANKFORD. Correct, but we can't in the process choke off investment in that area, that suddenly there is a transition. We have to be able to say, if it is there, it si there, let's go after it.

With that, I yield back.

Chairman ISSA. I thank the gentleman.

The gentleman from Massachusetts, Mr. Tierney is recognized for 5 minutes.

Mr. TIERNEY. Six minutes or 5 minutes? I just wondered if we are going to continue the trend.

Chairman ISSA. Only in the usual way, Mr. Tierney, in which the last question comes in with a half a second to go and the answer takes that minute. And I expect that will happen.

Would you please reset the clock?

Mr. TIERNEY. I think part of what we are talking about here is whether or not this premise of the hearing is, whether a green agenda kills jobs. To me it seems a bit of a suspect statement, if not totally political. I think we ought to really be asking whether or not investments in green energy are useful or not.

And I look, and I see that China seems to think that it is. Truth of the matter is that China is now number one, it is the highest public market for financing in clean energy, the sector. We are number three. We used to be number one. We are number three now, behind China and Germany. China has secured $47.3 billion

in asset financing in 2010 for clean energy projects. We had $21 billion.

Sixty percent of all clean energy technology IPOs in the world in 2010 were from Chinese companies. China has created 16 national energy research and development centers and 10 are specifically to drive innovation in the clean energy sector. By the end of 2011, national Chinese research and development expenditures are expected to rise 11 percent over levels earlier this year. And there has been a 600 percent increase in the number of college graduates in science fields in China between 1995 and 2005.

So the truth of the matter is that China certainly thinks that creating jobs and moving forward by investing in green technologies is, as Mr. Quigley stated, the Economic Council of the President, Jeffrey Inmault, Norman Augustine, Bill Gates, and others, all down the line, they think it is an investment, that there should be some public support for what the private industry is doing. They asked for $16 billion in general clean technology investment and asked for a specific $1 billion for the energy advanced research program on that initiative.

So there are a lot of people, a host of people that really believe that this is an investment worth making to support what the private industry would on that. I think it is a shame we are sitting here while China charges ahead, while Germany charges ahead and we fall further behind. We are still arguing about whether making an investment in clean technologies is killing jobs, something like that. It just doesn't seem right.

And I think we should investigate what the role of different people has been in supporting this. But I just take a note in the newspaper this morning, there are a bunch of article in the press suggesting that 10 Republican members of our committee wrote letters to the Department of Energy praising loan guarantee programs. They were glowing in their terms, they were looking for funds for various projects in their district. So apparently nobody wants to pick winners and losers unless we can pick winners in a specific district on that.

Let me read from one of the stories. It is an article that ran last night in Energy Daily. "In one letter dated October 30th, 2009, Representative Dan Burton," our colleague here who is the second ranking Republican on the committee and its former chairman, "joined 10 Indiana Members of Congress to express his support for loan applications submitted by Abound Solar."

Are you familiar with Abound Solar, Mr. Poneman?

Mr. PONEMAN. Yes, sir.

Mr. TIERNEY. According to your Web site, they got a $400 million loan guarantee under the exact same loan guarantee program as Solyndra. Is that true?

Mr. PONEMAN. Same program, yes, sir.

Mr. TIERNEY. And what your Web site says, the Department of Energy offered Abound Solar Manufacturing, LLC a $400 million loan guarantee to manufacture state-of-the-art thin film solar panels. The project includes two facilities, one in Longmont, Colorado, and the other in Tipton, Indiana. Is that right?

Mr. PONEMAN. As I recall.

Mr. TIERNEY. So Mr. Issa says that doing things like that is kind of a back door corruption. Do you think that a Member sending a letter in support of a constituent company suggesting that they might benefit from a program like this is some sort of corruption?

Mr. PONEMAN. Let me be very clear, Congressman——

Mr. TIERNEY. I don't think it is.

Mr. PONEMAN. We welcome all correspondence from Congress and treat it respectfully. However, when we are looking at these proposed loans, we analyze them purely on the merits.

Mr. TIERNEY. Well, one would hope. So on the one hand, we have those 10 Members putting in a letter and suggesting it go to their company in their district. And the next night they are on Fox News saying the whole green thing is a scam in the first place. I guess we will have to go those Members and decide which it is.

I noticed that our chairman, Mr. Issa, who talks about this being a job killer and back door corruption, himself wrote a letter to the Secretary of the Department. I just quote from the first part, "I write to express my support of Aptura Motors," an application for a loan under the Department of Energy's 136 Advanced Technology Vehicles Manufacturing Incentive program, ATVMIP. Later on there he says Aptura's project will also promote domestic job creation.

So apparently on the one hand we are having a hearing about whether we are killing jobs. But when it comes to a company in our district we are suggesting that they are going to promote domestic job creation if we make the right investment.

I would like to turn this hearing into, how do we make smart investments like the President's Council talks about, and how do we do that. Secretary Solis, when we make smart investments, if we are going to try to catch up to China and Germany, take advantage of all our innovation in this country, it would be useful, I would think, to have some people who can actually do those jobs. Is that correct?

Secretary SOLIS. Congressman, that is what we are hearing from the industry right now, that we don't have enough qualified individuals in this new technology.

Mr. TIERNEY. So what the Department of Labor is doing basically is not creating the jobs, you are training the people for the jobs that are created?

Secretary SOLIS. I have said that from the start.

Mr. TIERNEY. And how has your record been on that?

Secretary SOLIS. Well, we are now, for our $500 million that we have received through the Recovery Act, we have already trained up 52,000. Our goal is about 96,000. So we are more than halfway there. And I would say our numbers are growing, because these are 3-year, 2 and 3-year projects. So you have to consider when the startup began.

So I think we are on the road to slow recovery. As soon as the economy and venture capitalists feel that there is a way to go, then I think you are going to see those jobs there, and we will have trained individuals ready for them.

Chairman ISSA. I thank the gentleman.

We now go to the gentleman from Tennessee, Mr. DesJarlais.

Dr. DESJARLAIS. Thank you, Mr. Chairman.

I was just listening to the conversation here about whether we are——

Chairman ISSA. Would the gentleman suspend? I apologize. Okay, the gentleman will wait. Go ahead, please.

Dr. DESJARLAIS. Just getting back to the subject of listening to Mr. Tierney, and we are talking about whether we are killing jobs or are we creating jobs, are we making smart investments, you have to forgive me, I come from the private sector and I am new. So I have a little bit of difficulty understanding how government jobs are profitable.

But Secretary Solis, how many people with green jobs training have green jobs?

Secretary SOLIS. I would say the number of participants that have gone through what we are talking about here is 52,000 individuals that went through our green jobs programs. Not all of them have been placed in jobs yet, but many of them were incumbent workers currently employed and were upgraded, so they got other certificates.

Dr. DESJARLAIS. So you may just answer this, what fraction of the graduates of green job training programs have since obtained green jobs?

Secretary SOLIS. The percentage, well, I will give you a number of individuals that have been placed in jobs, that is about 8,000.

Dr. DESJARLAIS. Okay. How are people selected for green job training? Do people opt for green job training instead of normal training, or is this a government decision?

Secretary SOLIS. It is not a government decision. As I said earlier, these are partnership grants that are based on market based information. So you have businesses that will work in conjunction with, say, a community college or another individual group. And they will decide where the needs are based on facts and information. We then monitor that. It is a competitive process. We do not pick the winners and losers. These are individuals that compete State-wide and in some basis, nationally.

Dr. DESJARLAIS. Okay. You are familiar with the Davis-Bacon Act?

Secretary SOLIS. Yes, I am.

Dr. DESJARLAIS. A key part of President Obama's American Jobs Act is creating jobs to rebuild or repair at least 35,000 schools. Do you think that waiving Davis-Bacon requirements on school construction has any merit?

Secretary SOLIS. I think that the Davis-Bacon Act was, provided many decades ago through a Republican administration, and it was basically to keep wages at a good, balanced level so they wouldn't be driven down with outside individuals coming in from say, other neighboring States or other places. So I do believe that it does provide a good quality of, how could I say, salary for individuals in a competitive market. Yes, I do agree.

Dr. DESJARLAIS. So you are familiar with the George Mason University study that basically concluded that suspension of the Davis-Bacon Act would have created about 55,000 additional jobs federally, because the way they made their calculations, they were paying on the average of about 6 percent higher than market rates?

Secretary SOLIS. I am not familiar with the study. I know there have been individuals and different groups that have said that Davis-Bacon may have an impact in raising wages. But I would tell you that what our Department does is a wage survey. So we base it on what that sector is providing in the neighboring areas and we come up with a medium. That is how we base our Davis-Bacon rates.

Dr. DESJARLAIS. So do you think green jobs to this point, the money invested, as Mr. Tierney says, are we making smart investments? Are we showing a profit with these government jobs?

Secretary SOLIS. They are not government jobs, Congressman. I have to remind you that we don't create government jobs. We are actually helping to train individuals who will then be available for private sector jobs. Or if, say, they are working for a local government, they may be hired up to work in that particular part that is green. So I am not the actual creator of a job; we help to train them.

Dr. DESJARLAIS. I think sometimes we focus so much on the fact that unemployment rates are high and we need to create jobs. But we often spend a heck of a lot of money, we did so with the first stimulus, and we are staring at possibly stimulus 2 here. It reminds me of a story, I am from southern Tennessee, right on the Alabama border. There is a story about a farmer who decided to sell watermelons at the market. So he found a watermelon just across the line in Alabama and he would go load his truck up and buy the watermelons for a dollar, and he would bring them back to Tennessee and sell them for 75 cents. He did that a few times, and clearly wasn't turning a profit. So he came to the conclusion he just needed a bigger truck.

Sometimes when we look at these jobs, green jobs and how we are spending stimulus money at an incredibly high rate for an overpriced, sometimes overpaid jobs, I am just wondering if we are solving the problem of our debt crisis or if we are just making it worse.

Secretary SOLIS. I had an opportunity to visit Tennessee almost a year ago and visited the Sharp industries there and was very impressed to see the kind of training and the diverse work force there that were involved in solar panel development. And the owner of the plant there, as you know, is from another country. However, their employment there helped to provide a substantial number of good-paying jobs there.

I asked him, what will it take for you to continue to expand? Because we obviously want to see this industry grow. And he said, well, what we would like to do is be able to open two or more factories, but we know that we have to have a demand. So they are very interested in seeing expansion of that particular plant. But to see people who are in another industry that was dying, because they were making plasma TVs and other things, now they are into solar panels, this was a job creator. And clearly, the individuals that make the decision to create that industry there in Tennessee where unemployment rates are very high I think was a very good decision.

Dr. DESJARLAIS. Did you get any good deals on watermelons?

Secretary SOLIS. I didn't stop to have one.

Chairman ISSA. I thank the gentleman and the gentlelady.

We now go to the gentleman from Virginia, Mr. Connolly, for 5 minutes.

Mr. CONNOLLY. Thank you, Mr. Chairman. And my friend from Tennessee began by saying he didn't understand how public sector jobs could help an economy. I find that odd, given that Tennessee has benefited from Federal investments in Oakridge and created actually incredible intellectual capital that has generated technologies and jobs and fostered an economy. To say nothing of, going further back, the Tennessee Valley Authority, which created jobs with a strategic investment by the Federal Government and then transformed an entire region then allowed it to develop economically.

Other than that, he is right, public sector investment in public sector jobs makes no sense.

The premise of this hearing——

Dr. DESJARLAIS. Will the gentleman yield?

Mr. CONNOLLY. Yes.

Dr. DESJARLAIS. I was just curious, with all the aid that we got in Tennessee, what has happened from the deficit from that time to now.

Mr. CONNOLLY. I am not sure what the gentleman's question——

Dr. DESJARLAIS. Well, we are talking about how we have created all these good jobs. But yet we continue to have a spiraling deficit. Is there any correlation there?

Mr. CONNOLLY. Reclaiming my time, I would say respectfully to the gentleman, it is not good enough to know the cost of everything and the value of nothing. There is a difference in spending. There is a difference between purchasing a consumable and making a strategic investment. And quite frankly, your State has really benefited from the latter, as has mine.

The premise of this hearing is nothing but, in my view, a raw, partisan assertion that presupposes the answer. We don't say, in the title of this hearing, are Obama's green energy, is Obama's green energy agenda creating jobs. That would be a fair intellectual pursuit. We say, how Obama's green energy agenda is killing jobs, which gives away, transpaerntly, the agenda and the intent of the majority in putting together this hearing. It is not an honest intellectual pursuit. And that is too bad, what a lost opportunity. Because I really would have liked a hearing that actually did go in depth into, well, how are you keeping numbers. Are we disappointed in some investments that didn't work out? Are there some that are panning out that we now are happy with or we didn't expect would have the kind of payoff they did? But that is not really what we are about here.

And just sadly, in looking at how sometimes we perform, you have been cut off in trying to give some answers or explain. You have been told it is a yes or no, so that of course we box you in, so that nothing gets in the record from you three that is unwanted or that contradicts the false premise of this hearing. And for that, I am very sad. It is a missed opportunity. I hope some day that we can put aside partisan gotcha and yet another hearing and trying our best to embarrass an administration and actually have an honest intellectual pursuit.

So with that, I yield back my time.

Chairman ISSA. The gentleman yields back. Would you like to reclaim your time?

Mr. CONNOLLY. I reclaim my time as a matter of courtesy to the ranking member.

Mr. CUMMINGS. Thank you very much. I just want to go to, this is a New York Times piece which is very interesting, it talks about, it says here the bankruptcies of three American solar power companies in the last month, including Solyndra of California, and this is dated September 19, 2011, including Solyndra of California on Wednesday have left China's industry with a dominant sales position, almost three fifths of the world's production capacity and rapidly declining costs. Some American, Japanese and European solar companies still have a technological edge over Chinese rivals, but seldom a cost advantage, according to the industry. Loans at very low rates from state-owned banks in Beijing, cheap or free land from local and provincial government across China, huge economies of scale and other cost advantages has transformed China from a minor player in the solar power industry just a few years ago into the main producer of an increasingly competitive source of electricity.

Do you have a comment on that?

Mr. PONEMAN. Yes, sir, Congressman. We can get it back. We have the best innovation, the Abound case that was just noted, we have some great technologies. And there is no one who is better at innovation, marketing and making the private sector work than the American people.

Mr. CUMMINGS. And it can create jobs?

Mr. PONEMAN. Absolutely. Hundreds of thousands of jobs already we have created.

Mr. CUMMINGS. Thank you, Mr. Chairman.

Chairman ISSA. I thank the gentleman.

We now go to the gentleman from Michigan, Mr. Amash.

Mr. AMASH. Thank you, Mr. Chairman. I gladly yield my time back to you.

Chairman ISSA. I thank the gentleman. I thank him a lot.

Mr. Poneman, I am going to zero in on something that Secretary Solis said about, we don't create these jobs by hiring the people, we in fact train them and the private sector hires them. Then how do you explain that the jobs created at the Lawrence Berkeley National Labs, a DOE-funded lab, basically government jobs, they were allowed to and successfully bid for the Algerian contract for carbon sequestration monitoring against an American company, Halliburton, and their Canadian partner. They underbid an American company that would have put the jobs in Houston, and instead, they used a government lab to underbid them.

Why is it DOE is bidding against the private sector at all? Why is it that you in fact undercut an American company's attempt to bid in a foreign country? Why?

Mr. PONEMAN. Two points, Congressman. Number one, to be clear, like all of our national laboratories, Lawrence Berkeley is a government-owned contractor operated facility. Point one. Point two, I am not familiar with the specific facts of the matter.

Chairman ISSA. We will give it to you and you can respond for the record.

Mr. PONEMAN. I would be happy to respond.

Chairman ISSA. Contractor-funded, I am very familiar, I have visited many of the labs and certainly a lot of both our overt and covert facilities. Bottom line is, taxpayer dollars prop that up. Special considerations, even special patenting capability and the like, all of which are available to Lawrence Livermore, Lawrence Berkeley and the others, Los Alamos.

Why are, presuming that this is a correct report, why is it that they should be bidding at all for contracts that are private sector contracts?

Mr. PONEMAN. There are many of these bids, Congressman, I am not familiar with this particular case, in which they are a consortia, in which they are a number of private and academic and other institutions. That is one thing. The second thing I just want to note, we have worked very, very hard so that the intellectual property that has been developed in those national laboratories actually gets spun out of the private sector so that it promotes and stimulates private investment.

So I am very happy to look at the particulars of this case and get back to you. But I am not familiar with it from what you have described.

Chairman ISSA. Well, you brought it up, so I will just be quite candid. You don't own the intellectual property when these labs do it. Individuals, inventors at the labs using government money ultimately spin them out and become very wealthy. It is one of the problems of the labs. And if you don't know it, you have only been on since March 2009, take a look at it. In fact, that has been part of our problem, is we fund people to in fact develop, we give them special access, and then yes, we do commercialize. The problem is, we take our money and allow somebody to commercialize it, basically making entrepreneurism on the back of the taxpayers.

But I will give you the information on this so that you can answer for the record.

Madam Secretary, once again I am going to just review the facts. And Dr. Hall, I would like you to weigh in on this. When you train somebody to drive a bus, if it is a hybrid bus it is a green job. That was from your own statement on Mr. Reyes, correct?

Secretary SOLIS. Yes.

Chairman ISSA. Okay. Dr. Hall, can you today give this committee, and Mr. Connolly left, and I apologize that he is not here, but I am sure he will get word. The premise of ours is that you have bad numbers because you haven't had the metrics in order to get good numbers. If I put LEDs in my office, apparently my staff becomes a green staff. If my staff director drives in in a hybrid, I guess he becomes a green person. If a lobbyist is paid a million dollars a year here to lobby for green grants, apparently it is a green job.

What are the number of green jobs, real jobs, that go on past government contracting or government subsidies today that are actually net increases since the President took office?

Dr. HALL. The measurement, the two surveys I talked about, we are actually in the process of collecting data for the first time.

Chairman ISSA. So in the future, you will be able to give us numbers.

Dr. HALL. Yes.

Chairman ISSA. But today, your numbers are clearly wrong, unless you make the assumption that teaching a bus driver to drive a bus is a green job. Understanding that there are no new net bus drivers created, there is only somebody driving a bus with a battery instead of a bus with just an engine and a starter battery, right?

Dr. HALL. Our green jobs include mass transit. So actually, any busy service, whether it is——

Chairman ISSA. Oh, okay, so let me understand this. Because Mr. Connolly had some righteous indignation. You are counting everyone who drives a bus as a green job.

Dr. HALL. Mass transit is a green service, yes.

Chairman ISSA. Oh, my goodness. I didn't know that.

Mr. Poneman, one last question. There was some hyperbole here earlier about Beijing's terrible environment. Isn't it true that Americans enjoy the acid rain from China and Vietnam's abysmal use of coal by not cleaning it up and simply pouring it into the air? Ultimately that terrible Beijing ends up falling on the heads of Californians and our cleaner, much cleaner facilities using coal and natural gas, do not produce the kind of acid rain they produce?

Mr. PONEMAN. Alas, this is a global problem. And the emissions that happen in one country certainly transmit to the other countries. That is why we have to address this on a global basis. And we are trying to do that every day.

Chairman ISSA. I would submit that no one is addressing China. China is doing what they want to do and stealing our jobs and we are actually enabling it.

With that, I go to the gentleman from Illinois, Mr. Davis.

Mr. DAVIS. Thank you very much, Chairman. And let me welcome our witnesses. It is certainly a pleasure to see our former colleague, Secretary of Labor, it is a pleasure indeed. Dr. Poneman, Dr. Hall.

I was amazed, quite frankly, as I tried to analyze the title of this hearing. And that is the idea that the green energy agenda is killing jobs. And it is sort of, it struck me, how can you kill something that is already dead, that the jobs are not being killed by the energy program that is being developed and articulated, that job opportunities are being increased.

And I want to especially thank and commend you, Madam Secretary, for the training programs that people in the congressional district that I represent, thousands and thousands and thousands of low income people, in an inner city community, who basically migrated from some of those areas that have been discussed, and have had opportunities denied them because business and industry has flown. So I commend you and the Department for the sensitivities that you have displayed, for the understanding.

I also want to commend my colleague from Virginia for his understanding of Tennessee history and the recognition of how impactful government intervention has been on raising the quality of life in areas throughout the country.

Dr. Hall, let me ask you, because I am interested in the numbers that the chairman asked about, how soon do you think we will be able to get those?

Dr. HALL. We will start producing the green goods and services data in the first quarter of 2012. And by the middle of 2012 we will have the second survey results with the green technology and practices.

Mr. DAVIS. Thank you very much.

Let me just ask, there are people who argue that investing in green companies, the government is picking winners and losers. But investing in the energy industry is not new to government. We have done it for a long time, especially subsidies to oil companies, to big oil. Now instead of focusing predominantly on the fossil fuel projects, the Department of Energy loan programs appear to be promoting investment in a more diverse array of energy sectors.

Dr. Poneman, let me ask you, can you describe the various energy sectors that the Department of Energy has made loan guarantees to, and can you describe what factors the Department takes into account in determining which companies get these loans?

Mr. PONEMAN. Thank you, Congressman. I will answer both parts of that question. We have invested loan guarantees in the first nuclear power plant to be built in this country in three decades. We have invested in the largest wind farm in the world, some of the largest solar facilities in the world. We have invested in geothermal. We have invested in wind farms.

The criteria that we use, the criteria that were wisely put into statute by the U.S. Congress going back to 2005 and later in 2009, we look for those projects that are innovative, that can make a significant difference in terms of creating a competitive, successful industry that hires American workers. Our data so far suggests we are generating hundreds of thousands of jobs.

I had the opportunity, speaking of Tennessee, to go to Smyrna, TN to open a Nissan Leaf factory that is already hiring 700 to 800 workers, and when in permanent operation will have 1,300 workers. We have Iraqi war veterans who are working on a desert facility for solar in the Mojave Desert. We have 1,000 green employees in the A123 factory in Romulus, MI, taking people like Annette Herrera and giving them jobs after they have been looking for 2½ years. We have seen this works, we can win this future.

Mr. DAVIS. Mr. Chairman, can I ask your indulgence for a minute to ask a question of the Secretary?

Chairman ISSA. Without objection, the gentleman will be given an additional minute.

Mr. DAVIS. Thank you very much.

Madam Secretary, let me ask, what are the factors that your agency considers when you are trying to determine who gets training grants and what kid of training opportunities would be created as a result of those expenditures?

Secretary SOLIS. Congressman Davis, this is a competitive grant process. So what we look for are obviously the potential for partnership. Industry has to be a part of that. It could be labor management, it could be a community based with an employer. And we have to look at the information that they provide in terms of mar-

ket research, where the jobs will be, where there is a need and where there is an educational gap.

It is a very competitive process. Actually in one of our grants alone that we gave out, Pathways Out of Poverty, to direct funding to low income communities with high rates of poverty, we were over-subscribed, we only could give out less than 90 grants. And there were over 400 applicants. So we know that there is a need, there is an interest. And these were a combination of industry working with communities and community colleges. So there is a great need.

We are sorely underfunding, in my opinion, these kinds of efforts. We have to have a better trained work force.

Mr. DAVIS. Thank you all very much.

Chairman ISSA. I thank the gentleman.

We now go to the very patient gentleman from Pennsylvania, Mr. Kelly.

Mr. KELLY. Thank you, Chairman.

First of all, thank you all for being here. I would not disagree that President Obama's ideas on green jobs, he really believes that is a way we should go. But when you look at the history of our country, the ability to power up all over this country really is what created the jobs that we had back then, and we powered up the rural community. We did an awful lot of things because we had so many natural resources right here.

And I hear people reference China and Germany. And I would suggest to you that China is one of the biggest purchasers of coal from us. They also do things a little bit differently than we do. So I don't want to model ourselves after China or Germany. Germany has a problem with natural Resources.

But I think most people would agree, and in our business, one of the things, we sit down each year and try to project what we are going to do the next year, I am in the automobile business. One of our costs, of course, is the cost of money, but also the cost of energy. And by far, the most affordable thing for me is the fossil fuels. And most economists agree, okay, if energy is a component of what is going to drive your ultimate cost of operation, then shouldn't we be looking at making sure that energy costs stay low?

Madam Secretary, Mr. Poneman, I would ask you, isn't that something we all agree on? If we are really concerned about jobs and creating jobs, I would also suggest that maybe we also need to consider keeping the jobs we already have and making sure that they have a more sustainable life. Is that something you would agree on? I think most economists agree that the low cost of energy really does help job creators.

Secretary SOLIS. I agree, but I also know that because of what we saw happening in the automobile industry, in fact, in Detroit and the northeast section, we saw that the competition with foreign builders from Japan, China and Korea, South Korea, were actually better at producing more fuel-efficient cars.

Mr. KELLY. And we know why they were, because their cost of buying fuel was a lot greater than ours for a long, long time. They import it all, we had it right here. The cost of gasoline was very inexpensive in the States, and that is why we continued to build

what we built, because it was affordable and we could build those cars.

I mean, if somebody had a choice, and I am going to tell you, I am a Chevrolet dealer, the fact that we use $7,500 of taxpayer money to sell a Chevy Volt to me does not seem to be a very good investment from a tax income. I don't believe that. I believe that people will buy other cars that are more affordable. And if we have to use taxpayer money to sell that car, that doesn't make sense to me.

But my point is, if energy is a true cost of your total operation, for a job creator, that is important. People in my industry and other small businesses, they really do, that is a component. So when we tell them that, listen, the traditional energies that made us great, and were very affordable, now we are going to go to green energy, even though heavily subsidized with taxpayer money, is much more expensive. Now, how does that drive my cost of operation down?

Secretary SOLIS. Those industries, GM, Chrysler, have actually paid back their loans. And I can tell you——

Mr. KELLY. Well, but they paid back, they over-borrowed and paid back with money they over-borrowed.

Secretary SOLIS [continuing]. I have seen the assembly lines——

Mr. KELLY. And please, I don't want to get into that. My question is, is it directly related to jobs. In my area of the country, northwest Pennsylvania, and Pennsylvania has been called the Saudi Arabia of natural gas. We have a third of the world's coal beneath our surface. I have friends in western Pennsylvania that cannot get a permit to mine coal any more because the EPA took over primacy from the Pennsylvania DEP. I can tell you what.

So in the interest of creating green jobs and creating green energy, which is more expensive than fossil fuel, and we are saying, yes, we want to create jobs, what we are going to do is we are going to penalize the people that already create cheap energy, we are going to come out with a taxpayer-subsidized new green energy. And if the ultimate cost is still higher than we had, how does that help us?

Secretary SOLIS. I will tell you that the Brookings——

Mr. KELLY. I am sorry, ma'am, I was going to ask Secretary Poneman.

Mr. PONEMAN. It is a great question, Congressman. Let me be very clear, number one, the premise about trying to get the low cost of energy, that is exactly right. That is why we are trying to drive down the cost of solar to 5 to 6 cents level cost of electricity, and then it competes, point one. Point two, we have used this program to protect the existing jobs. We protected 33,000 jobs, Ford Motor Co., through our loan guarantee program, making incremental improvements——

Mr. KELLY. I am not talking about Ford or GM now, I am talking about at some point these industries——

Mr. PONEMAN. These are all jobs.

Mr. KELLY. Well, no. No. These industries, okay, they compete on a global market. I understand that,. We are talking about the cost of energy in all these different businesses okay.

Mr. PONEMAN. Right.

Mr. KELLY. We are talking about, do these green initiatives really create jobs. And my other question was, we already have a base of jobs now creating traditional energy, and we are holding them back. And that is not arguable. We are actually holding these people back.

Now, it is true, and at some point, at some point, I raised four children and they all learned to ride a bike and they started off with training wheels. But sooner or later you have to take the training wheels off.

Mr. PONEMAN. That is right, sir.

Mr. KELLY. I am saying, in these green initiatives, we look at ethanol, we look at all these things, people are saying, look, this just doesn't work, it just doesn't make sense. My question is, when do you take the training wheels off and when do you stop subsidizing this when the ultimate product is greater cost than the one we already have, and we have it in great supply? We are not running out.

Mr. PONEMAN. This is a great question, because the question is, are we building the future or are we building the past. If we want to win competitively in this country, we are going to have to beat, just as we did in the Industrial Revolution, in the technology revolution——

Mr. KELLY. I understand that. I understand that.

Mr. PONEMAN. The energy revolution is next.

Mr. KELLY. Why are we penalizing the people that already——

Mr. PONEMAN. To the contrary, sir, we are investing heavily——

Mr. KELLY. You and I will disagree on that. I will tell you that the investments we are making, at some point we cannot continue to fund these. I think we need to take a look at these. But at the end of the day, we are making it very difficult for job creators. We are driving their costs up with no benefits.

I yield back my time.

Mr. PONEMAN. The investments we are making in coal——

Chairman ISSA. I thank the gentleman, although his time is expired, if you would like to briefly answer.

Mr. PONEMAN. Thank you. Just briefly, Congressman, we are investing very heavily, $3.4 billion we are putting into our carbon capture and sequestration, and our CCPI program. We are strongly supporting our existing technologies and our existing industries as well as investing in the future. We think we can win the future.

Chairman ISSA. I thank both the gentlemen.

I would now ask unanimous consent that the earlier described emails be included in the record. Without objection, so ordered.

Additionally, I would ask that the LA Times environmental page, which I am going to give you a copy of, that shows that the endangered tortoise is now making the aforementioned solar Mojave Desert project on a hiatus for the foreseeable future, based on—let me make sure I describe it right—the 38 reptiles that might die. So hopefully Mojave Desert jobs will some day happen. But right now, 38 tortoises stand in the way.

And with that, we recognize the gentleman from Manchester, New Hampshire, Mr. Guinta, for 5 minutes.

Mr. GUINTA. Thank you very much, Mr. Chairman. Thank you all for coming today.

I wanted to move into a little bit of a different direction, if I could ask and direct my comments to Secretary Solis. I wanted to actually talk to you a little bit about a project in New Hampshire that I think you are familiar with, a Job Corps Center that has been a long time in the making. And there have been a lot of delays related to a lot of different issues.

But first, I wanted to convey to you that our delegation is intent on working collectively to try to make this project happen, make it happen timely and as quickly as we can, and certainly under budget. So to that extent, could you give me just a quick status update on at least what you know on where the Job Corps Center stands as of today?

Secretary SOLIS. Congressman, we are moving ahead with that. I am delighted that we have the support from your delegation, because I think one of our goals is to try to at least have one Job Corps Center in every State. Obviously yours was very important to us.

And we did have some delays, but now we are moving ahead. By the end of the week I think we are going to take a preliminary step in releasing what we call sources sought, notice to gauge what the small business interests are. And that is going to be a very important component, so that small businesses can also look at getting involved in this project potentially.

Mr. GUINTA. So based on that, do you feel confident or could you guarantee that the construction of this New Hampshire project would be focused on New Hampshire businesses only? Or, do you feel that there is a possibility that outside businesses, outside of the State, would be part of the construction?

Secretary SOLIS. Well, we will find out once we get that information as a result of what we are going to be posting. My hope is that, yes, all the jobs do stay in the area, because that is what our intent is.

Mr. GUINTA. Given that the delegation feels strongly that New Hampshire businesses would certainly qualify.

Secretary SOLIS. Absolutely.

Mr. GUINTA. They have done different Federal projects in the State in the past, and I would certainly like to see that New Hampshire businesses and New Hampshire jobs for a New Hampshire project are paramount as we move forward with the project.

Can you talk to me a little bit about the status of the PLA issue or whether there will be a PLA?

Secretary SOLIS. We are planning for that to take place. But once we get all the information and we survey the small businesses and potentially their involvement, then we will move forward.

Mr. GUINTA. I would love, as that process moves forward, to try to keep in communication about PLA, if a PLA is going to be written, what the requirements within the PLA are going to be. I take the position that I would like to see a level playing field, and I would like to see every business, regardless of whether they are union or non-union, have a fair opportunity to work on this project.

Secretary SOLIS. I understand, and that is why we are doing the survey now.

Mr. GUINTA. Good. I appreciate that.

Also, relative to the solicitation phase, are there going to be, or can you give me an idea on what the green requirements or building requirements would be?

Secretary SOLIS. I can't elaborate on that at this time.

Mr. GUINTA. But if there will be green requirements, is that something you can notify the delegation of?

Secretary SOLIS. Absolutely. Once we identify who the actual contract will go to, I am sure we will be able to work with you and the delegation, because I know they are very interested.

Mr. GUINTA. The reason I ask is, the unemployment rate in New Hampshire within the construction industry is far higher than the actual New Hampshire unemployment rate, which is around 5.5 percent, and it is much higher than the national average of 9.1 percent. So the construction industry is eager to work on this job, and I am eager to see New Hampshire employers and individuals get back to work as quickly as we can. I know that you share in that same vision.

So I look forward to working with you on that particular issue. If there are issues with the PLA, I would like to make sure that we work through those quickly and effectively and try to get this project underway.

Chairman ISSA. Would the gentleman yield?

Mr. GUINTA. Yes, I would.

Chairman ISSA. I would like to thank the Department of Labor for sending all Members of at least the majority the number of training jobs just prior to this that were in their district. I take note that it was informational and not lobbying.

The committee set about to have this hearing be about proper accounting for job creation and about whether or not we had net job gains or loss and so on. And many people objected to the title.

But I just want to close with a simple question for Dr. Hall. As I understand it, if I wanted to, I could say that every job fueling a bus, fueling a bus is a green job because it is a job in mass transit. I could probably say the same thing about every United Airline pilot, right?

Dr. HALL. Sure, yes. The logic of the mass transit of course is that every single bus may replace dozens of cars.

Chairman ISSA. Okay, I just wanted to understand that for the record.

Dr. HALL. That is why it is in there.

Chairman ISSA. Because an empty bus being driven or an empty train being driven might be inefficient as can be, and highly subsidized. But it is a green job. So I look forward to receiving what I would consider to be the undeniable green jobs. You have all been very patient. You have lived up to our 12 o'clock anticipated deadline. I thank you for your testimony.

Mr. CUMMINGS. Mr. Chairman, just a few minutes, please? I just have to get something in the record. I didn't know you were wrapping up.

Chairman ISSA. I am wrapping up, but if you have a unanimous consent, I would accept it at this time.

Mr. CUMMINGS. Thank you very much.

I just wanted, Mr. Chairman, you just, I don't know what you were referring to, but with regard to information, but Mr. Chair-

man, I have another document I would like to enter into the record. This is a report I asked my staff to complete for Members, all members of our committee. It provides information from the Brookings Report and the Departments of Energy and Labor about green initiatives in each of our districts, both Democrats and Republicans.

I asked my staff to put together this report so each Member can see what programs are going on right now that may contribute to job creation in his or her district, region, metropolitan area. Some of this relates to Recovery Act funding and some of it relates to private funding.

The point is that we need to support this sector, because these are the jobs of the future and we have to invest in this future if we want our Nation to remain competitive.

I also want to take the time—I would ask that it be submitted to the record.

Chairman ISSA. First of all, I would ask unanimous consent that that inclusion and other extraneous material that Members may want to have, they would have 5 legislative days in which to place them in the record. Additional questions, comments for the same period of time.

Mr. CUMMINGS. Just one last thing. I wanted to thank the witnesses. I thank you so very, very much. And I really mean that. Because as I listened to all of the evidence, I have not heard one scintilla of evidence that shows that your efforts are killing jobs.

Now, Dr. Hall, I know you are going to come forward with your report. I see you every month, as you well know, in a joint economic committee. And I know your work. I am looking forward to seeing those numbers. Because I agree with the chairman, we want integrity with regard to numbers. We want to know that these jobs are being produced. Because I have people in my district, I am telling you, in the area I live in, African American male unemployment is probably 35 to 40 percent. They are begging for jobs.

So how we define it, I would like to know. But I really want to make sure that people get jobs and they are able to support their family.

Thank you, Mr. Chairman.

Chairman ISSA. I thank the gentleman.

I would only ask one closing request. Would all of you be willing to take additional questions from Members who had them and couldn't give them today?

Then without objection, we would ask that all Members will have 5 days in which to submit their questions, and of course, we will hold the record open for your answers.

And with that, we stand adjourned.

[Whereupon, at 12:05 p.m., the committee was adjourned.]

[Additional information submitted for the hearing record follows:]

Apollo Alliance: Clean Energy & Good Jobs

[illegible] clean energy revolution that will put millions of Americans back to work

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B'More Green: Turning Ex-Cons Into Conservationists

Green-Collar Jobs, Signature Stories for Green Collar Jobs | February 20, 2009 by Derek Fletcher | 1 Comment

The B'More Green program, a project of Civic Works, a non-profit service corps, was founded in 2001 as a way to connect Baltimore's disadvantaged residents to employment opportunities in the growing green-collar economy. Since its inception, the program has helped over 120 Baltimoreans find living wage jobs in environmental construction and technology. Most of the program's graduates, 74 percent of whom are formerly incarcerated, are now earning paychecks and learning the skills of job discipline needed to make a meaningful contribution to society.

B'More Green alumni are employed with environmental cleanup companies that extract arsenic from soil, remove lead and asbestos from buildings, and clear brownfield sites for redevelopment.

"B'more Green is an opportunity for personal renewal and growth through community renewal and growth, said Program Supervisor John Mello. "We have sites that have been abandoned and have gone unutilized being cleaned up and redeveloped by people that have often felt abandoned and underutilized."

In a typical year, the B'More Green program graduates one or two classes of roughly 20 participants each. Most sessions run for a period of six weeks with 40 hours of classes each week. Because most of the program's participants have little or no prior work experience, the sessions commence with a series of seminars and workshops on job preparedness. This segment of the curriculum gives students background in resume writing, workplace behavior expectations, and money management skills.

When the job preparedness segment is complete, students receive an introduction to contemporary environmental issues intended to instill a sense of the larger meaning of their employment. With this background in place, the students begin their technical training in environmental technology. By the end of the course the students will have received six critical certifications in environmental health and safety.

For More Information

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Web site

Signature Stories

Of the B'More Green program's 136 graduates, fully 90 percent are employed in a field directly related to their training. The average starting wage for these graduates is $13.60/hour. Program graduates typically find employment through the extensive relationship network that B'More Green has established with local employers or through pre-arranged agreements with local unions to hire a set number of program graduates. In 2006, for instance, the Construction & Masters Labor Union #11 of Alexandria, VA hired 13 graduates of one program session immediately upon their graduation.

"Local # 11 has been a partner of critical importance," said Mr. Mello. "The representatives of this local have connected our graduates to high wage employment opportunities that come with competitive benefits packages, have consulted on curriculum, and have offered training to our classes at no cost."

Remarkably, the B'More Green training program is free of charge. This is made possible through a U.S. EPA brownfields grant and generous funding from the Abell and Thalheimer foundations. With opportunities in green collar jobs on the rise in Maryland and across the country, Program Supervisor Mello sees a bright future for disadvantaged Baltimoreans seeking employment in this sector.

"For our graduates," he said, "cleaning up environmental contamination becomes a stepping stone to a career and a new life."

Tags: Baltimore, environmental clean up, green-collar job

« Apollo Weekly Update, 2/20/09: Clean Energy Breakthrough in Stimulus, Next Steps
Stockton Biodiesel Plant Counts On Stimulus To Expand »

One Response to "B'More Green: Turning Ex-Cons Into Conservationists"

1.

American Sustainable Business Council

To: Congressman Darrell Issa, Chair, Committee on Oversight and Government Reform
Congressman Elijah E. Cummings, Ranking Member, Committee on Oversight and Government Reform, Members of the Committee and Staff

From: David Levine, Executive Director, American Sustainable Business Council

Re: Hearing on How President "Obama's Green Energy Agenda is Killing Jobs"

Dear Congressman Issa, Congressman Cummings & Members of the Committee,

We respectfully write regarding the positive impact of President Obama's initiatives in green energy. The American Sustainable Business Council is a network of business organizations and companies committed to a vibrant and sustainable economy. The Council and our member organizations consist of more than 110,000 companies, many which are developing or rely upon green energy technology.

President Obama's initiatives to support research in green energy technologies and to help build the market for domestic renewable energy, fuels the growth of our companies. We represent tens of thousands of small, mid-size and large businesses, as well as entrepreneurs, who believe in the American dream. Like owners and entrepreneurs who came before us, our ability to innovate is strengthened by U.S. government-funded research and programs, which help us to compete effectively in international markets.

The United States, as you know, has historically been a leader in developing important clean energy technologies. These technologies have not only created thousands upon thousands of jobs at home, but have also helped improve the balance of trade. Unfortunately, however, the U.S. is now falling behind other countries that have more extensive programs in place to support the development of clean energy technologies.

As the Harvard Business Review noted in September 2009, 'Sustainability is now the Driver of Innovation'. Many corporations are enjoying robust growth and profits by adopting sustainability practices throughout their supply chains. Companies are pioneering new markets and achieving significant cost savings as they build consumer trust and reduce their carbon footprint. Investors are responding favorably by directing over $2 trillion into building this new green economy; expected to grow to $10 trillion by 2020. The Green Economy holds tremendous potential to bring together the simultaneous needs for economic security and environmental protection.

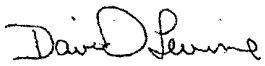
From the development of the internet to critical pharmaceuticals, the government has often played a crucial role in supporting business and innovation. Government support in the development of this young industry helps reduce risk and foster opportunity. Because of active

and effective government support for green energy development in other countries, we are at a competitive disadvantage here in the US. In addition, current federal programs and subsidies that support the fossil fuel industry tip the playing field in favor of those older and more mature industries.

You have stated many times that the government should not pick winners and losers in the marketplace. We encourage the Committee to take a more balanced approach in its work, to recognize the clear economic and job-creating benefits of green energy, and to allow these technologies to compete fairly in the marketplace.

Thank you for your consideration, we look forward to your response.

Sincerely,



David Levine
Executive Director
American Sustainable Business Council

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