

THE GREEN ENERGY DEBACLE: WHERE HAS ALL THE TAXPAYER MONEY GONE?

HEARING

BEFORE THE
SUBCOMMITTEE ON REGULATORY AFFAIRS,
STIMULUS OVERSIGHT AND GOVERNMENT
SPENDING

OF THE

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AND GOVERNMENT REFORM
HOUSE OF REPRESENTATIVES

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THE GREEN ENERGY DEBACLE: WHERE HAS ALL THE TAXPAYER MONEY GONE?

WEDNESDAY, NOVEMBER 2, 2011

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON REGULATORY AFFAIRS, STIMULUS
OVERSIGHT AND GOVERNMENT SPENDING,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:06 a.m., in room 2154, Rayburn House Office Building, Hon. Jim Jordan (chairman of the subcommittee) presiding.

Present: Representatives Jordan, Buerkle, Labrador, DesJarlais, Kelly, Kucinich, and Cummings (ex officio).

Staff present: Drew Colliatie, staff assistant; Tyler Grimm, professional staff member; Christopher Hixon, deputy chief counsel, oversight; Kristina M. Moore, senior counsel; Michael Whatley, professional staff member; Jaron Bourke, minority director of administration; Lisa Cody, minority investigator; Ashley Etienne, minority director of communications; Jennifer Hoffman, minority press secretary; and Carla Hultberg, minority chief clerk.

Mr. JORDAN. The subcommittee will come to order. We want to welcome our guests and our panel today. Mr. Kats is on his way. We have been informed that he will be here in just a few minutes. So we will get started with opening statements and then get right to our testimony.

Today's hearing continues the committee's oversight and examination of this administration's effort to use taxpayer dollars to fund a massive green energy experiment. The 2009 stimulus directed around \$90 billion toward green initiatives, including loan guarantees for green energy firms, money to weatherize homes, green jobs training grants, and many other projects.

The President told the American people that, "green jobs would be a major force not just for environmental conservation, but for economic recovery." The President said that we will harness the Sun and the winds and the soil to fuel our cars and to run our factories. And he promised that our country would create millions of green jobs, which would help us compete in the global economy. However, over 2½ years into this experiment, the available evidence demonstrates these efforts have wasted vast sums of taxpayer dollars, and have possibly caused economic harm.

Even the Washington Post editorial board recently noted that "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.”

This committee welcomes and embraces new businesses and technologies with the aim of increasing environmental conservation, but it is important that we—that these be brought about by market forces, not political whims. Today we have a panel of expert witnesses who can speak to how the administration’s green energy efforts have panned out and where we should go from here.

The inspectors general from both the Department of Labor and Department of Energy have done thorough work evaluating the challenges we faced as the economy has undergone these green initiatives. In an audit released in September, the Department of Labor’s inspector general found that a \$500 million program for training people with so-called green skills has so far produced only 1,336 jobs that have lasted over 6 months, with \$163 million already spent. This amounts to \$121,856 per successful green trainee.

While these numbers are abysmal, the truth of the matter is even worse. Many of these people who went through this training to obtain, “green skills” are likely worse off because of it. Instead of spending time looking for sustainable work or acquiring marketable skills, they acquired skills that are simply not valued in the marketplace today. This is yet again another well-intentioned government program that appears to harm many of the people it was designed to help.

In his inauguration speech, the President stated in areas where government initiatives fail, “programs will end.” And those of us who manage the public’s dollars will be held to account to spend wisely, to reform bad habits. The available evidence seems to indicate that programs put forth by this administration aimed at promoting green energy and green jobs failed, and, frankly, should end. With an unemployment rate still over 9 percent and nearly \$15 trillion accumulated in debt, the American people deserve more than to see their government going further into the red with programs that simply aren’t doing the job.

With that, I would yield to my good friend from Cleveland for his opening statement.

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

I think it is right to critically analyze the performance of specific programs, and that is the purpose of this committee, and I appreciate your role as chair in doing that. The attention that has been focused on the Solyndra matter is a case in point. These are legitimate questions that have to be asked. But the concern that I have is that the run-up to this meeting, and generally to the critical analysis of the administration’s inability to be able to bring forward a massive greenworks program, should not in any way deter us from moving forward with an effort on the part of the Federal Government to create a transition in our economy toward more sustainability in our energy and in our manufacturing.

For example, I have long been an advocate of plussing up the NASA budget for the purposes of looking at areas of developing green microtechnologies where you could theoretically—now, it is theoretical—create millions of new jobs involved in the design—in the concept, design, engineering, manufacturing, installation, and

maintenance of millions of wind and solar microtechnologies that would lower our carbon—reduce our carbon footprint, lower our energy costs, and enable an economic—an overall economic stimulus through jobs and lower energy costs.

America cannot rely on coal, which is a nonsustainable form of energy, one that is damaging to our environment, for our long-term energy needs. We cannot rely on oil for our long-term energy needs. If we really had an accurate cost of a gallon of oil, we would have to factor in the use of our military, which has been increasingly used to be able to secure oil—access to oil around the world. And we can't rely on nuclear, which is a very shaky form of energy with respect to its security and the disposition of nuclear—the securing of nuclear waste. So we have to challenge the administration to come forward with new possibilities. And today, hopefully, we will hear from the Department of Defense about some of the directions that they are going in that might lead to some possibilities for the larger economy.

America inevitably is going to have to go in a direction of green. Our economy must go in that direction. There is money to be made in those directions. The fact that we have seen failure at the beginning, which is important to note, because it—we need to know what not to do, should not cause us to conclude that there is little or no hope of being able to not just restore public confidence, but be able to restore our economy. Because in the end, that's what we are all concerned about, getting Americans back to work, and finding ways where America can seize the opportunity to catch the wave that is inevitably building of green technologies, and particularly with respect to energy.

So I want to again thank the chair for holding this hearing, and I look forward to hearing the witnesses' testimony.

Mr. JORDAN. I thank the gentleman. I think he makes good points.

I would just point out we are all for—I would think Members on this side of the aisle are for any new technologies that can help meet our technology energy needs. We just think the market is a much better and more efficient way of getting us there versus the kind of program we are going to hear about today from our witnesses.

Mr. KUCINICH. Would my friend yield?

Mr. JORDAN. Be happy to yield.

Mr. KUCINICH. Of the things that I remember a few years ago, and this was in an investor's advice that was being given to people who were interested in energy stocks, this may have been 6 years ago, people were being told not to invest in green energy, or wind and solar energy because they were being seen as "fads," but to put the investment dollar into oil, coal, nuclear. Now, the market sometimes will go for the short-term gain, using whatever resources are there, to max them out immediately for maximum profit, without any necessary concern about the society at large and about the future potential.

So, you know, I understand, you and I have had an agreement on the government not interfering in the market with respect to the bailout. We both voted the same way on that. But I am also

saying that market forces are not always according to Adam Smith's invisible hand here.

Mr. JORDAN. Does the gentleman from Tennessee—or excuse me, we now have our vice chairman walking in. Does the gentlelady from New York wish to make an opening statement?

Ms. BUERKLE. Thank you, Mr. Chairman.

Mr. JORDAN. The gentlelady is recognized for 5 minutes.

Ms. BUERKLE. Thank you, Mr. Chairman.

At a time when people across the United States are struggling to rebuild our economy and create jobs, I would like to thank our chairman for calling this hearing to evaluate the process and the substance of the MACT regulations.

Sorry about that. Wrong hearing.

Thank you, Mr. Chairman. Thank you for calling this hearing. I will yield back my time. Thank you.

Mr. JORDAN. The gentleman from Maryland, distinguished ranking member of the full committee, is recognized.

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

I want to associate myself with the comments of Mr. Kucinich, and saying that I think we have to be very careful and not throw the baby out with the bathwater. I think government does have a role to play here, and a very important role. The Recovery Act provided some \$49 billion to a variety of green energy projects, and that funding has been used to develop crucial new technologies, train workers for the 21st-century jobs, and improve our national security.

The Departments of Energy, Defense, and Labor, and the General Services Administration have been instrumental in this effort; however, only the inspectors general from the Departments of Labor and Energy are here today. The title of today's hearing is "Where Has All the Taxpayer Money Gone?" One of the largest recipients of the Federal dollars for green energy programs is the Department of Defense. In a 2010 Memorandum of Understanding with the Department of Energy, the Defense Department said, "Energy efficiency can serve as a force multiplier, increasing the range and endurance of forces in the field, while reducing the number of combat forces diverted to protect energy supply lines, as well as reducing long-term energy costs."

In addition, we are developing green jobs here at home. The Brookings Institution estimates that in my home State, for example, the green jobs in Maryland employ some 43,207 residents, and pay out an average of \$44,790 per year, which is higher than the median salary in my State. At a time when the middle class of nearly every State is shrinking, these figures are indeed good news.

Finally, if we are going to remain competitive in the global economy, we must be willing to make investments going forward. According to a report released by the Pew Charitable Trusts in March, China and Germany are leading in green energy investments, and other countries like Italy, Mexico, and Argentina are rapidly increasing their investments. The United States, on the other hand, is falling behind. If we are not willing to make long-term investments, we risk limiting our competitiveness in the years to come, something we simply cannot afford to do.

So I want to thank the witnesses for being here today. I look forward to your testimony. And I want to, as we look at this particular problem, I want to know how it is that, you know, are we looking at one situation here? Are we doing a blanket indictment of all our efforts in this regard? Because I think if we are going to paint with one brush this entire effort, I think that would be a major mistake.

And with that, I yield back.

Mr. JORDAN. I thank the gentleman.

Does anyone else wish to make an opening statement?

All right. With that, we will introduce our panel. We first have Mr. Gregory Friedman, who is the inspector general at the U.S. Department of Energy. We want to thank the Honorable Gregory Friedman for being here today. Mr. Elliott Lewis, the Assistant Inspector General for Audit at the U.S. Department of Labor. We also have with us Dr. David Montgomery, senior vice president, National Economic Research Associates, Inc., and is formerly Assistant Director of the CBO, as well as Deputy Assistant Secretary for Policy at the U.S. Department of Energy. As I indicated earlier, Mr. Kats is on his way. And we also have with us Mr. Brett McMahon, who is president of Miller & Long, D.C. And we appreciate our panel being here.

We are going to go ahead and swear you guys in. When Mr. Kats gets here, we will do that. This is a rule of the committee. So if you would just please stand up, raise your right hands.

[Witnesses sworn.]

Mr. JORDAN. Let the record show that everyone answered in the affirmative.

You guys know the rules. Five minutes, you know, you get the light system there. So stick to that as best you can. And we will start right down the row here with Mr. Friedman. You are recognized for your 5 minutes.

STATEMENTS OF GREGORY H. FRIEDMAN, INSPECTOR GENERAL, U.S. DEPARTMENT OF ENERGY; ELLIOT P. LEWIS, ASSISTANT INSPECTOR GENERAL, U.S. DEPARTMENT OF ENERGY; W. DAVID MONTGOMERY, PH.D., SENIOR VICE PRESIDENT, NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.; GREG KATS, PRESIDENT, CAPITAL-E; AND BRETT MCMAHON, VICE PRESIDENT OF BUSINESS DEVELOPMENT, MILLER & LONG CONCRETE CONSTRUCTION

STATEMENT OF GREGORY H. FRIEDMAN

Mr. FRIEDMAN. Thank you, Mr. Chairman.

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to testify today at your request on the work of the Office of Inspector General concerning the Department of Energy's implementation of the American Recovery and Reinvestment Act of 2009. The intent of the Recovery Act was to quickly stimulate the economy and create jobs, while fostering an unprecedented level of accountability and transparency.

The Department received \$35.2 billion in Recovery Act funding, dramatically increasing the budgets traditionally available for initiatives such as home weatherization, environmental cleanup,

science projects, and loan guarantees to advance energy technologies. With the passage of the Recovery Act, the Office of Inspector General immediately launched efforts to assist the Department. We have issued 68 reports covering all major Recovery Act initiatives and activities, initiated over 100 Recovery Act-related criminal investigations, and conducted 300 fraud awareness briefings around the country for nearly 16,000 Federal contractors, State, local, and other officials.

Based on our body of work, we found the efforts by the Department to use Recovery Act funds to stimulate the economy was more challenging than many had originally envisioned. Our reviews identified a fairly consistent pattern of delays in the pace at which Recovery Act funds had been expended by grant and other financial assistance recipients. As of October 22, 2011, according to the Department's own records, recipient organizations had spent only 55 percent of available Recovery Act funds.

In terms of the Department's ability to meet the Recovery Act goals, we found that weatherization work, for example, was often of questionable quality. In one recent State-level report, we found that 9 of the 17 homes visited failed inspections because of substandard workmanship. The success of the weatherization program was affected by other management issues as well. For example, one major subrecipient gave preferential treatment to its own employees and their relatives for weatherization services over other eligible residents who were elderly or who had special needs.

The Loan Guarantee Program could not always readily demonstrate through documentation how it resolved or mitigated relevant risks prior to granting loan guarantees. And one of the Department's environmental management sites, relying on Recovery Act funding, adopted an approach to radioactive waste processing that could have cost about \$25 million more than necessary.

Further, the Office of Inspector General is investigating various Recovery Act-related schemes, including submission of false information, mischarging, and misrepresenting test results. To date, these investigations have resulted in over \$2.3 million in monetary recoveries, as well as a number of criminal prosecutions. This includes a series of cases involving fictitious claims for travel per diem, resulting in the recovery of \$1 million alone in Recovery Act funds.

The Recovery Act established extremely challenging goals for the Department. Notwithstanding the Department's intense effort to meet these goals, we have a number of overarching observations about the Recovery Act's implementation. These included, first, the demanding nature of the Recovery Act's implementation placed an enormous strain on the Department's then-existing infrastructure. Second, dealing with a diverse and complex set of departmental stakeholders complicated Recovery Act startup, administration, and execution. Third, although shovel-ready projects were the symbolic goal of the Recovery Act, in most cases execution was more challenging and time-consuming than had been anticipated. Fourth, infrastructure at the State and local levels was overwhelmed. Ironically, in several States those charged with implementing the Recovery Act's provisions had been furloughed due to economic conditions in those States. Fifth, the pace of actual expenditures was

significantly slowed because of the time needed to understand and to address specific requirements of the Recovery Act. And finally, recipients of Recovery Act funding expressed their frustration with what they described as overly complex and burdensome reporting requirements. In summary, a combination of massive funding, high expectations, and inadequate infrastructure resulted at times in less than optimal performance.

Over the next year we will further review Recovery Act expenditures in a number of high-risk areas, and our investigative efforts continue. Additionally, we are evaluating how the Department plans to deal with the loss of over 4,000 environmental management jobs by the end of this year, a significant downsizing of the work force that was dedicated to Recovery Act-funded work. Further, we are refining our observations on the Department's implementation of the Recovery Act, and are drafting a report to highlight other lessons learned from this experience.

Mr. Chairman, this concludes my statement. I would be pleased to answer any questions that you or the subcommittee may have.

Mr. JORDAN. I thank the gentleman for his testimony.

[The prepared statement of Mr. Friedman follows:]

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to testify today at your request on the work of the Office of Inspector General (OIG) concerning the Department of Energy's (Department) implementation of the American Recovery and Reinvestment Act of 2009 (Recovery Act). The intent of the Recovery Act was to quickly stimulate the economy and create jobs while fostering an unprecedented level of accountability and transparency.

The Department received \$35.2 billion in Recovery Act funding for various initiatives. At this funding level, the Department received significantly more funds than its Fiscal Year (FY) 2011 annual budget of about \$27 billion. Some existing Department programs received dramatic increases in funding. For example, the Weatherization Program received \$5 billion in Recovery Act funding, more than a 10-fold increase from its FY 2009 budget of \$450 million. In addition, Recovery Act funds were used to create essentially new Departmental efforts, such as the Energy Efficiency and Conservation Block Grant Program, which received \$3.2 billion in funding.

Recovery Act funds also allowed the Department to drastically expand its Loan Guarantee Program for certain renewable energy systems, electric power transmission systems and biofuels projects that would commence construction no later than September 30, 2011. With this expanded authority, the Department estimated that it could guarantee up to \$71 billion in loans. Additionally, the Recovery Act provided the Bonneville Power Administration and the Western Area Power Administration over \$3 billion each in authority to borrow funds from the U.S. Department of the Treasury to modernize and build transmission infrastructure.

Office of Inspector General Oversight

Given the unprecedented level of funding and required transparency and oversight, the OIG launched efforts to assist the Department with its Recovery Act implementation. Since the passage of the Recovery Act, the OIG has:

- Issued 68 audit, inspection, and investigative reports covering all major program activities; attached to this testimony is a complete listing of the OIG's Recovery Act reports;
- Initiated over 100 Recovery Act-related criminal investigations; and,
- Conducted nearly 300 fraud awareness briefings for over 15,700 Federal, contractor, state, and other officials.

Overall Observations

Based on our body of work, we found that the effort by the Department to use Recovery Act funds to stimulate the economy was more challenging than many had originally envisioned. The concept of "shovel ready" projects became a Recovery Act symbol of expeditiously stimulating the economy and creating jobs. In reality, few actual "shovel ready" projects existed. The Department programs which benefitted from the huge influx of Recovery Act funds, as it turned out, required extensive advance planning, organizational enhancements, and additional staffing and training. We found this to be true at the Federal, state, and local levels. As a result, despite a major effort in a high pressure environment, the Department struggled to obligate and expend Recovery Act funds on a timely basis. As noted, the expeditious creation of jobs was a prime goal of the program. The delay in expenditures was not helpful in this regard.

Our reviews have identified a fairly consistent pattern of delays in the pace at which Recovery Act funds had been spent by grant and other financial assistance recipients. While the Department has made significant progress since passage of the Recovery Act, a number of challenges still exist. To place this in context, according to the Department's own records, as of October 22, 2011, about 45 percent of its Recovery Act funds had not been spent, largely by recipients such as state and local governments. This is detailed by major program area in the following chart:

<i>Recovery Act Funding (\$ million)</i>			
Program Office	Authorized	DOE Obligated	Spent
Energy Efficiency and Renewable Energy	\$16,666	\$16,655	\$9,855
Environmental Management	5,989	5,988	5,378
Electricity Delivery and Energy Reliability	4,488	4,488	1,914
Fossil Energy	3,379	3,379	384
Loan Guarantee Programs	2,470	1,918	396
Science	1,669	1,669	1,185
Advanced Research Projects Agency–Energy	387	386	173
Departmental Administration	144	112	83
Western Area Power Administration	10	9	7
Energy Information Administration	8	8	8
Total	\$35,210	\$34,612	\$19,383

Illustrative of this situation, our most recent work noted that:

- In the Energy Efficiency and Conservation Block Grant Program, \$879 million, or nearly a third of the formula grant funds, had not been obligated by recipients as of March 31, 2011.
- One state had only spent 30 percent of its State Energy Program funds two years after they had become available. We found that this was due to the time needed to comply with regulatory requirements of the National Environmental Policy Act, the Davis-Bacon

Act and the National Historic Preservation Act-issues that affected other jurisdictions as well.

The Department has enjoyed a number of successes, particularly in the use of Recovery Act funds in its environmental management and science projects. Yet, our reviews identified issues that impacted performance and affected the Department's ability to meet its Recovery Act goals. For example, our most recent work identified that:

- Weatherization work was often of poor quality. In a recent audit performed at the state level, 9 of the 17 weatherized homes we visited failed inspections because of substandard workmanship;
- Other program management issues adversely affected weatherization work. For example, one subrecipient gave preferential treatment to its employees and their relatives for weatherization services over other applicants, thus disadvantaging eligible elderly and handicapped residents;
- The Loan Guarantee Program had not properly documented and as such could not always readily demonstrate how it resolved or mitigated relevant risks prior to granting loan guarantees; and,
- One of the Department's environmental management sites, relying on Recovery Act funding, adopted an approach to radioactive waste processing that could have cost about \$25 million more than necessary.

Recovery Act Investigations

The Office of Inspector General initiated over 100 investigations associated with the Recovery Act. These involve various schemes, including the submission of false information, claims for unallowable or unauthorized expenses, and other improper uses of Recovery Act funds.

To date, our Recovery Act-related investigations have resulted in over \$2.3 million in monetary recoveries as well as five criminal prosecutions. This includes a series of cases involving fictitious claims for travel per diem resulting in the recovery of \$1 million alone in Recovery Act funds.

Recovery Act Implementation and Performance Observations

Even under ideal circumstances, the Recovery Act established challenging goals for the Department. We noted during our work that there was what we considered to be an intense effort to implement and execute the various aspects of the Department's Recovery Act responsibilities. These efforts notwithstanding, we had a number of overarching observations about the Department's implementation of the Recovery Act. These observations include:

1. The pressure of achieving expeditious program implementation and execution (and doing so with great emphasis on transparency and accountability) placed an enormous strain on the Department's personnel and infrastructure.
2. The challenges associated with the Department's program implementation and execution efforts were complicated by the nature of the bureaucracy in which it operates, specifically the diverse, complex, and often asymmetrical set of stakeholders which play an integral role in this process. This includes literally thousands of state and local

jurisdictions, community action organizations in every state and territory, universities and colleges, contractors, and other private sector entities.

3. The concept of "shovel ready" projects was not realized, nor, as we now have confirmed, was it a realistic expectation.
4. The Federal, state and local government infrastructures were, simply put, overwhelmed. In several states, the very personnel who were charged with implementing the Recovery Act's provisions had been furloughed due to economic situations. Ironically, this delayed timely allocation and expenditures of funds intended to boost the U.S. economy and create jobs.
5. The pace of actual expenditures was significantly slowed because of the time needed to understand and address specific requirements of the Recovery Act.
6. Recipients expressed their concern with what they described as overly complex and burdensome reporting requirements.

In summary, a combination of massive funding, high expectations and inadequate infrastructure resulted, at times, in less than optimal performance.

Path Forward

Nearly 45 percent of the Department's Recovery Act funding has yet to be spent. Accordingly, we have ongoing and planned reviews of Recovery Act funds in a number of high-risk areas such as Advanced Research Projects Agency-Energy, Electricity Delivery and Energy Reliability, and Renewable Energy programs. Additionally, our investigative efforts continue.

We are also in the process of evaluating contingency plans to address problems with transitioning to a post-Recovery Act funding posture. Of the most immediate concern is how the Department plans to deal with a significant downsizing of the contractor workforce. For example, Recovery Act funding for environmental clean-up activities are nearly exhausted and the Department now confronts the unpleasant task of laying off significant numbers of contractor workforce, many of whom had just recently been hired. The Department estimates that with the end of the Recovery Act funding, over 4,000 workers at Environmental Management sites throughout the complex will be displaced by the end of 2011. As part of its plan to transition contract employees, the Department is offering a series of benefits including re-training, severance and other paid benefits. We are currently reviewing the Department's workforce transition plans at two of these sites: the Savannah River Site in Aiken, South Carolina, and the Hanford Site in Richland, Washington.

As our work progresses, we are further refining our observations on the Department's implementation of the Recovery Act and are drafting a report to highlight other lessons learned in the areas of risk management practices; financial management, accounting and reporting; human capital management; regulatory compliance; and delivery of public services. We are hopeful that the Department's decision makers and others with an interest in these matters will consider these lessons learned in the management of future programs and projects.

Mr. Chairman, this concludes my statement and I would be pleased to answer any questions that the Subcommittee may have.

**Department of Energy Office of Inspector General
Recovery Act Reports**

	Title	Report Number	Date Issued
1.	Action for a Better Community, Inc. – Weatherization Assistance Program Funds Provided by the American Recovery and Reinvestment Act of 2009	<u>OAS-RA-11-21</u>	2011-09-30
2.	People's Equal Action and Community Effort, Inc. – Weatherization Assistance Program Funds Provided by the American Recovery and Reinvestment Act of 2009	<u>OAS-RA-11-20</u>	2011-09-30
3.	The 12 GeV CEBAF Upgrade Project at Thomas Jefferson National Accelerator Facility	<u>OAS-RA-L-11-13</u>	2011-09-30
4.	Cuyahoga County of Ohio Department of Development – Weatherization Assistance Program Funds Provided by the American Recovery and Reinvestment Act of 2009	<u>OAS-RA-11-19</u>	2011-09-29
5.	Community Action Partnership of the Greater Dayton Area – Weatherization Assistance Program Funds Provided by the American Recovery and Reinvestment Act of 2009	<u>OAS-RA-11-18</u>	2011-09-29
6.	Implementation of the Recovery Act at the Savannah River Site	<u>OAS-RA-L-11-12</u>	2011-09-29
7.	The Department of Energy's Energy Efficiency and Conservation Block Grant Program Funded under the American Recovery and Reinvestment Act for the State of Pennsylvania	<u>OAS-RA-L-11-11</u>	2011-09-23
8.	The Department of Energy's Weatherization Assistance Program under the American Recovery and Reinvestment Act in the State of Tennessee	<u>OAS-RA-11-17</u>	2011-09-19
9.	Management Alert on The Status of Energy Efficiency and Conservation Block Grant Recipients' Obligations	<u>OAS-RA-11-16</u>	2011-09-01
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12.	The Department of Energy's Weatherization Assistance Program under the American Recovery and Reinvestment Act in the State of Indiana	<u>OAS-RA-11-13</u>	2011-08-26

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22.	The Department of Energy’s American Recovery and Reinvestment Act – New Jersey State Energy Program	<u>OAS-RA-L-11-07</u>	2011-04-15
23.	Department’s Management of Cloud Computing Services	<u>OAS-RA-L-11-06</u>	2011-04-01
24.	The Department of Energy’s Geothermal Technologies Program under the American Recovery and Reinvestment Act	<u>OAS-RA-11-05</u>	2011-03-22
25.	The Department of Energy’s American Recovery and Reinvestment Act – Massachusetts State Energy Program	<u>OAS-RA-11-06</u>	2011-03-22
26.	Recovery Act Funded Projects at the SLAC National Accelerator Laboratory	<u>OAS-RA-L-11-05</u>	2011-03-08

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27.	The Department of Energy's Loan Guarantee Program for Clean Energy Technologies	<u>IG-0849</u>	2011-03-03
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35.	Selected Aspects of the Commonwealth of Pennsylvania's Efforts to Implement the American Recovery and Reinvestment Act Weatherization Assistance Program	<u>OAS-RA-11-02</u>	2010-11-02
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39.	Status Report: The Department of Energy's State Energy Program Formula Grants Awarded under the American Recovery and Reinvestment Act	<u>OAS-RA-10-17</u>	2010-09-21
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44.	Review of the Department's of Energy's Plan for Obligating Remaining Recovery Act Contract and Grant Funding	OAS-RA-10-15	2010-08-04
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52.	The Department of Energy's Program to Assist Federal Buyers in the Purchasing of Energy Efficient Products	OAS-RA-10-08	2010-04-27
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54.	Fermi National Accelerator Laboratory's NOvA Project	OAS-RA-L-10-02	2010-04-16
55.	Management Alert on Environmental Management's Select Strategy for Disposition of Savannah River Site Depleted Uranium Oxides	OAS-RA-10-07	2010-04-09
56.	The Department of Energy's Management of the NSLS-II Project	OAS-RA-L-10-01	2010-04-06
57.	Accounting and Reporting for the American Recovery and Reinvestment Act by the Department of Energy's Funding Recipients	OAS-RA-10-06	2010-04-01
58.	Management Controls over the Department's WinSAGA System for Energy Grants Management Under the Recovery Act	OAS-RA-10-05	2010-03-25
59.	Progress in Implementing the Department of Energy's Weatherization Assistance Program Under the American Recovery and Reinvestment Act	OAS-RA-10-04	2010-02-19
60.	Review of Allegations Involving Potential Misconduct by a Senior Office of Environmental Management Official	S09IS024	2009-12-29
61.	Management Challenges at the Department of Energy	IG-0832	2009-12-11
62.	Selected Department of Energy Program Efforts to Implement the American Recovery and Reinvestment Act	OAS-RA-10-03	2009-12-07
63.	Management Alert on the Department's Monitoring of the Weatherization Assistance Program in the State of Illinois	OAS-RA-10-02	2009-12-03
64.	The Department of Energy's Quality Assurance Process for Prime Recipients' Reporting for the American Recovery and Reinvestment Act of 2009	OAS-RA-10-01	2009-10-21
65.	Department of Energy's Efforts to Meet Accountability and Performance Reporting Objectives of the American Recovery and Reinvestment Act	OAS-RA-09-04	2009-09-04
66.	Department of Energy Efforts to Manage Information Technology Resources in an Energy-Efficient and Environmentally Responsible Manner	OAS-RA-09-03	2009-05-27

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67.	The Department of Energy's Acquisition Workforce and its Impact on Implementation of the American Recovery and Reinvestment Act of 2009	<u>IG-RA-09-02</u>	2009-03-30
68.	The American Recovery and Reinvestment Act at the Department of Energy	<u>OAS-RA-09-01</u>	2009-03-20

Mr. JORDAN. Mr. Lewis, you are now recognized.

STATEMENT OF ELLIOT P. LEWIS

Mr. LEWIS. Good morning, Mr. Chairman and members of the subcommittee. Thank you for inviting me to testify today on the OIG's recent report regarding the Department's Green Jobs program.

As part of our oversight responsibilities, and in response to a congressional request, we conducted this audit to determine how the Employment and Training Administration had defined green jobs; how they used the \$500 million in funds provided by the Recovery Act; and what the grantees had reported achieving with respect to training and placement of workers, including employment retention.

The OIG's findings and recommendations are based on the latest data reported by the grantees to ETA as of June 30, 2011. We found that ETA defined green jobs as jobs associated with products and services that use renewable energy sources, reduce pollution, and conserve natural resources. ETA derived this definition from the Green Jobs Act, the Energy Policy Act, and from its own data base of occupational requirements and worker attributes.

The Recovery Act mandated that funds be used for projects that prepare workers for careers in energy efficiency and renewable energy as described in the Workforce Investment Act. Therefore, we determined that the definition of green jobs used by ETA to award grants was in compliance with the requirements of the Recovery Act.

The second objective of our audit was to determine how the funds had been used. We found that of the \$500 million provided, ETA awarded the majority of the funding, or \$435 million, for training programs to prepare workers, help targeted populations overcome barriers to employment, help participants obtain industry-recognized credentials, and place them into green jobs. Overall, our audit found that although ETA obligated all of the \$490 million in grants as of June 30, 2011, grantees had reported expenditures of \$163 million, or 33 percent of the amount awarded, while approximately 73 percent of the training and nontraining grant periods had already elapsed.

Our audit also evaluated what grantees had reported achieving with respect to training and placement of workers, including employment retention. We found that with 61 percent of training grant periods having elapsed, grantees had reported achieving limited performance targets for serving and placing workers. Grantees reported that 53,000 individuals were served, 42 percent of the targeted 125,000; 47,000 participants enrolled in training, about 40 percent of the targeted 115,000; 26,000 participants completed training, 27 percent of the targeted 97,000; and 8,000 participants were placed into employment, 10 percent of the program's goal of 80,000; and finally, 1,300 participants retained employment for more than 6 months, about 2 percent of the planned 70,000.

It is important to emphasize that these training programs are still under way, and we would expect to see changes in the reported results by the time the programs are completed.

In response to our audit, ETA officials stated that they expected performance to significantly increase over time due to an initial lag during the startup phase of the grants. However, ETA could not demonstrate that grantees were on target to meet planned outcomes, nor was there a plan to ensure that they could. In addition, according to interviews we conducted with ETA regional officials early this year, grantees had expressed concerns about the overall poor economic conditions, and that green jobs had not materialized, and therefore job placements had been much less than expected. As a result, we are concerned as to whether grantees will effectively use the funds and deliver targeted employment outcomes by the end of their grants.

Accordingly, we recommended that ETA evaluate the Green Jobs program, and in so doing obtain a current estimate of funds each grantee will realistically spend given the current job market and the demand for green job-related skills. This will help the Department identify and correct any performance issues before the grants expire, and assess whether the grant funds will remain unspent, and could therefore be recouped and returned to the U.S. Treasury so they can be available for other purposes.

In response to our recommendations, ETA stated that it has put in place appropriate measures to monitor progress and provide technical assistance to help ensure ultimate grant success for those grantees that may be at risk of not delivering all of their outcomes. ETA further stated that it has obligated all of its Recovery Act funds, and that it expects all funds will have been expended by September 30, 2013, as required by the Office of Management and Budget.

In conclusion, Mr. Chairman, based upon the results of our audit, we believe the Department has an opportunity to evaluate the performance of the Green Jobs program while it is under way in order to correct any performance issues and maximize outcomes.

Mr. Chairman, thank you for the opportunity to testify on our work, and I would be pleased to answer any questions that you or any members of the subcommittee may have.

Mr. JORDAN. Thank you, Mr. Lewis.

[The prepared statement of Mr. Lewis follows:]

**WRITTEN TESTIMONY OF
ELLIOT P. LEWIS
ASSISTANT INSPECTOR GENERAL FOR AUDIT
OFFICE OF INSPECTOR GENERAL
U.S. DEPARTMENT OF LABOR**

**Before the House Committee on Oversight and Government Reform
Subcommittee on Regulatory Affairs, Stimulus Oversight
and Government Spending
November 2, 2011**

Good morning, Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to discuss our recent report on the Department of Labor's Recovery Act Green Jobs Program. As you know, the Office of Inspector General (OIG) is an independent entity within the Department of Labor (DOL); therefore, the views expressed in my testimony are based on the findings and recommendations of my office's work and not intended to reflect the Department's position.

Background

The American Recovery and Reinvestment Act of 2009 (Recovery Act), signed into law on February 17, 2009, provided the Department's Employment and Training Administration (ETA) with funding for a number of employment and training programs to help Americans acquire new skills and help them get back to work. This included \$500 million for competitive grants for research, labor exchange, and job training projects to prepare workers for careers in the energy efficiency and renewable energy industries – the Department's Green Jobs program.

As part of our oversight responsibilities and in response to a Congressional request, we conducted an audit of the Department's Green Jobs program. The objectives of our audit were to determine how ETA had defined "green jobs," how ETA used the funds provided, and what the grantees had reported achieving with respect to training and placement of workers, including employment retention.

The OIG's strategy for the oversight of Recovery Act funding has included audits during the planning, award, and implementation phases, and eventually of the outcomes, of the initiatives implemented. Consistent with this strategy, we conducted this audit of the Green Jobs program while the grants are still active to provide the Department with an opportunity to identify and correct any performance issues, so as to help the Department maximize the outcomes of the program.

The OIG's findings and recommendations found in our report are based on the latest data reported by the grantees to ETA as of June 30, 2011, with about 73 percent of the grant periods having elapsed. We have not verified the accuracy or completeness of the

data reported by the grantees. However, we plan to do this and other further work on the final outcomes of these grants, as well as on other Recovery Act programs, once they are completed.

How ETA Defined “Green Jobs”

Our audit found that ETA defined green jobs as “jobs associated with products and services that use renewable energy resources, reduce pollution, and conserve natural resources.” ETA derived this definition from the Green Jobs Act of 2007, the Energy Policy Act of 2005, and from the Occupational Information Network (O*NET) – an ETA-funded database of occupational requirements and worker attributes. The Recovery Act mandated that the funds be used for projects that prepare workers for careers in energy efficiency and renewable energy as described in Section 171(e)(1)(B) of the Workforce Investment Act. Therefore, we found that the definition of green jobs used by ETA to award grants was in compliance with the requirements of the Recovery Act.

How the Department Used the \$500 Million Provided by the Recovery Act

The second objective of our audit was to determine how the funds had been used. We found that, of the \$500 million provided, ETA awarded \$490.1 million through 189 competitive grants – \$435.4 million for training programs and \$54.7 million for non-training programs. ETA retained the remaining \$9.9 million for program administration and technical assistance.

With the \$435.4 million in funding for training, ETA issued grants through three training programs: Energy Training Partnership, Pathways Out of Poverty, and State Energy Sector Partnership programs.

Energy Training Partnership grants totaling \$99.8 million, funded 25 projects ranging from approximately \$1.4 to \$5 million each for training programs to prepare and place workers in green jobs such as hybrid/electric auto technicians, weatherization specialists, and solar panel installers. Most of these grants (80 percent) were awarded to first-time grantees of ETA.

ETA also awarded grants totaling \$147.7 million to fund 38 Pathways Out of Poverty projects ranging from \$2.1 million to \$8 million. Through these grants, targeted populations were to receive recruitment and job referral services; basic skills, work-readiness and occupational skills training; and supportive services to help overcome barriers to employment. About 42 percent of these grants were awarded to State Workforce Agencies and community colleges, and 58 percent to other types of grantees, such as non-profit agencies. Of the 58 percent, 34 percent were first time grantees of ETA.

State Energy Sector Partnership and Training grants totaling \$187.9 million were awarded to 34 state workforce investment boards. These grants ranged in value from \$2.5 million to \$6 million and were intended to provide participants with the technical and occupational skills necessary to obtain industry-recognized credentials, and to place participants into employment.

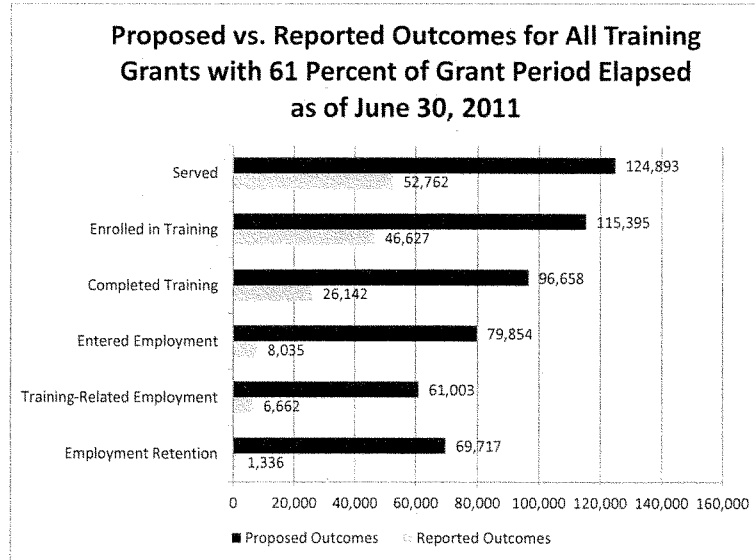
Of the \$54.7 million for non-training programs, ETA awarded 30 State Labor Market Information Improvement grants totaling almost \$48.9 million. These grants were to support the collection and dissemination of labor market information, and assist the state workforce agencies to help ensure that workers find employment after completing training. ETA awarded the remaining \$5.8 million through 62 Green Capacity Building grants to increase the training capacity of grant recipients through equipment purchases, curriculum development, and the hiring of additional training staff.

Overall, our audit found that although ETA obligated all of the \$490.1 million in grants, as of June 30, 2011, grantees had reported expenditures of \$162.8 million, or 33 percent of the amount awarded, while approximately 73 percent of the training and non-training grant periods had already elapsed.

Performance Results

Our audit also evaluated the extent to which ETA and its grantees had reported achieving performance targets for training and job placement, including employment retention. We found that, with 61 percent of training grant periods having elapsed, grantees have reported achieving limited performance targets for serving and placing workers. Indeed, as shown in the chart that follows:

- Grantees have reported serving an overall 52,762 individuals (42 percent of the targeted 124,893.) According to ETA, this includes participants who received grant-funded services, such as training, assessment, case management, or job placement assistance.
- Grantees also reported that 46,627 participants had enrolled in training (about 40 percent of the targeted 115,395); and that 26,142 had completed training, which amounts to about 27 percent of the targeted 96,658.
- In terms of employment goals, grantees reported that 8,035 participants had entered employment as of June 30, 2011, (which represents 10 percent of the program's goal of 79,854 placements); and that 1,336 participants had retained employment for more than 6 months – which is about 2 percent of the planned 69,717. However, it is important to note that the low retention rate may be attributable in part to the timing of placements since there is at least a 6-month lag between when an individual is placed and when employment retention data is reported.



It is also important to emphasize that these training programs are still underway, and we would expect to see changes in reported results by the time the programs are completed.

In response to our audit, ETA officials stated that there was no linear relationship between grant periods elapsed and grant expenditures and outcomes, and indicated that they expect performance to significantly increase over time due to an initial lag during the start-up phase of a grant. However, ETA could not demonstrate that grantees were on target to meet grant outcomes nor was there a plan to ensure that they could. In addition, according to interviews we conducted with ETA regional officials early this year, grantees have expressed concerns about overall poor economic conditions; and that green jobs have not materialized, and therefore job placements had been much less than expected. As such, we are concerned as to whether grantees will effectively use the funds and deliver targeted employment outcomes by the end of the grant periods.

Audit Recommendations

As a result, we recommended that ETA evaluate the Green Jobs program; and in so doing, obtain a current estimate of the funds each grantee will realistically spend given the current job market and the demand for green job-related skills. This will help the Department identify and correct any performance issues before the grants expire, and assess whether grant funds that remain unspent should be recouped and returned to the U.S. Treasury so they can be available for other purposes.

In response to our recommendations, ETA stated that it has put in place appropriate measures to monitor progress and provide technical assistance to help ensure ultimate grant success for those grantees that may be at-risk of not delivering all of their outcomes. ETA further stated that it has obligated all of its Recovery Act funds, and that it expects that all funds will have been expended by September 30, 2013, as required by the Office of Management and Budget.

Conclusion

In conclusion Mr. Chairman, based on the results of our audit, we believe the Department has an opportunity to evaluate the performance of the Green Jobs program while it is still underway in order to correct any performance issues and maximize outcomes.

Thank you for the opportunity to testify on our work. I would be pleased to answer any questions that you or any Members of the subcommittee may have.

Mr. JORDAN. Dr. Montgomery, you are now recognized.

STATEMENT OF W. DAVID MONTGOMERY

Mr. MONTGOMERY. Thank you, Mr. Chairman and members of the subcommittee. I was honored by your invitation to testify today. And I think I can summarize my testimony in five points.

First is that the project failures and wasted money that we are discussing today are not isolated examples of improper execution of an otherwise worthwhile and potentially successful program. The entire concept of using stimulus funds to create a green economy through energy spending is misguided.

Second point I would make to develop that is that green energy has none of the characteristics that are required to make effective use of stimulus funding. In countering a recession, the objective is to expend funds as quickly as possible—and Mr. Friedman has pointed out that that hasn't been happening—and also to phase out that spending as the economy improves. This kind of stimulus objective is simply inconsistent with the Department of Energy's mission. Applying this public works approach to energy would repeat the cycle of boom and bust that has contributed to the failure of most of our past efforts to deploy and—to develop and deploy new energy technology.

My third point would be that the Recovery Act funds have also been applied at the wrong end of the research, development, and deployment spectrum, where there is the least economic rationale for government involvement and the highest likelihood of waste and failure. I point out in my written testimony the great disproportion that existed in the Department of Energy even before the stimulus funds compared to other research organizations in terms of how much money goes into basic research and how much goes into funding for large-scale demonstration projects. The stimulus program made that far, far worse.

Now, the reason that economists give for a government role in R&D is the inability of private researchers to appropriate the full value of their research. This is a serious problem across the board in basic and in some applied research, but it is only a problem at the deployment and commercialization stage if there is no market for their product.

The second point is that peer review makes it possible for government research organizations to do a good job of allocating funds to basic research, but government has proven over and over again that it cannot consistently pick winners in the application of known technology.

And finally, there is a reason why so much money goes into this deployment and technology demonstration and why it fails. These are the projects that have electoral significance. They attract lobbying, rent seeking, and porkbarrel politics, and therefore come to be chosen independent of either their economic or technical merit.

My fourth point would be that the kinds of up-front funding provided by the Recovery Act basically create hothouse plants. And I think this has a lot to do with what we saw in Solyndra and with other bankruptcies that we are seeing today. Some of these hothouse plants will survive—my wife is occasionally lucky—but it is the exception.

And again, there is a reason for the failures. Up-front funding is not a universal substitute for the lack of a market. Green is not enough. Green technology that produces energy that costs more than its current fossil or nuclear substitutes is not going to be purchased, and consumers are not going to be willing to pay enough to cover the cost of ongoing business for many of the projects that are being funded under the Recovery Act. The Recovery Act, therefore, has turned into a back-door and ineffective substitute for what Congress has decided it does not want, a price on carbon. If there is no price on carbon, there is going to be not much of a market for green technology, and these projects will fail. In other words, if it is not a good idea to put a price on carbon, it is an even worse idea to loan money and fund projects that need it in order to survive.

So that, I think, would be my final point, that, in my opinion, it is very likely that most of the Recovery Act projects will fail in one of three senses. Some will fail to survive even with the subsidy that is provided in up-front funding and loans if the value of their product in the market isn't enough to cover the ongoing costs of producing it. And I think, to be fair, many of these projects were originally conceived with the hope that there would be a price on carbon, as Mr. Kucinich pointed out.

Second, the Recovery Act funding will fail to jump-start technologies or industries, because if every new venture has to have an up-front subsidy in order to overcome the capital barrier that exists because we don't put a price on carbon and don't have a market demand for green technology, then things will end with the Recovery Act projects.

And finally, it seems to me that these projects will fail to provide a return to the taxpayer even if the Recovery Act fails to—if the Recovery Act is supporting projects that can't pass the cost-benefits test on their own.

Thank you, Mr. Chairman.

Mr. JORDAN. Thank you, Mr. Montgomery.

[The prepared statement of Mr. Montgomery follows:]

**Prepared Testimony of
W. David Montgomery, Ph.D.
before the
Committee on Oversight and Government Reform
Subcommittee on Regulatory Affairs, Stimulus Oversight, and Government Spending
United States House of Representatives
The Green Energy Debacle: Where Has All the Taxpayer Money Gone
November 2, 2011**

Mr. Chairman and Members of the Subcommittee:

I am honored by your invitation to testify today. I am an economist and Senior Vice President of NERA Economic Consulting. I have studied energy technology programs since 1976, when I authored and testified here in the Rayburn House Office Building on a Congressional Budget Office study of synthetic fuels loan guarantees. Much more recently I was coauthor of a statement of principles for energy R&D policy with some of the most distinguished academic experts in the field, and I have helped to organize a series of workshops on the Green Economy that are taking place this year under the auspices of the US Council of International Business. When I returned to the Congressional Budget Office as Assistant Director, I was deeply involved in many issues relevant to this hearing because my Natural Resource and Commerce Division was responsible for analysis of Federal R&D programs and industrial policy. I have published many papers in peer-reviewed journals dealing with design and economic impacts of energy and environmental policies, and I was honored by the Association of Environmental and Resource Economists with their 2004 award for a “publication of enduring quality” for my pioneering work on emission trading. I taught environmental economics at the California Institute of Technology and economic theory at Caltech and Stanford University. I was a Principal Lead Author of the IPCC Second Assessment Report’s chapter that dealt with the costs of climate

change policy and I have led the development of a pioneering set of economic models that my colleagues and I have used in studies of virtually every major proposal for national and global climate policy. My testimony today will take a broad view of the issue of where the money for Green technology has gone. I will address the common-sense economics of federal efforts to create green jobs through federal R&D funding and through the use of loan guarantees, standards, subsidies, regulations, and tax incentives to promote "green" technologies. My statements in this testimony represent my own opinions and conclusions and do not necessarily represent positions of my employer or any of its clients.

Summary

The project failures and wasted money that will be discussed today are not isolated examples of improper execution of an otherwise worthwhile and potentially successful program. The entire concept of using stimulus money to create a Green Economy is unsound. To be effective, spending on energy R&D and investment incentives must be consistent and sustained over a long period of time, and projects must be put through a competitive and peer-reviewed selection process. This is exactly the opposite of what is needed in a recession, when fiscal policy experts all agree that the most effective jobs program expends funds as quickly as possible and phases out spending as the economy improves. This cycle of boom and bust is exactly what has caused the failure of past efforts to develop and deploy new energy technology, such as the Solar Initiative of the 1970s.

It is even worse when Green programs are authorized in a frenzy of spending that invites rent-seeking and political influence over the selection of projects. This process shortchanged basic

research where additional funds could be put to good use but on a slower and less politically profitable pace, and pushed funding into areas of energy technology demonstration and commercialization where the role of government should be smallest and where we have had a long history of immense failures.

The missions of the Department of Energy and the purposes of the Recovery Act are simply not consistent. Thus in some ways, it has been a good thing that, as the Inspector General's report indicates, DOE has only expended a small fraction of its allocated Recovery Act funds. The bad news is that actions taken thus far may have created a bow wave of future funding long after the need for stimulus has passed and with the same problems.

The other fundamental flaw in attempting to spend our way into a Green economy is that it creates enterprises whose continued existence demands continued infusions of government support to make up for the lack of market demand at prices sufficient to cover costs. Using taxpayer money to provide loans or loan guarantees to commercial energy projects that cannot raise capital from normal sources can only lead to waste of taxpayers' money. Projects with a high probability of producing commercial amounts of renewable energy or more energy efficient durable goods would be able to obtain private financing if their economics and management were sound. In contrast, projects that would leapfrog technology require much more than the slightly lower cost of capital offered by Government financing. This is the lesson of Solyndra, as revealed by the commentators who blame its failure on "a lack of supportive policies like a cap and trade system for carbon dioxide emissions." Loans, loan guarantees and direct funding of new energy technologies will amount to nothing more than pushing on a string unless Congress decides to put a price on carbon dioxide emissions or allows EPA to mandate adoption of those specific technologies.

Fundamental Causes of the Problems with DOE Loan Programs and Funding for Demonstration and Commercialization

The current effort to promote Green Energy is the most recent example of failed efforts at industrial policy that have recurred throughout my 35 year career in Washington. Using taxpayer money for loans or loan guarantees for commercial energy projects that cannot raise capital from the normal sources can only lead to waste of taxpayers' money. In today's sophisticated capital markets, with many energy concerns having capitalization many hundreds of times the size of the largest DOE loans and venture capitalists making aggressive investments in new technologies, the only plausible reason for inability to attract investors is that the fundamental economics or management of a project are seen to be unsound. Thus the DOE loan program either faces a huge problem of adverse selection -- any project that can make money on its own will not apply -- or it is being taken in by project developers who could finance the project and make money on their own but expect to make more money by securing the lower cost financing afforded by government loans.

There is another way of viewing the DOE loan program, and indeed the entire collection of current Recovery Act programs that provide direct funding, loans or other forms of government financial support to the production of specific forms of energy or the adoption of energy efficiency measures. They are a partial, likely ineffective, and far more costly substitute for putting a price on carbon dioxide emissions.

The Administration has attempted to justify its Green jobs and investment programs as a means of providing cost-effective environmental protection. It is exactly the opposite. Current programs to promote a Green economy actually increase the costs of achieving environmental goals, by promoting specific technologies whether or not they are the most cost-effective solutions. Well-designed environmental regulations provide incentives to choose least-cost means of compliance; tilting the playing field through loan guarantees and other forms of subsidy, if it works at all,

does so by distorting incentives so that more costly means are adopted at the taxpayers' expense.

Lack of policies to create market demand: The basic problem with the attempt to substitute front end funding or loans is that there is no sustained market demand for costly Green technology unless policymakers finally choose to put a substantial price on carbon dioxide emissions. An underlying regulatory system or market based policy such as a carbon tax must be in place unless the favored Green technologies are to be subsidized forever, like corn-based ethanol. We can see this dynamic clearly in commentary on the Solyndra affair that cites "expectations of government policies to promote solar energy" and "failure to enact comprehensive climate legislation" as reasons for the failure of the company. What this means is that there is no market at a price that will make it possible to service their loans. I by no means want to understate the importance of efforts to identify and correct the poor management that occurs when investors can gamble with the government's money, but the problem that loans cannot solve the problem of a lack of credible policy commitments to create a market demand is more fundamental.

Other reasons for up front funding: To avoid admitting this inevitable result of investing in production of uneconomic renewable energy or electric cars, a whole mythology has developed about a "valley of death," "learning by doing" and the impossibility of getting private investment to demonstrate new technologies. These justifications all share one characteristic: they are "infant industry" arguments. They all claim that if the government just puts enough money in at the start, the technology in question will be able to take off on its own and be weaned from any form of government support. The theoretical support for these claims is weak, and the empirical evidence is all negative. My first experience in testifying before the U.S. Congress was 35 years ago, when I testified on a CBO study that I had authored on "Synthetic Fuels Loan Guarantees" -- an idea that is not succeeding any better now than it did then. We have seen huge failures over the past 35 years when the U.S. government has tried to take on the role of venture capitalist in funding massive demonstration projects -- the Northern Great Plains Coal

Gasification Project, the Synthetic Fuels Corporation, and the Clinch River Breeder Reactor are probably the biggest.

It is claimed that some highly capital intensive projects will have low operating costs and therefore could continue in operation without further government support if only the initial “capital barrier” were overcome. This may be true of an individual project, but if an entire technology has this characteristic, as for example wind energy, then to get continued investment in additional capacity it will be necessary to provide continued subsidies.

Department of Defense projects: The importance of market demand for energy produced by projects grown in the hothouse by means of Federal loans and up-front funding is highlighted by comparing projects of that have taken place in the Department of Defense. Projects in DoD create their own demand, as long as the energy produced meets required technical specifications. Thus the cost of biofuels produced in projects funded by DoD does not prevent them from being used in military equipment once they are available, but the same is not true if the project has to convince independent private buyers to purchase them. The same is seen in the choice of solar arrays by the Department of the Navy, which the DoD Inspector General criticized for failing to examine the economics and cost of alternatives.¹ The Navy can install those solar arrays as long as there is sufficient Recovery Act funding to pay for them, but in the real economy solar arrays have to compete with other renewable energy sources, not to mention traditional ones. Thus the DoD experience tells us nothing about how to stimulate greater innovation and deployment of technologies in the economy as a whole.

Federal support for basic R&D falls into an entirely different category than loans and spending to promote adoption of current renewable energy and energy efficiency technologies. Basic and applied research is where the need for government intervention is greatest and where the U.S. government now allocates the smallest part of the Energy R&D budget. The use of Recovery Act

¹ Office of the Inspector General, Department of Defense, “The Department of the Navy Spent Recovery Act Funds on Photovoltaic Projects That Were Not Cost-Effective” Report No. D-2011-106 September 22, 2011.

funding to promote green technology is short-changing basic and applied research and instead supporting demonstration and deployment of excessively costly current technology.

Providing needed stimulus to the economy is the third reason given to justify Recovery Act funding of DOE R&D projects and support for commercial applications. This is where the DOE programs are particularly unsuitable. The effort to move hundreds of billions of dollars into "shovel ready" energy projects was, as Inspector General Friedman has described clearly, was wide open to waste and abuse. As he has testified, the Department of Energy had nothing like the capacity to select, fund and manage the amount of money it was given in the Recovery Act and there was nothing like a sufficient number of projects ready to fund.

I would put the basic problem more broadly: The missions of the Department of Energy and the purposes of the Recovery Act are not consistent. To be effective, spending on energy R&D and investment incentives must be consistent and sustained over a long period of time. This is exactly the opposite of what is needed in a recession, where fiscal policy experts all agree that the most effective jobs program spends the funds allocated to job creation as quickly as possible and phases out the funding as the economy improves. If possible, job creation should also provide needed services or infrastructure *if* those programs can be ramped up and down without harm – which of course energy technology development cannot.

Purposes of government intervention:

Efforts to use government spending to create "Green" jobs lose sight of the real objectives of government intervention in energy technology and R&D. Economists call these reasons "externalities," which, simply put, is a catchall term for the types of problems that government intervention is designed to solve. There are two areas in which markets cannot be expected to bring about the most socially desirable outcomes without some form of government intervention,

and these are R&D and environmental protection. There is less complete agreement among economists about the appropriate role of government in dealing with the business cycle, but for my testimony today I will assume that a third policy goal, more rapid recovery from the recession, is also relevant. The Recovery Act programs have only a haphazard relationship to these three externalities, and cannot do a good job of dealing with any of them.

R&D

Government must play a role in R&D because it is impossible for researchers and innovators to capture for themselves the full value of the information that their activities provide to society. This spillover effect is a positive externality, but it also implies that without active government intervention there will be less R&D than is socially optimal. The market failures associated with R&D are greatest in the early stages of basic and applied research: as activity moves into demonstration of technologies and their commercial deployment there are increasingly effective ways to protect intellectual property – including patents, trade secrets, and in-house development -- for innovators and investors to appropriate an adequate share of the gains their innovations provide to society. Thus government's role should be greatest in funding of basic and applied research and fade to a smaller fraction of the investment as projects move toward large scale demonstration.²

A new rationale for replacing private investment with government funding has appeared recently, which is the claim that businesses are sitting on large amounts of retained earnings and refusing to invest in projects that should, by someone's standards, be profitable at current interest rates. This claim can be used to rationalize just about any incursion of government into what are

² In support of this point, see Richard Newell, A U.S. Innovation Strategy for Climate Change Mitigation. The Brookings Institution Discussion Paper 2008-15 December 2008 p. 20 ff.

normally the realms of private business, be it R&D or commercial production of energy, but it fails to inquire whether doing so will just make the problem worse. It is at least equally plausible that greatly expanded regulatory programs affecting the financial sector and labor markets and uncertainties about future tax burdens and environmental regulations are making the risks of any kind of investment higher and the costs lower. Policies that expand the role of government even further into the economy will so increase the political risk of investing in the U.S. as to make the claim a self-fulfilling prophecy.

In all sectors of the economy except energy, U.S. government funding is concentrated in basic and applied research as theory and experience demonstrates that it should be. Energy R&D programs tend to take too few risks, because they concentrate funding on pre-selected potential “winners” that are carried forward long after they have ceased to warrant continued government support. In large part, these failings can be directly attributed to the widespread perception of energy technology funding as a “jobs” program.

A statement written by a number of the most distinguished experts in the economics of R&D described the kinds of policies that would be effective in promoting technological advances in energy:³

Government R&D policy should encourage more risk-taking and tolerate failures that could provide valuable information. This can be accomplished by adopting parallel project funding and management strategies and by shifting the mix of R&D investment towards more “exploratory” R&D that is characterized by greater uncertainty in the

³ “A Statement on the Appropriate Role for Research and Development in Climate Policy” Kenneth J. Arrow, Linda Cohen, Paul A. David, Robert W. Hahn, Charles D. Kolstad, Lee Lane, W. David Montgomery, Richard R. Nelson, Roger G. Noll and Anne E. Smith. *Economists Voice*, February 2009, Vol 6, No. 1.

distribution of project payoffs. The single greatest impediment to an R&D program that is directed at achieving a commercial objective is that it will be distorted to deliver subsidies to favored firms, industries, and other organized interests. The best institutional protections for minimizing these distortions are multiyear appropriations, agency independence in making grants, use of peer review with clear criteria for project selection, and payments based on progress and outputs rather than cost recovery.

Studies of successful R&D show that a parallel approach, in which many early-stage, high-risk projects are funded with the expectation that most will fail, would provide far more information than the current approach, and would increase the likelihood of breakthrough discoveries.

It is worth commenting that Solyndra does not appear to have any characteristics of an “informative failure.” Those occur early in the R&D process, and help to weed out technical approaches that appeared good on paper but could not meet cost or performance goals. The whole point of parallel research is to find that out before \$500 million or more is invested in commercial production.

But the parallel process is rarely seen in Federal energy R&D. One reason is that managers do not want failures on their record, even if “failures” are important sources of information in a strategy of forming a portfolio of high risk, high potential payoff projects. Another is that Members of Congress will not allow funding to projects under their protection to be terminated, no matter how soundly the project fails to meet its objectives.

The statement also emphasized that commitments must be long-term and stable:

Policy commitments must be stable over long periods of time. Climate change is a long-run problem and will not be solved by transitory programs aiming at harvesting available short-run improvements in energy efficiency or low-carbon energy. A much more stable commitment to funding and incentives for R&D is required to do better than the limited results of energy R&D efforts in the 1970s and 80s.

What should be equally clear is that a series of temporary, politically unstable, targeted subsidies, financial incentives, or even mandates for deploying specific green technologies will not provide adequate incentives for the R&D that would bring about large-scale technological change. Short term stimulus and long term investment incentives are not compatible objectives.

Environmental and other externalities of energy production and use

Another rationale for loans and direct funding to energy technology demonstration and commercialization comes from externalities associated with energy production and use. Effective programs to address these externalities – such as the Clean Air Act Title IV program that through a cap and trade program put a price on sulfur emissions from utilities – created clear incentives for the private sector to develop and deploy new control technologies. One of the few things that most economists agree on is that the most effective policy to stimulate innovation and deployment of new technologies is putting a price on CO₂ emissions in a sustainable manner that can be reliably expected to remain in place for decades to come. Such a price will lead to cost-effective technology deployment and provide a demand-driven inducement to innovation. Federal support for energy R&D motivated by these externalities also needs to be concentrated

on basic and applied research, as existing environmental regulations and new policies focused on the direct causes of environmental concern -- such as greenhouse gas problems -- provide the incentives for innovators to take these research findings into commercial demonstration and deployment.

Many of the environmental consequences of energy production and use are already extensively regulated. Greenhouse gas emissions have not been regulated until now, but are the subject of proposed EPA regulations and much legislation. Development of new -- and indeed radically new -- energy technologies is critical to our ability to reduce greenhouse gas emissions sufficiently to stabilize temperatures at some level without unacceptable economic harm. For other externalities, this is less clear. Development of new technologies for production and use of fossil fuels or other forms of energy is already motivated by a perceived need for more cost-effective options for compliance with policies that address other externalities.

Recovery

Recovery from the recession is a policy problem distinct from either R&D or energy externalities. Economists differ seriously about the best strategy to pursue to address an economic downturn like the one we have faced. All agree that monetary policy in some form is necessary, but many are critical of using fiscal policy (i.e. government spending) to stimulate the economy because of the long-term consequences of increased debt and the difficulty of making the spending be effective and timely. Too often the specific fiscal measures that end up being selected are so slow to get money into the economy that they only ramp up funding after the economy is well on its way to recovery, so that rather than reducing unemployment deficit

spending ends up increasing inflationary pressures. Moreover, temporary stimulus programs create constituencies that lobby to keep the spending going long after stimulus is no longer needed.

The basic principles of public finance for reducing cyclical unemployment are to choose methods of spending that get money into the economy as quickly as possible. Public works projects that have already been chosen as desirable investments by passing through the authorization process are good candidates. But the projects must be ones that can be ramped up quickly and also ramped down without waste or diminishing their value or effectiveness. Technology development that requires this kind of long term and stable funding does not satisfy these criteria.

There are also good reasons why the basic and applied research programs of DOE cannot be ramped up completely. This delay is built into the system of funding basic and applied research in order to assure the quality and relevance of research. There is not a reserve army of the best-qualified researchers in the world drawing unemployment and waiting for funding for energy R&D to increase. To increase the amount of work being done on energy R&D, those researchers have to be drawn away from other fields. New projects will have to go through a sequence of requests for proposals, proposal writing, review -- including peer review if a good outcome is expected --negotiation and finally funding. All these steps are there to make sure that R&D funding goes to the best qualified researchers and to projects that are relevant to the problem at hand. Sacrificing these steps to shovel out money subverts the entire process.

Energy R&D failures are largely attributable to an inability to resist treating technology investment as a jobs program

R&D is carried out by governments, for-profit and not-for-profit entities, and national and multinational institutions. These institutions perform a wide variety of R&D as illustrated in Table 1. This suggests that the problem of appropriability is greatest in basic research, important in applied research, and smaller in development and later stages of demonstration, commercialization and deployment.

Perhaps the most striking feature of the government's energy spending is the relatively low priority that it accords to R&D in general and basic and applied research in particular. In fact, in terms of total spending, deployment subsidies dominate. The following figure shows the relative resource commitments and the relatively modest role of basic and applied research in the Federal program. Thus even before the stimulus package, Federal funding was highly biased toward development where the private sector is capable of handling a much larger role if the technologies being advanced to that state promise to be commercially successful. Federal funding for this stage has been needed largely because too many unpromising technologies are advanced beyond basic and applied research.

**U.S. 2006 Distribution of Total R&D Funding By Source and Stage
and Energy R&D Funding in Stimulus Package**

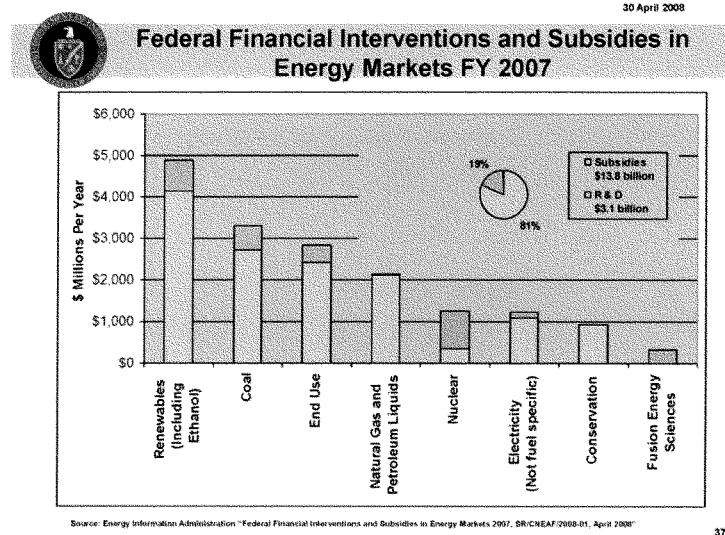
	Basic research	Applied research	Development	Total*
Industry	5%	20%	76%	\$223.4B
Government	59%	33%	16%	\$94.2B
Total	\$61.5B	\$74.7B	\$204.3B	\$340.4B
Energy R&D In Stimulus Package**	17%		83%	\$7.9B

*Totals include \$22.9B funded by universities and other nonprofit

**At least \$33B of the energy portion of the stimulus package (over 80%) is for deployment

Source: National Science Board, 2008

Demonstration and deployment subsidies tilt the balance further away from basic and applied research:



These funding patterns can be attributed to three serious failings in the total energy technology program:

- Large scale demonstration projects that provide "jobs" in politically influential regions drain funds from basic and applied research,
- Deployment subsidies that benefit specific constituencies are rationalized as creating "jobs" even if the technologies are not cost-effective, and
- Failing projects are not cancelled because of the "jobs" involved.

And each of these failings arises because of favoring "jobs" over the most effective way of

promoting technological advance.

It is not surprising, therefore, that energy R&D had a long history of waste and failure. Cohen and Noll describe a dynamic based on incentives of executive agency staff and Congressional incumbents that leads to the conclusion that R&D programs will investigate too few risky alternatives in the early stages of research, commit prematurely to large scale demonstration, and continue to fund large scale projects long after their failure has become evident.⁴ This is exactly the opposite of the stable, long-term research program required to stimulate breakthrough research and introduce game-changing technologies.

Newell, in the study cited earlier, expands on this point:

A number of specific market problems have been suggested as rationales for technology deployment policies. These market problems include information problems related to energy-efficiency investment decisions, knowledge spillovers from learning during deployment, asymmetric information between project developers and lenders, network effects in large integrated systems, and incomplete insurance markets for liability associated with specific technologies (Newell 2007b). Although such problems are often cited in justifying deployment policies, these policies in practice often go much farther in promoting particular technologies than a response to a legitimate market problem would require. Therefore, while conceptually sound rationales may exist for implementing these policies in specific circumstances, economists and others tend to be skeptical that many of them, as actually proposed and implemented, would provide a cost-effective addition to market-based emissions policies. Critics also point out deployment policies intended to

⁴ Linda R. Cohen, and Roger G. Noll (With Jeffrey S. Banks, Susan A. Edelman, and William M. Pegram). *The Technology Pork Barrel*. Washington, D.C.: The Brookings Institution, 1991.

last only during the early stages of commercialization and deployment often create vested interests that make the policies difficult to end.

... the most notable failures in government energy R&D funding (e.g., the Synthetic Fuels Corporation, Clinch River Breeder Reactor) tend to be associated with large-scale demonstration projects—using up large portions of limited R&D budgets in the process (Cohen and Noll 1991). The recent experience with the FutureGen Initiative for clean-coal power tends to reinforce this perspective.⁵

The nature of the electoral process biases authorization and appropriation processes against basic and applied energy research. Supporting R&D projects that yield large, but diffuse, net benefits and those only after a long time, is a poor re-election strategy. However, when an R&D project reaches a large enough scale, it begins to have distributive significance. At that stage, the project may become politically relevant to legislators interested in re-election (Cohen et al 1991).

Energy R&D managers also exhibit an unwillingness to propose a sufficiently wide range of risky alternative approaches to achieve real breakthroughs. High-risk approaches with high potential may not come to their attention, since in the early stage of R&D there are significant agency problems in communicating the nature and potential of an approach (Cohen et al 1991). Career advancement is also more likely to come from successful projects rather than accumulation of useful information about approaches that do not work. This limits the set of alternatives considered for funding and leads to far too little risk-taking in government R&D and too narrow a view of possible avenues of approach.

This dynamic introduces a series of perverse incentives.

⁵ Newell, *ibid.*

First, it encourages officials to move technologies too swiftly to the phase of large-scale demonstration. As a result, these projects often run into technical problems that could have been resolved much more cost-effectively at a smaller scale, and to end up having chosen the wrong route overall.

Second, congressional involvement has often led to poor projects surviving long after they should have been terminated. Representatives gain electoral credit for continued funding of local facilities and lose almost no electoral credit because the funding is accomplishing nothing.

Third, the excess resources that demonstration projects consume, either because they are launched prematurely or because they linger too long on political life support, are likely to crowd out more valuable earlier phase research. In effect, projects at the early stage of development are not politically appealing because further work on them is not expensive enough to have distributive significance.

Fourth, the rush to demonstration may distort the selection of technologies toward those that are more mature rather than toward those that are more promising. Where there is path dependency in technology selection such distortions may have long-term consequences.

In addition to the effects of the high political discount rate on a premature rush to demonstration at high cost, choosing the location and design of projects by earmarking to benefit influential constituents is unlikely to lead to the choice of the best qualified and most cost-effective organization to carry out an R&D project.

These characteristics are found in the Recovery Act projects that are the subject of this hearing.

The history of energy R&D suggests that they were likely from the beginning to be ineffective in promoting technological advance and to lead to waste of taxpayer's resources.

Mr. JORDAN. Mr. Kats, if you would please rise. We just need to swear you in. You walked in just after we swore everyone else in. So if you would just please stand up and stand and raise your right hand.

[Witness sworn.]

Mr. JORDAN. All right. Thank you, Mr. Kats. Sorry about that. We know were you caught in traffic. We welcome you to the committee, and you are now recognized for 5 minutes.

STATEMENT OF GREG KATS

Mr. KATS. Thank you very much, Mr. Chairman and members of the subcommittee. My background is in finance. I have a MBA from Stanford. I worked as the Director of Financing for Energy Efficiency and Renewable Energy in the Department of Energy for the last 10 years. I have been involved in private-equity financing for clean energy. I have been involved in funding billions of dollars of clean energy projects, both at a project development and a venture capital perspective.

The way I look at it is from a finance perspective, and I can say that our international competitors, Japan, Germany, and China, are not sitting still. They are heavily subsidizing this race to a clean-energy future, which is a transition that pretty much all companies, certainly the U.S. military, and the large majority of governments now recognize we are involved in. So the support for ARRA funding and clean energy, although it has had a steep ramp-up and had some teething problems, on balance was well timed and has been very important in supporting the U.S. ability to compete in this critical area.

A recent Brookings study found that between 2003 and 2010 in this clean energy area, there has been an 8.3 percent job growth. It has been one of the most important areas of job growth domestically and is an area that our competitors are investing in. So in terms of economic opportunity and job growth, it has been an important driver for the economy.

The U.S. military is committed to clean energy because, in its view, and based on its actual experience, clean energy allows them to deliver their military purpose and security more cost-effectively than reliance on fossil fuels. So the security dimension of clean energy has become much more important. The U.S. military has been very clear on this particular issue.

There was a—several independent nonpartisan reviews about the impact of ARRA funding on clean energy. The Council of Economic Advisers in November 2010 found that as of the third quarter of 2010, between 2.7 and 3.7 million new jobs had been created from this ARRA funding, and that it had a positive impact on GDP of 2.7 percent. In May 2011, U.S. Congressional Budget Office found that in the first quarter of 2011, the impact of this ARRA funding had been an increase of between 1.1 and 3.1 percent GDP growth, and an increase in full-time employment of between 1.6 million and 4.6 million people. These success stories are being built on.

As discussed, this very steep ramp-up in funding was hard to deliver because the personnel were not there. As that funding gets deployed in the field, we expect to see an increase in economic productivity and an increase in employment.

The last point I would make is that the OMB in its 1705 Loan Guarantee Program assumed and budgeted for a 12.85 percent default rate, an almost 13 percent default rate. Solyndra, and more recently Beacon, which went bankrupt, represented about 1.6 percent of that total funding. We expect to receive back a portion, that is recover a portion, of that funding. So the total default rate to date, based on these two companies, will be about 1 percent. That is less than one-tenth of the projected default rate expected for and planned for by OMB.

About 90 percent of ARRA funding goes to large, clean-energy-generation projects. The large U.S. companies like General Electric who are competing in international markets have found this funding critical to their ability to compete and to expand and build on jobs. Funding for Johnson Controls, for example, in building a 3,000-person clean battery bank—excuse me, production facility in Michigan, will create 3,000 direct jobs and many more indirect jobs at a cost of under \$100,000 per job.

So it is not a perfect story, but given the rate of ramp-up expected from this funding, the success story, I think, has been pretty clear. At least 1 million to 3 million jobs created, a lot of strengthening of U.S. competitiveness on this critical international issue. And for investors in clean technology, it is really a commitment to the future. It is really a vote for those who are optimistic about America's capacity to compete successfully in this critical market.

Thank you.

Mr. JORDAN. Thank you, Mr. Kats.

[The prepared statement of Mr. Kats follows:]

Thank you for the opportunity to speak with you today on this important issue.

I am an energy venture capitalist and serve on the boards of a half dozen U.S. energy and energy related firms, all of whom sell or seek to sell into international markets, and all of whom are hiring employees here in the US. Previously, I had the opportunity to serve as the Director of Financing for Energy Efficiency and Renewable Energy at the U.S. Department of Energy. I currently work on energy investment issues with large financial institutions and large real estate owners who are concerned about both the cost effectiveness of energy investment programs and broader policy impacts, including employment impact.

This hearing addresses several questions

- 1) Is it economically and financially prudent to invest in energy efficiency and green job programs, and do these programs successfully create jobs and strengthen businesses and the economy as a whole?
- 2) Has the ARRA funding of green jobs and green energy technology been successful, and does the slow ramp up in green job training programs and the high visibility bankruptcies of two recipients of ARRA cleantech funding- specifically Solyndra and Beacon - indicate a failure of the program?

Regarding the first question, there is a long bipartisan history of U.S. federal, state and city level investment in energy efficiency and green job training. In December 2007, President George W. Bush signed The Green Jobs Act of 2007 into law, authorizing \$125 million per year for programs to train workers for green-collar jobs, such as energy-efficiency retrofitting and service, green building construction, and solar panel installation. The legislation was incorporated as Title X of H.R. 6, the Energy Independence and Security Act of 2007. The training targeted veterans, displaced workers, at-risk youth, and individuals in low-income families for jobs industries including energy-efficient building, construction and retrofitting, renewable energy energy-efficient vehicles, bio-fuels, and manufacturing using sustainable processes and materials.

The American Recovery and Reinvestment Act of 2009 (ARRA) appropriated \$49 billion for programs to increase energy efficiency and renewable energy and biofuels.¹ The vast majority were awarded to four government agencies (1) U.S. Department of Energy (DOE) \$35.2 billion for projects and activities² (2) GSA - \$4.5 billion, (3) U.S. DoD - \$2.1 billion, and (3) U.S. DOL (Department of Labor) - \$500 million.³ DoD Recovery Act funding covers four major areas: (1) Energy Conservation Investment Program (2) Near

¹ See Congressional Research Service (CRS), "*Energy Provisions in the American Recovery and Reinvestment Act of 2009*" (P.L. 111-5) (Mar. 12, 2009) (R40412) (online at <http://vcresearch.siuc.edu/R40412.pdf>); U.S. Department of Defense, American Recovery and Reinvestment Act of 2009: Facilities Sustainment, Restoration and Modernization (FSRM) Program Plan (June 2010) (online at www.defense.gov/recovery/plans_reports/2010/pdfs/DoD%20FSRM%20Program%20Plan%20Update_FINAL_062110.pdf); House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, Statement of Frank Rusco, Recovery Act: Status of Department of Energy's Obligations and Spending (Mar. 17, 2011) (online at www.gao.gov/new.items/d11483t.pdf).

² House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, Statement of Frank Rusco, *Recovery Act: Status of Department of Energy's Obligations and Spending* (Mar. 17, 2011) (online at www.gao.gov/new.items/d11483t.pdf).

³ Congressional Research Service (CRS), *Energy Provisions in the American Recovery and Reinvestment Act of 2009* (P.L. 111-5) (Mar. 12, 2009) (R40412).

Term Energy-Efficient Technologies (3) Military Construction and (4) Facilities Sustainment, Restoration, and Modernization.⁴

DoD entered into a Memorandum of Understanding (MOU) with DOE in July, 2010 in order to “improve energy security and operational effectiveness, reduce greenhouse gas (GHG) emissions in support of U.S. climate change initiatives, and protect the DoD from energy price fluctuations,”⁵ and to “speed innovative energy and conservation technologies from laboratories to military end users, and to use military installations as a test bed to demonstrate and create a market for innovative energy efficiency and renewable energy technologies.”⁶

The rationale for green job and energy efficiency investment and training is broad and includes reducing energy costs, creating jobs, enhancing economic competitiveness, cutting health costs, and - increasingly - strengthening national security. Former Senator and former Secretary of the Navy John Warner wrote earlier this year that , “The brave men and women in uniform, whether serving on U.S. bases or on forward deployments overseas, clearly understand the linkage between strong energy policies and their ability to more safely perform their missions. Under the leadership of former Secretary of Defense Robert Gates, and now Secretary Leon Panetta, the Department of Defense is exercising aggressive energy-efficiency goals to lessen our dependence and to enhance our nation’s energy security.”

The Secretary of the Navy Ray Mabus (National Clean Energy Summit 4.0 Las Vegas, NV August 30, 2011) asked the question this way: “Why the interest in alternative energy? The answer is pretty straightforward: We buy too much fossil fuel from potentially or actually volatile places on earth. We buy our energy from people who may not be our friends. We would never let the countries that we buy energy from build our ships or our aircraft or our ground vehicles, but we give them a say on whether those ships sail, whether those aircraft fly, whether those ground vehicles operate because we buy their energy. There are great strategic reasons for moving away from fossil fuels. It’s costly. Every time the cost of a barrel of oil goes up a dollar, it costs the United States Navy \$31 million in extra fuel costs. But it’s costly in more ways than just money. For every 50 convoys of gasoline we bring in, we lose a Marine. We lose a Marine, killed or wounded. That is too high a price to pay for fuel.”

The strong beliefs of Senator Warner and Secretary Mabus are representative of the U.S. military and the Pentagon’s views on the critical nature of green jobs and energy efficiency industries. Like the finance industry, the military does not have the luxury of taking positions for political purpose. US military views on

⁴ U.S. Department of Defense, *American Recovery and Reinvestment Act of 2009: Program Plans* (June 2010)

⁵ U.S. Department of Defense and Department of Energy, *Memorandum of Understanding Between U.S. Department of Energy and U.S. Department of Defense Concerning Cooperation in a Strategic Partnership to Enhance Energy Security* (July 22, 2010) (<http://energy.gov/sites/prod/files/cdg/media/Enhance-Energy-Security-MOU.pdf>). The U.S. military commitment to energy and green energy reflects its commitment to cost effectively fulfilling its mission and addressing security threats, including climate change. As the U.S. Army notes on its website: “Climate change and other projected trends will compound already difficult conditions in many developing countries. These trends will increase the likelihood of humanitarian crises, the potential for epidemic diseases, and regionally destabilizing population migrations.” http://www.army.mil/aps/08/strategic_context/strategic_context.html

⁶ *Id.*

clean energy and energy efficiency is based on its experience of cost-benefit performance and its actual impact on the safety and effectiveness of our men and women in uniform.

One challenge and limitation of the ARRA funding was the need to invest a large amount of money rapidly to check the rapid economic decline and reduce spiraling unemployment that many economists likened to the great depression. However, the necessary speed of scale up has posed serious challenges.

The green jobs portion of ARRA received \$500 million or 1% of the American Recovery and Reinvestment Act of 2009 (ARRA) \$49 billion in appropriations for energy programs aimed at increasing energy efficiency and developing and investing in renewable energy and biofuels.⁷ This 1% of ARRA funding devoted to scaling up capacity for training, developing programs, and recruiting, has - because of the nature of training and recruiting - been slow. As of the end of September 2011 the majority of these funds had not been spent, and these funds are not expected to be fully spent by the end of the grant period.

Expenditure at the scale of ARRA is, by its nature, slow to ramp up. A March 2011 DOE Office of the Inspector General statement to the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce noted that the that the “size and skill mix of staff, then in place, was not adequate to meet the increased demands of the Recovery Act... Inadequate personnel to support such a steep ramp lead to delays in deployment. ... Federal, State and local government infrastructures were simply put overwhelmed. In several states, the very personnel who were charged with implementing the Recovery Act’s provisions had been furloughed due to the economic situation. Ironically, this delayed timely allocation and expenditures of funds intended to boost the U.S. economy.” (pp. 7-8)

As ARRA investment occurs, job creation impact also rises, and by early 2011 had become large - on the order of a few million jobs created.

A November 2010 report by the Council of Economic Advisors entitled “THE ECONOMIC IMPACT OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009” found that:

- Following implementation of the ARRA, the trajectory of the economy changed significantly. Real GDP began to grow steadily starting in the third quarter of 2009 and private payroll employment increased on net by nearly 1 million from the start of 2010 to the end of the third quarter.
- The two established CEA methods of estimating the impact of the fiscal stimulus suggest that the ARRA has raised the level of GDP as of the third quarter of 2010, relative to what it otherwise would have been, by 2.7 percent. These estimates are very similar to those of a wide range of other analysts, including the non-partisan Congressional Budget Office.

⁷ See Congressional Research Service (CRS), Energy Provisions in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5) (Mar. 12, 2009) (R40412) (online at www.crs.gov/Products/r/pd/R40412.pdf); U.S. Department of Defense, American Recovery and Reinvestment Act of 2009: Facilities Sustainment, Restoration and Modernization (FSRM) Program Plan (June 2010) (online at www.defense.gov/recovery/plans_reports/2010/pdfs/DoD%20FSRM%20Program%20Plan%20Update_FINAL_062110.pdf); House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, Statement of Frank Rusco, Recovery Act: Status of Department of Energy’s Obligations and Spending (Mar. 17, 2011) (online at www.gao.gov/new.items/d11483t.pdf).

- The CEA estimates that as of the third quarter of 2010, the ARRA has raised employment relative to what it otherwise would have been by between 2.7 and 3.7 million, consistent with the initial estimate that the ARRA would save or create 3.5 million jobs as of 2010:Q4."

See: http://www.whitehouse.gov/sites/default/files/cea_5th_arra_report.pdf

In February 2011 the National Bureau of Economic Research issued a report entitled "Did the Stimulus Stimulate? Real Time Estimates of the Effects of the American Recovery and Reinvestment Act." The report summary noted that job impact varied considerably but that "Support programs for low income households and infrastructure spending are found to be highly expansionary. Estimates excluding education spending suggest fiscal policy multipliers of about 2.0 with per job cost of under \$100,000". The report also found that "The stimulus had a positive, statistically significant effect on employment...aid to low-income people and infrastructure spending showed very positive impacts."

See: <http://www.nber.org/papers/w16759.pdf>

The non-partisan US Congressional Budget Office issued a report in May 2011 entitled "Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from January 2011 Through March 2011", (May 2011). In its report the Congressional Budget Office found that:

"ARRA's policies had the following effects in the first quarter of calendar year 2011:

- They raised real (inflation-adjusted) gross domestic product (GDP) by between 1.1 percent and 3.1 percent
- Lowered the unemployment rate by between 6 percentage points and 1.8 percentage points
- Increased the number of people employed by between 1.2 million and 3.3 million, and
- Increased the number of full-time-equivalent jobs by 1.6 million to 4.6 million compared with what would have occurred otherwise..."

See: <http://www.cbo.gov/ftpdocs/121xx/doc12185/05-25-ARRA.pdf>

These major non-partisan analyses all demonstrate that ARRA had large positive impact in slowing severe job loss, helping slow or reverse the economy's steep economic slide, increasing employment and in stimulating the economy. And as allocated funding gets spent at the local level the job creation impact can be expected to continue to rise quite substantially.

The issue of timing of job creation for ARRA funding has created some confusion and some apparently deliberate misinformation. Employment occurs **after** investments are made, so assessment of employment impact **before** investments are made is neither relevant nor intellectually honest. For example an article on CNS is entitled "Obama Visits Corporation Where His Stimulus Created 'Green' Jobs at \$2 Million Per Job" See: <http://www.cnsnews.com/news/article/obama-visits-corporation-where-his-stimulus-created-green-jobs-2-million-job>

The article later acknowledges this job creation cost estimates is based on only 150 interim jobs created as Johnson Controls builds its high performance battery plant for 3000 employees in Michigan. Based on actual plant employment of 3000, the cost per job created is \$100,000 per direct job created, not \$2 million per job, as widely reported. The cost effectiveness is actually better than this because the 3000 direct employees at Johnson's new plant will drive a lot of indirect employment (supplying the plant, servicing employees etc.) This kind of manipulation of data appears to be widespread and may be politically expedient but it is dishonest and insulting to US corporations like Johnson Controls who are investing in

expanding the US economy. This kind of dishonest accounting also does a disservice to the need for a fair evaluation of the actual cost-effectiveness and impact of ARRA funding.

The 1705 loan guarantee program provided loan guarantees to Solyndra and Beacon, and like other bank and government commercial lending programs assumes a default rate as normal and expected. In establishing the 1705 loan guarantee program, for example, the Office of Management and Budget predicted and budgeted that the \$2.5 billion in loan guarantees will experience a default rate of 12.85 percent. (See:

<http://www.whitehouse.gov/omb/budget/Supplemental>) The two prominent defaults (to date) are Solyndra and Beacon: Out of a total \$35.9 billion DOE loan guarantee portfolio, Solyndra received a \$535 mil guarantee (1.5% of total) and Beacon Power Corp received a \$43 mil guarantee (.1%) The Federal government can expect to receive a portion of the loans back. Defaults from Solyndra and Beacon after some funds are recouped are therefore likely to be in the 1% range, or less than one tenth the expected and budgeted-for default rate. From a portfolio perspective this is very low and leaves considerable room for further defaults without losses exceeding budgeted losses. The DOE loan program can therefore so far be fairly viewed as so far performing as well as or better than projected. The overall the loan guarantee program track record is so far on balance a successful one.

90% of loan ARRA guarantees are for clean power generation projects, and these look solid.

These clean power generation projects will generate enough clean electricity to power over two and a half million homes, cutting oil imports, improving trade balance, expanding distributed domestic employment, and strengthening US corporate competitiveness in the very fast growing and internationally competitive clean energy markets. Recovery Act investments helped finance:

- Agua Caliente - the world's largest photovoltaic solar plant
- Caithness Shephers Flat in Oregon - the world's largest wind farm to date
- Diamond Green Diesel in New Orleans - a biodiesel project that will nearly triple the amount of domestically produced renewable diesel

Given that our principal trading competitors are providing heavy subsidies to their domestic clean energy industries, ARRA provided a large and timely boost to US clean energy industry, helping maintain US strength in the critical and fast growing international clean energy markets. Clean energy has been targeted by our major international competitors (including China and Germany) as a critical and perhaps the critical future growth and export industry. For most US citizens, businesses and policy makers, whether the US wins or loses in this race matters because the outcome will have a large impact on future US employment and economic strength. The ARRA has strengthened the hand of those who are optimistic – and ambitious – about the US capacity to compete successfully in the huge and fast growing global clean energy industry.

There have been larger questions raised about the cost effectiveness and merit of investing in energy efficiency – a large part of the ARRA clean and green energy funding. There is extensive documentation

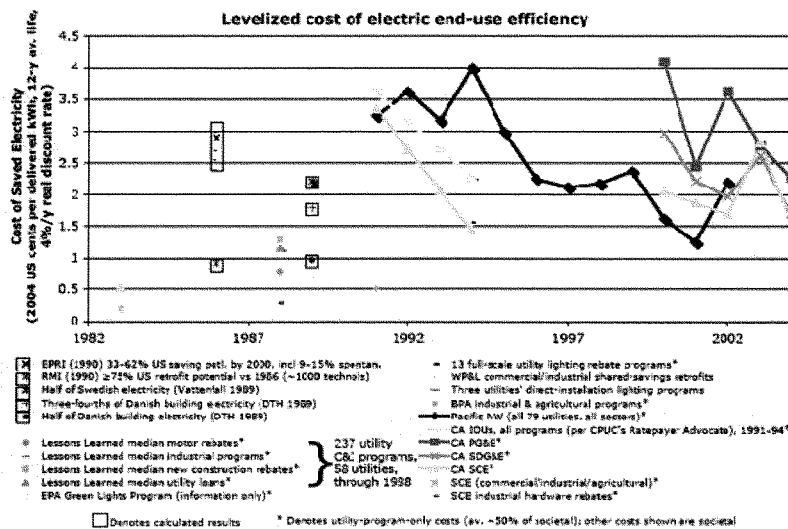
about the cost effectiveness of corporations, cities, and states that have adopted energy efficiency funding strategies. These experiences have generally been quite positive from a cost effectiveness and job creation perspective. A good example is California, our largest state with over 10% of the U.S. population. A recent Berkeley University review of California's moderate but sustained energy efficiency strategy over the last 3 decades provides some relevant conclusions. The study found that "Energy efficiency measures have enabled California households to redirect their expenditures toward other goods and services, creating about 1.5 million FTE jobs with a total payroll of \$45 billion, driven by well-documented household energy savings of \$56 billion from 1972-2006..." "As a result of energy efficiency, California reduced its energy import dependence and directed a greater percentage of its consumption to in-state, employment-intensive goods and services, whose supply chains also largely reside within the state, creating a "multiplier" effect of job generation... The economic benefits of energy efficiency innovation have a compounding effect. The first 1.4% of annual efficiency gain produced about 181,000 additional jobs, while an additional one percent yielded 222,000 more." (Roland-Holst, 2008). These findings of expanding employment benefits from public investments in energy efficiency are directly relevant to the ARRA clean job creation timing and impact.

The study concludes that "California's legacy of energy policies and resulting economic growth provides evidence that innovation and energy efficiency can make essential contributions to economic growth and stability. Had the state not embarked on its ambitious path to reduce emissions over three decades ago, the California economy would be in a significantly more vulnerable position today. Looking ahead, California's ambitious plan to reduce greenhouse gas emissions as mandated by the California Global Warming Solutions Act (AB 32) puts the state on a more stable economic path by encouraging even greater investment in energy saving innovation. The current financial crisis reminds us of the importance of responsible risk management. The results of this study remind us that, in addition to energy price vulnerability and climate damage, the risks of excessive energy dependence include lower long-term economic growth. A lower carbon future for California is a more prosperous and sustainable future" (Roland-Holst, 2008).

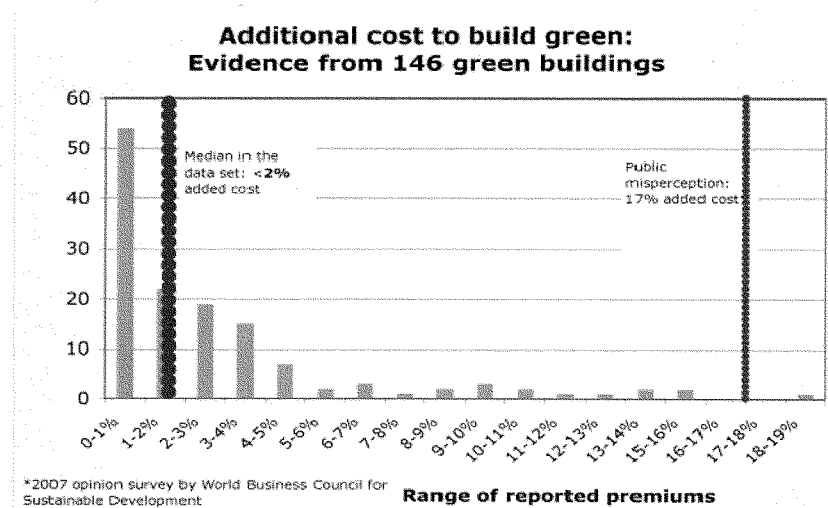
It is worth noting that the California efficiency success was achieved over a few decades. As the difficulty that ARRA green training funds had in being rapidly deployed demonstrates, the process of ramping up green jobs training and implementing energy efficiency are more easily done over a longer time frame. A current snapshot of ARRA funding success as measured in energy savings and jobs creation grossly understates the full employment and economic impact it will have over the coming years.

What the California experience illustrates, and what the principal U.S. economic competitors, including Japan, Germany and China now understand is that cutting waste and increasing efficiency increases economic and business competitiveness. To the extent that U.S. competitiveness is recognized as a valid objective, the ARRA funding for clean energy and energy efficiency is a prudent investment in enhancing competitiveness of U.S. firms and the U.S. economy.

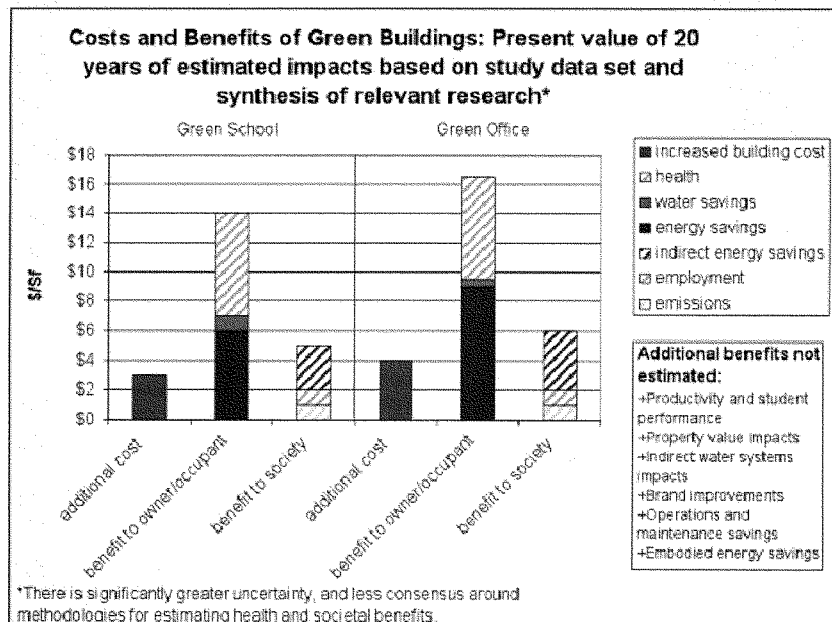
Much of U.S. investment in energy efficiency has traditionally been through utilities. As summarized below, these utility programs involving about \$15 billion in funding show that the average cost of energy efficiency savings is about 3 cents/kWh or two third less than the average retail rates. In other words, public investments in energy efficiency are smart investments from a cost benefit perspective. The chart also shows that the marginal cost of achieving efficiency declines over time as these programs build up. With respect to ARRA, the experience of past administrations, US states, corporations, and other countries investing in energy efficiency is generally very positive from the perspective of economic and financial returns and job creation.



There have also been questions raised about the cost effectiveness of the US government - including the US military - investing in greening buildings. Returns from energy efficiency and green energy investments range but are typically in the 3-6 year range. There is a widespread perception that green buildings - an area where the US military has been a leader - cost a lot more than conventional buildings. Recent analysis (See Greening Our Built World: Costs, Benefits and Strategies (Island Press, 2010)) demonstrates that this perception is incorrect - green building typically cost up to 2% more on median, far less than the 17% premium reported in one major survey.



The financial returns to investors in green buildings – including federal state and private sector investments have generally been very positive. Reductions in utility bills alone repay the average extra cost of greening building 2-3 times over just in the first 20 years of a buildings operation. When additional benefits including health benefits, operations and maintenance benefits, increased building value, and expanded employment are factored in, the total returns are about 10X. (*Greening Our Built World*) Federal investing in greening buildings is therefore a financially prudent investment with strong economic and employment returns.



Major banks have also generally become convinced that investments energy efficiency and green buildings are cost- effective and produce good US jobs. For example, Deutsche Bank Group in October 2011 released a report entitled “Repowering America: Creating Jobs”. Deutsche Bank forecast energy supply and energy employment through 2030 based on projections of sustained US investment and growth in the areas of energy efficiency and clean energy. Deutsche Bank determined that such a strategy would result in 7.9 million cumulative net job-years of direct and indirect energy employment, of which 6.35 million jobs (80%) would come from energy efficiency or renewable energy sectors (e.g. geothermal, solar PV, solar thermal and wind). http://www.dbcca.com/dbcca/EN/_media/DB_Repowering_America_Creating_Jobs.pdf

Conclusion

The purpose of a hearing is commonly thought to be an effort to learn about an issue to then allow rational fact-based conclusions to be drawn. The title of this hearing “The Green Energy Debacle: Where Has all The Taxpayer Money Gone?” suggests that a conclusion may have been drawn before the hearing. Nonetheless I hope that the experience and views of US venture capital investors, US corporations and the US military – summarized briefly above - are recognized as valid and relevant to the evaluation of the ARRA programs. Evaluation of employment impact from multiple non-partisan organizations, including the Council of Economic Advisors, the National Bureau of Economic Research, and the US Congressional Budget Office demonstrate large and positive employment impact from ARRA clean energy and green funding.

Measures of investment success can vary, but for ARRA should include: economic and financial impact, U.S. and individual firm competitiveness, risk reduction, and security (including climate change risk) as defined by the U.S. military. From a policy perspective, evaluation of the cost effectiveness of the ARRA program should include effect on job creation, health benefits from cleaner air and water, and reductions in our trade deficit. Against this set of criteria a reasonable review of the facts and actual performance to date demonstrates that, despite some specific problems, that the overall ARRA clean energy and green jobs investment is successful and that the benefits are continuing to grow as ARRA funded projects build out. Despite the steep ramp up, insufficient personnel, high demands on transparency, documentation and review, ARRA performance to date can fairly be judged as successful in its objectives of driving expanded U.S. investment in clean energy, slowing job loss and expanding job creation, enhancing US economic and corporate competitiveness, and enhancing national security.

Mr. JORDAN. Mr. McMahon, you are recognized for 5 minutes.

STATEMENT OF BRETT MCMAHON

Mr. MCMAHON. Thank you very much, Chairman Jordan, Ranking Member Kucinich, and other members of the subcommittee. My name is Brad McMahon. I am the president of the recently founded Miller & Long DC, Inc. We are a Washington, D.C.-based subcontractor. My previous employer, Miller & Long Co., Inc., was founded in D.C. in 1947. It is one of the Nation's oldest and largest subcontractors. The company regularly employs approximately 1,500 people as form building carpenters, cement finishers, reinforcing rodmen, layout engineers, equipment operators, laborers, everything that you could think of under the Sun for our particular trade. We have provided employment for over 75,000 D.C.-area residents over the last 64 years.

During my 19 years in construction, I personally have overseen over 50 high-rise concrete structures, and have been proud to provide employment for over several thousand construction workers, both here in D.C. and in the Carolinas.

Also active in a number of organizations here locally, including the D.C. Construction Trades Academy at Cardoza Senior High School, where we provide the only vocational training available for construction workers in the District of Columbia.

I first heard the term "green collar jobs" about 4 years ago. Like many, I was not sure what the term meant. And since so much of the focus seemed to center around my industry, I thought it would be wise to at least learn some more about it.

I learned over time that the term was actually a lot more political than actual. It became clear that it was just a new label on jobs that actually have existed for years. A lot of the public relations effort has gone into trying to claim there is something new here, and, unfortunately, that is not the case.

Considering this—consider, please, the following example, because I thought this was the clearest I have ever seen, by a gentleman named Mark Anderberg from the Texas Workforce Development Commission in a report labeled "Green Collar Workers and Other Mythical Creatures." In it, if you have the testimony in front of you, you will see the picture of two different toilets. One is a low-flow toilet; one is the old-fashioned one. And the question that begs from this is what are the skill differences for installing these two things? What is the possible difference between installing this one and that one? And the problem is there isn't one. However, the claim is that somehow they are trying to say that there is a new job created because you can install the low-flow toilet instead of the old one.

For a nonconstruction example, I would hope we could all agree that the skills necessary to drive an electric car are the same skills necessary to drive the largest SUV. The same driver can operate either vehicle just as the same plumber could install either toilet. The difference is in the product and not the operator. However, a great deal of effort and tax dollars have gone to the purpose of convincing the public that the plumber who installs a low-flow toilet should now be called a green collar plumber, and that the new label should count as a new job. This kind of thing makes those of

us in construction wonder where somebody would come up with that idea.

There is something important about the new label that I did not understand at first. If the new label is more than just a political talking point, but is actually a formal, new, capital O "Occupation Title" per the U.S. Department of Labor, then a new problem is created. When a new occupation is designated for the construction industry, a new set of standards is developed. In addition to the antiquated and complex determination of a prevailing wage, a new apprenticeship training standard is established, even though in this case the only difference is in nomenclature, not in skill set.

With that understanding, I will relate how this program unfolded in the District of Columbia. On October 4, 2007, I attended a meeting in the D.C. Department of Employment Services. The purpose of the meeting was to discuss the rollout of the Green Collar Jobs initiative. The meeting was basically handled by the staff from the Center for American Progress. The handout we received is attached to this document. I kept it because it laid out the goals of their program very clearly. It even included, for the first time I had ever received one from a D.C.-based meeting, a bar chart schedule detailing new mandatory apprenticeships that will be required to work on any project covered by the then brand-new at that time D.C. Green Building Act.

This proposal was a great concern to me because it took my company 26 years to get our apprenticeship program passed by the D.C. Apprenticeship Council. In fact, the only reason we were finally accepted was because the Apprenticeship Council at that point had its first and only nonunion member. Union control over apprenticeship boards is a common roadblock for the 87 percent of construction workers who have chosen the merit shop over unions.

So when a new occupation gets its own apprenticeship training standards, the participating employers must apply to have their program accepted. Having spent the better part of three decades getting our current program accepted, we were not looking forward to going through the whole process again.

In the District, there is a local hiring ordinance known as First Source, which includes mandatory registered apprenticeship participation. First Source only applies to those projects that receive a certain level of assistance from the District Government. What is shown in this handout is that the advocates were planning to take the First Source mandatory apprenticeship concept to a new level. The inset here from the project schedule is taken from that handout. The advocates were planning to make new green collar apprenticeship mandates apply to every project covered by the new D.C. Green Building Act. Unfortunately, the District of Columbia Green Building Act actually covers every brick and stick, public or private, inside the city limits of Washington, D.C. And we were basically looking at being barred from working inside the District.

Thank you.

Mr. JORDAN. Thank you, Mr. McMahon.

[The prepared statement of Mr. McMahon follows:]

**Testimony before the Subcommittee on Regulatory Affairs, Stimulus Oversight and
Government Spending**

November 2, 2011

My name is Brett McMahon. I am President of the recently founded Miller & Long DC, Inc., a Washington, DC based concrete subcontractor.

My previous employer, Miller & Long Co., Inc., was founded in Washington, DC in 1947. It is one of the nation's oldest and largest subcontractors. The company regularly employs approximately 1,500 people as form building carpenters, cement finishers, reinforcing rodmen, layout engineers, equipment operators, and laborers. We have provided employment for over 75,000 DC area residents over the last 64 years.

During my 19 years in construction, I have overseen more than 50 high-rise concrete structures. I have been proud to employ several thousand construction workers in the DC metro area and in the Carolinas.

I have also been active in various industry organizations such as the DC Chamber of Commerce, DCBIA, and Associated Builders & Contractors among others. I served on the DC Workforce Investment Council and participate with the DC Construction Trades Academy at Cardozo Senior High School here in Washington. I am here today in my capacity as a contractor.

I first heard the term Green Collar jobs four years ago. Like many, I was not sure what the term meant. Since so much of the focus seemed to center around my industry, I thought it would be wise to learn more about it.

I learned that the term was actually more political than actual. Over time it became clear that the term was just a new label on jobs that have existed for years.

A lot of public relations effort has gone into trying to claim that there is something new here. Unfortunately, that is not the case.

Consider the following example from a report Green Collar Workers and Other Mythical Creatures by Marc Anderberg of the Texas Workforce Development Commission:

Green Collar Jobs 101
Pop Quiz

Before reading the attached monograph, please take the pop quiz below. (It is sort of a pretest as used in an experimental design to establish a baseline for assessing learning gains.)

Q1) What is the difference between Exhibit A and Exhibit B?

Q2) Which one is “green”?




Exhibit A




Exhibit B

Q3) When did federal legislation mandate the installation of toilets like the one in Exhibit B?

Q4) Do the design differences between Exhibits A and B require radically different sets of know-ledge, skills and abilities for their respective installation and repair by a licensed plumber?

Q5) Do the design differences have any impact on employment demand for plumbers?

Q6) Do the design differences have any effect on employment demand in general?

(Pop Quiz and Quiz Answers continued in Appendix D)

This picture explains the problem better than any words. Please take note of Questions 4 and 5. There is nothing significantly different in terms of knowledge, skills or abilities required to installer

either toilet pictured above. Furthermore, the design differences do not lead to any increase in employment demand for plumbers.

For a non-construction example, I hope we can agree that the skills necessary to drive an electric car are the same skills needed to drive the largest SUV. The same driver can operate either vehicle just as the same plumber can install either toilet. The difference is in the product, not the operator.

However, a great deal of effort and tax dollars have gone for the purpose of convincing the public that the plumber who installs the 'Lo-Flow' toilet should now be called a Green Collar plumber, and that that new label should count as a new job. This kind of thing makes those of us in construction wonder who comes up with such an idea.

But there is something important about the new label that I did not understand at first. If the new label is more than just a political talking point, but is actually a formal, new Occupation title per the US Department of Labor, then a new problem is created.

When a new Occupation is designated for the construction industry, a new set of standards is developed. In addition to the antiquated and complex determination of a prevailing wage, a new apprenticeship training standard is established even though, in this case, the only difference is in nomenclature, not skill set.

With that understanding, I will relate how this program unfolded in the District of Columbia.

On October 4, 2007, I attended a meeting in the DC Department of Employment Services. The purpose of the meeting was to discuss the roll-out of the Green Collar Jobs initiative. There were many attendees, but the conversation and agenda was directed by staff from the Center for American Progress. The handout we received is attached to this document.

I kept the handout because it laid out the goals of their program very clearly. It even included a bar chart schedule detailing the new mandatory apprenticeships that would be required to work on any project covered by the DC Green Building Act.

This proposal was of great concern because it took my company twenty-six (26) years to get our apprenticeship program passed by the DC Apprenticeship Council. In fact, the only reason we were finally accepted was because the Apprenticeship Council had its first and only non-union member.

Union control of apprenticeship boards is a common roadblock for the 87% of construction workers who have chosen the merit shop over the unions.

When a new Occupation gets its own Apprenticeship Training Standards, the participating employers must apply to have their program accepted. Having spent the better part of three decades getting our current program accepted, we were not looking forward to going through the whole process again.

In the District, the local hiring ordinance known as First Source includes mandatory registered apprenticeship participation. First Source applies to any project that receives a certain level of

participation by the DC government. About 30% of the projects we construct include First Source because the building owners get some kind of assistance for the local government. Therefore, it is very important that we retain our standing with our apprenticeship program. Without it, we could not bid on the work.

What is shown in the handout is that the advocates were planning to take the First Source/Mandatory Apprenticeship concept to a whole new level.

Apprenticeship	1 day?	Tue 9/4/07	Tue 9/4/07
Apply mandatory apprenticeship guidelines to new green project development	180 days	Tue 9/4/07	Mon 5/12/08
Identify planned development projects in the District subject to green requirements	90 days	Tue 9/4/07	Mon 1/7/08
Identify types of green collar jobs and training requirements	1 day?	Wed 10/10/07	Wed 10/10/07

The inset above is taken from the handout from that meeting. The advocates were planning to make new Green Collar apprenticeship mandates apply to every project covered by the new DC Green Building Act.

They were not saying that there was going to be an exchange of compliance with a program for some government benefit. Rather, they were trying to create a mandatory apprenticeship program, to which we would have to apply all over again, because of a new zoning law. That zoning law, the DC Green Building Act, covers every public and private brick and stick within city limits.

Given our multi-decade tussle with the Apprenticeship Council, we had no expectation that we would be a reasonable shot at having our new "green collar" programs approved. We were looking at the potential of being excluded from working in DC.

After this meeting I began researching the initiative and discovered that it was not what it appeared to be. It was not an overall jobs initiative; it was a union jobs initiative.

Green Collar is supposed to be Union

The literature from the green collar jobs advocates shows that they are seeking union friendly and union exclusive policies.

"New Energy for States"

This publication contains a list of best-practices and suggested policies for state lawmakers. Many of the recommended public policy initiatives – from 'smart growth' planning to improvements to mass transit to incentives for hybrid cars – are of only modest consequence to labor and, certainly, it is here one sees some good-faith contributions from the environmental groups connected with the Alliance (e.g. Sierra Club). Yet, in critical areas of the publication, the

attempt to use 'green jobs' public policy as a vehicle for union jobs is blatant. From the first priority in the section, "Skilled Workers for Our New Energy Future":

As states begin to emphasize clean energy development, it is more important than ever to have a supply of workers who are well-trained in modern energy technologies. For this reason, states should add requirements or incentives for employing workers trained through state-approved apprenticeship programs to any energy legislation. To date, these requirements have been most successfully integrated into Project Labor Agreements (PLAs)...ⁱⁱ

"New Energy for Cities"

This volume has virtually the identical template as the "New Energy for States" report, but with the focus on cities and local jurisdictions. Again, the publication focuses on a wide-range of issues, but the focus on jobs – and organized labor – is clear. Some of the top priorities from the section, "Building a Workforce for the Clean Energy Future," include:

Prevailing wage or self-sufficiency wage plus adequate health benefits... Ties to state-approved apprenticeship programs... Job preparation training in coordination with community-based job training programs... Appropriate level of workers compensation...ⁱⁱⁱ

"Model Legislation"

Using much of the same material from, and building on, the 'New Energy' reports, this section of Apollo Alliance's website (in the "Action Center") presents legislation that can be enacted by state and local governments. The recommendations include Project Labor Agreements, requiring community-based pre-apprenticeship programs, and changes to building codes. One "model" example cited is an effort proposed by the California Chapter of the Apollo Alliance:

In December 2004, the California Apollo Alliance submitted comments to the California Environmental Protection Agency and the California Resources Agency in response to the Administration's Million Solar Roofs Initiative... The CA Apollo Alliance recommended that specific workforce standards be included in the legislation, including apprenticeship utilization requirements. The Alliance urged a requirement that electrician apprentices be hired on projects with housing tracts of 25 homes or more and non-residential projects totaling 10 kilowatts or more. Apprentices must come from CA State-certified programs with at least a 60% graduation rate in each of the preceding 5 years.^{iv}

Part of the "models" for building codes advocated by the Alliance:

Passing or updating building codes to incorporate modern building efficiency standards has the potential to benefit three key Apollo Alliance stakeholders: environmentalists, labor, and the community. Constructing buildings up to IECC or other high-efficiency standards is labor intensive and requires skilled workers, bolstering demand for high-pay union jobs. One goal of state and local Apollo Alliances is to work with community-based job training programs to develop meaningful employment opportunities for the communities in which projects are located.^v

The construction industry is one of the Alliance's key targets. In the website's "Why the Apollo Alliance Matters to Labor" section, the building trades are specifically highlighted:

Renewable energy, smart growth and energy efficiency all require construction, sometimes on a very large scale. Renewable energy, for instance, requires construction of wind towers and geothermal generation facilities. Renovating buildings to make them more efficient requires weatherization and appliance upgrades, while green building requires solar installations, HVAC and lighting retrofits and other upgrades. Smart growth requires new transit infrastructure, such as high speed rail.

Unions, especially those in the building trades, are seeing the importance of capitalizing on the economic benefits of emerging clean energy markets, energy efficiency initiatives, and green building. Given the labor movement's expertise in providing training and continuing education in state of the art facilities – as well as its significant political clout and legislative experience – labor is a necessary partner in any Apollo Alliance project.^{vi}

In the end, the Green Collar jobs initiative is really just a scheme to bar non-union construction companies. The advocates never got much farther than planning before the economic meltdown scuttled their plans. Had the advocates been able to pull this off, we would have been excluded from a market that has historically accounted for 35% of our revenues.

Thank you for the opportunity to speak to you. I look forward to answering your questions.

ⁱ Attached

ⁱⁱ *New Energy for States*. Apollo Alliance, 37

ⁱⁱⁱ *New Energy for Cities*. Apollo Alliance, 46

^{iv} http://www.apolloalliance.org/strategy_center/model_legislation/aur.cfm

^v www.apolloalliance.org/strategy_center/model_legislation/eelegis.cfm

^{vi} http://www.apolloalliance.org/about_the_alliance/benefits_of_apollo_s_plan/labor.cfm

Mr. JORDAN. We appreciate everyone's testimony.

Mr. Friedman and Mr. Lewis, based on your testimony, it looks like both this weatherization program and the Green Jobs training program are, by, I guess, anyone's conclusion, just a complete failure. And I want to start with you, Mr. Lewis, and walk through this. Based on your testimony, I think I got the numbers right, \$490 million is out the door, but only \$163 million has been spent. Is that accurate?

Mr. LEWIS. Correct. That was as of June 30.

Mr. JORDAN. Okay. And how many of the \$163, \$162.8, \$163 million spent, how many people have been trained?

Mr. LEWIS. Completed training, 26,000 people.

Mr. JORDAN. And how many now have a job that—how many have been successful, been trained, and actually are working in this area and have a job for any length of time, let's say 6 months?

Mr. LEWIS. Of the 26,000, about 8,000 people were placed into a job.

Mr. JORDAN. Do you know the math on that? So we have spent \$163 million and trained 20-some thousand; only 8,000 have actually received a job. Do you know how much we are spending per person?

Mr. LEWIS. I didn't. I had not calculated that.

Mr. JORDAN. Several thousand dollars probably, right?

Mr. LEWIS. Yes.

Mr. JORDAN. Maybe even close to—I mean, maybe approaching—well, it wouldn't be quite 100,000, but lots of money spent per job. Do you see any way—in fact, what were the targets that the Department of Energy had laid out?

Mr. LEWIS. Department of Labor.

Mr. JORDAN. Department of Labor, I am sorry.

Mr. LEWIS. The total grants added up to a plan to train about 97,000 people. We are at 26,000 had been trained at this point. I do believe at the end of June there were around 20,000 people that were in the program.

Mr. JORDAN. All right. Do we know anything about the folks in this program? Have they been laid off? Are they on unemployment? What do we know about the people in the program? Do we know?

Mr. LEWIS. Some of the people in the program were unemployed, although there were—some of the grants were also designed to target incumbent workers, so workers who were already employed, but wanted to upgrade their skills to qualify for a green job or to maintain a job.

Mr. JORDAN. Okay. And so I guess there are two perspectives to look at. You have several thousand people who have been trained. Some of them may have been receiving some kind of benefit from the taxpayer. Now the taxpayer is helping them get trained. So they could be receiving unemployment and getting these additional dollars spent. Most of them are not getting a job. So we've got the harm to the taxpayer, but, frankly, also the harm to the individual who went through this training and has maybe not a whole lot to show for it.

Mr. LEWIS. If we have trained them in something that there is not a job for, then, yes, we are not doing them the best benefit.

Mr. JORDAN. Do you think there is any way we can recover—you said \$490 million out the door, but only \$163 million spent. Is there any way we can recover the additional over \$200-some million?

Mr. LEWIS. Of course, those numbers were as of June. So this quarter, which we don't have the reports in yet, there would be more funding spent. I don't know how much.

Mr. JORDAN. Isn't there at some point when you say this program is not working? This actually reminds me of another program we have had hearings on, the HAMP program, which was designed to help 4 million homeowners stay in their homes and helped a few thousand. Lots of money out the door, but lots of money hasn't. So is there any way you think we can get the money back, not do any more harm to people, put them in training that is not going to benefit them, and actually get the money back for the taxpayer?

Mr. LEWIS. Yeah. And that is what we have asked the Department to do, to look at how much at this point has not been spent. And if it isn't going to be—

Mr. JORDAN. So is it—the inspector general of the Department, is your recommendation that we stop the program?

Mr. LEWIS. I would want to have more information from the Department.

Mr. JORDAN. How much more do you need? When you look at these numbers and how bad they are, how much more do you need to say this is just not working?

Mr. LEWIS. Well, I don't know. You know, I know there is 20,000 people in the mill at the end of June. You know, whether these numbers are going to pick up, there is something we haven't seen, I can't say.

Mr. JORDAN. I mean, at some point we say how much longer do we give—

Mr. LEWIS. But the placement numbers are very far behind.

Mr. JORDAN. Yeah, very bad. And is there ever a chance to catch up to the targets they said they were going to hit?

Mr. LEWIS. They could catch up to their targets for serving. They would have to make a significant increase to catch up with their placement targets.

Mr. JORDAN. Exactly.

Mr. Friedman, real quickly, because I have about 40 seconds here, the weatherization program, you mentioned, I think, in your testimony, if I got it right, 9 of 17 homes you visited—was this homes or commercial?

Mr. FRIEDMAN. Homes.

Mr. JORDAN. Okay. So homes you visited did not pass inspection.

Mr. FRIEDMAN. That is correct.

Mr. JORDAN. How were these 17—did you select them, did the Department of Energy tell you? How were these 17 selected?

Mr. FRIEDMAN. They were not selected by the Department of Energy. We don't work that way, Mr. Chairman.

Mr. JORDAN. Okay. You just randomly picked them or—

Mr. FRIEDMAN. They were picked in conjunction with the States in some cases. This is one example. There are other examples in other jurisdictions of rejection rates because of inadequate work and poor quality work.

Mr. JORDAN. But based on your sample, over half—

Mr. FRIEDMAN. That is correct.

Mr. JORDAN [continuing]. Over half the homes didn't meet the requirements.

Mr. FRIEDMAN. In that jurisdiction, that's correct.

Mr. JORDAN. So I want to ask you the same question I asked Mr. Lewis: Is this weatherization program, based upon what you have seen out there, over half the homes not meeting the criteria that is outlined and meeting the standard, is this a program we should end?

Mr. FRIEDMAN. Mr. Chairman, that is a long—requires an extensive answer. So give me a minute or two, if you don't mind. This program has been in effect since the mid-1970's. The funding, on an annualized basis for the last several years, has been about \$400 million a year.

Mr. JORDAN. It seems to me it doesn't matter how long it has been in existence. If it is bad, it is bad, and it should have ended a long time ago. Maybe that is a reason that—but that shouldn't prohibit us from doing the right thing and ending it if it's that bad.

Mr. FRIEDMAN. Absolutely. And I am not suggesting that is the case. What I am suggesting is the fact that the program has a long history, it is a mixed bag. I wouldn't say it is a total failure. There have been some successes, a number of successes. The Department reports that over 500,000 homes have been weatherized around the Nation. So there have been some successes, there have been some failures. I think—I would suggest that we fix it, not necessarily end it.

Mr. JORDAN. Okay. Not a total failure, just a failure in a lot of ways.

With that, I will yield to my friend from Ohio, the gentleman Mr. Kucinich.

Mr. KUCINICH. Mr. Friedman, you are not recommending, though, that the U.S. Government suspend all weatherization programs; is that correct?

Mr. FRIEDMAN. That's correct.

Mr. KUCINICH. And this recent audit was 9 of 17 weatherized homes visited—that were visited failed inspections because of substandard workmanship. You are not concluding, based on that, that all weatherization programs don't work; is that right?

Mr. FRIEDMAN. That's correct. But, Mr. Kucinich, let me put this in some perspective. We visited 10 or 20 States around the Nation, and this was reflective of one particular jurisdiction, the work of one particular community action organization. There were problems in a number of jurisdictions that need to be corrected if the program is going to be continued. The purpose of—what we were trying to achieve is a sort of a lessons learned. Here is what has gone wrong; here is what needs to be corrected if the political judgment is to continue this program going forward.

Mr. KUCINICH. Let's look at this. I mean, who uses weatherization programs? Primarily lower-income people. So we don't want to be in a position as a subcommittee in recommending that lower-income people don't get the help that they need. We want to do everything we can to lower their energy costs. So I think that this subcommittee has to be very, very careful about drawing any sweeping conclusions about failures that may exist in some areas.

And I will certainly yield to my friend.

Mr. JORDAN. I think the gentleman makes a good point, but we certainly don't want to, whether it is a green jobs training program or a weatherization program, have a program that doesn't work; on one hand gives peoples false hope, on the other hand doesn't give them the standard that they are entitled to get if we are going to have the program.

Mr. KUCINICH. You and I are 100 percent in concurrence on saying that if Federal dollars are being spent, we expect the workmanship to be good. That is one of the reasons why I support Davis-Bacon requirements. It is a workmanship issue.

And so I think that, you know, we are on the threshold of another winter. It snowed here last weekend. Temperatures are dropping. There is poor people shivering in their homes. We don't want to tell them that they are not going to have access to a weatherization program. I just want to be very careful about that.

On the issue of workmanship, though, 100 percent in agreement with you. And we will get Mr. Friedman's help in how we tighten that up.

Now, Mr. Kats, in the time that I have remaining, you know, there is an assertion being made here that somehow this green energy and the potential for profit in it is some kind of a myth. You are an investor in this, right? Isn't this your background?

Mr. KATS. Yes, that's correct.

Mr. KUCINICH. I mean, can investors make money investing in green energy or not?

Mr. KATS. Yes, they can. And—

Mr. KUCINICH. Do they?

Mr. KATS. Yes, they do. There have been an increasing number of IPOs and sales to large corporates from firms that we have invested in. I am on the board of Tendril, for example, which is a smart grid company that has benefited from ARRA funding. Beginning last year they were in 100,000 homes, end this year it will be 4.2 million homes. We expect to get a 10X return on that. Some companies we have—

Mr. KUCINICH. You want to explain that for the uninitiated, a 10X return?

Mr. KATS. So investments are made in the hope that we are going to make money. That doesn't always happen. Part of the portfolio is expected to not perform well, and others are expected to perform well. In the case of clean energy, we are seeing more and more companies that are performing well over time. And as they get purchased, or as they go public, the investors are returned money. And the expectation is that the money that they receive back exceeds the money they put in.

Mr. KUCINICH. Let me ask you this, the Department of Defense is spending a lot of money on green energy research, is it not.

Mr. KATS. Yes.

Mr. KUCINICH. Why?

Mr. KATS. They believe it reduces the cost for delivering support services in the field. They believe it reduces adverse security concerns. They believe it strengthens the military. They believe that clean energy is a more cost-effective way of delivering their obligation.

Mr. KUCINICH. Have you worked with people in the Department of Defense on any of these energy issues?

Mr. KATS. Yes, I have. They're very excited about it. They think that it strengthens security in a lot of different ways, and on a cost-effectiveness basis, is a smart investment strategy.

Mr. KUCINICH. And I think it would be interesting for us to have a hearing just with the Department of Defense on this issue because what we're seeing is that those people who are inevitably charged to intervene on energy-related issues, with the geopolitics being what they are, are themselves cognizant of the imperative of moving toward green energy, and if the institution that drives one of the largest parts of the Federal Government is showing an interest in green energy, I think that not only should this committee pay attention to that, but I also think that Wall Street ought to be paying attention to that as well.

Thank you, Mr. Kats. Thank you, Mr. Chairman.

Mr. JORDAN. I thank the gentleman. Just one followup question if I could with Mr. Friedman.

Half of the homes that you looked at that did not meet the standard, do you know who did the work, was it a union contractor or nonunion contractor, do you know?

Mr. FRIEDMAN. Well, Davis-Bacon—I don't know in those particular instances. Davis-Bacon, for the first time in its 35- or 40-year history was introduced to the weatherization program as a result of the operation of the Recovery Act.

Mr. JORDAN. So it is likely—we were talking about union contractors doing this work?

Mr. FRIEDMAN. I don't know. I can't answer that question.

Mr. JORDAN. But what you're saying, Davis-Bacon is being applied now, right, with the stimulus? It's a requirement now, correct?

Mr. FRIEDMAN. I apologize, let me hear—I missed your statement. Go ahead, please.

Mr. JORDAN. Davis-Bacon is now required?

Mr. FRIEDMAN. Correct.

Mr. JORDAN. You're charged with looking at stimulus dollars out the door?

Mr. FRIEDMAN. Correct.

Mr. JORDAN. Your testimony was half the work done was not to standard, 9 out of 17?

Mr. FRIEDMAN. Correct.

Mr. JORDAN. And so is it likely to conclude who did the work?

Mr. FRIEDMAN. I can't make that conclusion because it could have people who were nonunion who were being paid Davis-Bacon wages.

Mr. KUCINICH. Would my friend yield?

Mr. JORDAN. Would be happy to yield.

Mr. KUCINICH. Since we're both from Ohio, I bet you a bag of Buckeyes that they weren't union contractors. Thank you.

Mr. JORDAN. I now yield to Dr. DesJarlais, gentleman from Tennessee.

Mr. DESJARLAIS. Thank you, Mr. Chairman. I guess just to kind of bring things back in focus, we're here today as a subcommittee of oversight and reform to take a look at stimulus oversight in this

case, and the hearing, of course, is entitled The Green Energy Debacle: Where has all the taxpayer money gone? And that's really why we're here. We're all here to make sure that all the good taxpayers are getting the best for their tax dollars, and I think, clearly, the stimulus program has not lived up to its expectation.

So, Mr. Friedman, just to kind of maybe try to put a cap on the weatherization issue, we've been beating that horse here for a while. I think about \$5 billion of the stimulus money was set aside for weatherization projects for paid contractors and nonprofit groups to make the homes of low-income Americans more energy efficient.

Being from Tennessee, I think that the program has revealed countless instances of waste, fraud, and abuse, and in an audit in Tennessee, the Inspector General found that 246 energy measures installed in 41 homes revealed only a third were shown to meet Department-directed minimum energy savings-to-investment ratios.

So your office has done investigations of stimulus funded weatherization projects in many different States. Tennessee may be one, but what are some of the most egregious examples of the waste your office has uncovered?

Mr. FRIEDMAN. Well, first, mischarging, that is, charging for work that was never accomplished. These are some of the schemes that we are currently investigating and have investigated. Second, paying premiums for products that could be purchased at lower cost. Third is charging for work that was never done in general. Fourth is abusing the priority sequence of those who could or should be receiving, were eligible to receive the weatherization work. And those are four or five of the most significant finds, and of course, the whole question of substandard, the quality of work issue. In some cases, it was actually life threatening.

Mr. DESJARLAIS. Is it true that weatherization funds can be used to purchase brand new refrigerators or air conditioners?

Mr. FRIEDMAN. I don't want to give you an inaccurate answer. Certainly, furnaces would be appropriate. I don't know about—did you say refrigerators?

Mr. DESJARLAIS. Refrigerators, air conditioning.

Mr. FRIEDMAN. There are programs that will give premiums other than weatherization for purchasing new appliances that are energy efficient. I don't believe it was covered under the weatherization program.

Mr. DESJARLAIS. I'm not sure that would be found anywhere in the Constitution, that that would be a right, but rumor has it that is the case. How much weatherization money do you think we could recover at this point of the \$5 billion?

Mr. FRIEDMAN. I would suspect that there would be very little that's recoverable at this point.

Mr. DESJARLAIS. Okay. Changing gears just a little bit, I think there was an article in maybe The Washington Post this morning, but were the State and local governments ready to receive the massive amounts of money that were allocated to them from the Department of Energy as part of the stimulus?

Mr. FRIEDMAN. Unfortunately, they were not and that was an issue that I think was predictable, and we, in fact, did anticipate that that would be a problem.

Mr. DESJARLAIS. So you don't think it was very wise to send millions of dollars to local governments who were in the process of laying off workers because of the recession, they couldn't handle this influx of money, they weren't ready and that contributed to the waste?

Mr. FRIEDMAN. Well, not meaning to make a joke out of a very serious subject, but it's been equated to attaching a long hose to a fire hydrant, that the infrastructure—both at the Federal, State, and local level simply was not there to accept the burden.

Mr. DESJARLAIS. Okay. So you think that that was a great contributor to the inefficiencies and the waste that the office has seen?

Mr. FRIEDMAN. Certainly.

Mr. DESJARLAIS. Okay. Thank you. Mr. Montgomery, you state in your testimony the mission of the Department of Energy and the purpose of the Recovery Act were not consistent. Could you please expand on this point for us?

Mr. MONTGOMERY. Yes. The requirements of an effective energy technology development program are essentially stable long-term funding. It also requires a careful selection process, especially if the money is being put at the R&D stage, and that involves proposals. It involves peer review. It involves the formation of a program in which the R&D stage is set.

None of that fits with the classic prescription for stimulus, which is get the money in fast and turn it off quickly when it's no longer needed. That's exactly the opposite of what the Department of Energy needs, and it's the way we have killed any number of useful programs in the past. For example, the Solar Energy Initiative, I remember back in the 1970's and early 1980's, was cut off just as it was beginning to get going somewhere, and in terms of production and bringing costs down.

Mr. DESJARLAIS. Based on your decades of experience in energy policy, does the entire concept of promoting green jobs make economic sense?

Mr. MONTGOMERY. Not through programs like the Recovery Act. I would say that green jobs are a solution in search of a problem. It's not a way of dealing with climate change. It is not a way of dealing with the government's responsibilities for R&D. It's not a way of dealing with the other environmental issues that we face, and it is certainly not a necessity for getting the U.S. economy to grow. It's something that may or may not happen if we put policies in place for those other objectives, but it is not a program that has policies significant to itself.

Mr. DESJARLAIS. Okay. And I'm out of time. Thank you, gentlemen.

Mr. JORDAN. I thank the gentleman from Tennessee. Will now recognize the vice chairman, followed by Mr. Kelly and Mr. Labrador—oh, excuse me. Mr. Kelly is up first.

Mr. KELLY. Thank you, Mr. Chairman. Mr. Montgomery or Doctor, let's stay with you.

I know in the opening statements we talked about one of the problems with our dependency on oil is that there's also a military investment made. If we were to do it domestically, if we had a really aggressive domestic energy policy, where we actually use our own resources—we know that a third of the world's coal is under-

neath our surface. We know that in Western Pennsylvania it's now being called the Saudi Arabia of natural gas. We have oil onshore, oil offshore. We've done an awful lot to hinder that development.

And certainly, I listened to John Hoffmeister early in the spring. He said there's 2 million jobs, a minimum of 2 million jobs waiting right now in the energy sector if we were to have an energy policy, a strategy that was aggressive. And I'm listening to what you're saying. So the cost of military, it's true we do spend a lot of money in the military. But we wouldn't have to do it if we produced it in our own country. I mean, we wouldn't be spending petro dollars in countries whose ultimate goal is to annihilate us and we're funding that process.

I have a difficult time when I hear that, yeah, we want jobs, we want jobs right now, but we keep gaming ourselves, you know, and this investment that we've made—and only in government, by the way. I come from the private sector, and I love this idea of these green jobs and you have to go at them, when you don't have to worry about a positive return on investment, you can waste a lot of taxpayer money.

There's hardworking Americans whose money has been invested and I keep hearing this, there's an element of risk. And I understand there's an element of risk, but when you take hard-earned American tax dollars, and you throw it at an agenda rather than at a strategy, and you see the waste, I mean, it must really rankle somebody like you, your whole life you have watched this happen. And only in this town, only in this town can you squander money and not worry about it because there's an endless supply of it. If you don't have enough money for that project, don't worry, we'll get more money. We'll just raise taxes and we'll throw some more money at that and we'll re-allot money to you.

I think that's really where we're at today when we ask about this money has been wasted. There's nobody in the private sector that would continue to squander the capital that we're squandering right now on a reelection agenda and not on an energy policy that makes sense for America.

And I want to hear words. Would it be possible, without government subsidies, for these green jobs to go forward? Because you know what, I'll tell you what, in my district, one of the local business owners, he has a marquee out in front of his place. He puts down "green jobs equals red ink." And I tell you what, I think that guy has a better feel for what's going on about policies right now than a lot of folks inside this Beltway.

So I mean, really without the subsidies, we talk about—well, yeah, General Motors is willing to invest in the Volt. Well, no kidding. They've got a safety net underneath them. I mean market-driven means you can drive it off the lot, somebody wants to buy it, not you're going to throw somebody \$7,500 of taxpayer money, Federal money, and \$3,500 of Pennsylvania money for somebody to drive that car off the lot.

And we're already seeing, by the way, and I know this because I'm a Chevy dealer, this great idea that we're going to produce 16,000 of these Volts this year. Well, we're selling about 500 a month. You do the math. There's 10,000 Volts that are going to

have no home to go to. Being a dealer, I know whose driveway they end up in, or whose lot they end up in.

Just tell me, without the government subsidies, who would venture into this wonderland, and I mean wonderland, wondering if they could possibly work if it was their own money?

Mr. MONTGOMERY. Thank you, Mr. Kelly. I think I heard three questions. Let me go back to the first one which was——

Mr. KELLY. More frustrations than questions, I've got to tell you.

Mr. MONTGOMERY. Thank you. No, I think there were—well, there were three topics I would like to talk about.

The first one is energy security. Most of the green jobs that we are hearing about now are either in the weatherization area, which we've heard talked about, classifying construction—certain construction jobs as green, or they have to deal with generating electricity because in the short term, the technologies that we are deploying are largely electricity-related technologies. And the electricity technologies are already being supported by things like the State level renewable portfolio standards, and requirements of the various public accounts, California's requirements for renewable energy, and that's making a market. Again, it's created by government, but it's created by regulation.

The opportunities in the near term for actually changing our oil imports are very, very limited on the green technology side because biofuels are going to be a long time to develop. They require serious breakthroughs in order to accomplish something.

Electric vehicles I think you've described very accurately, that the market just does not exist for electric vehicles with the current price of electricity and the current price of those vehicles, except for people to whom they're a very expensive toy or people who will be given them for free.

So what are we going to do about energy security? Green jobs program is not affecting energy security because if you define energy security as either reducing the amount of world oil supply that's produced by our enemies or reducing U.S. oil imports, their production is probably the most rapid way that we can do something about it. The transportation sector is going to be very hard to get off oil, and electricity doesn't consume oil, so putting money into electric technologies doesn't affect our oil balance at all.

As far as government subsidies go, yes, I think that if—once Congress makes—made the decision that there was not going to be a price of carbon in the market, that there was not going to be a cap and trade program or a carbon tax, that means that most—that any technology that was depending on that, any technology that's going to produce renewable energy at a cost that's 25 percent higher than burning coal is not going to have a market beyond what's created by the State renewable portfolio standards, which gets into a third and important issue, I think, and maybe you will let this have some debate among the panelists.

But it's that Mr. Kats mentioned that investors can make money on clean energy. Well, certainly they can if they are selling into, you know, wind turbines into a market where the RPS, the renewable portfolio standard, says utilities must buy wind. Well, investors are going to make money selling wind. Actually most of the

wind is—there's another trade issue about where the wind turbines are being purchased.

My question is, if a venture that was funded largely by private equity and made it 10 times return for its private equity investors when it was sold to a big company, why did it need Recovery Act funding? It seems to me that we are in a situation where if you—if you—if you can make a profit on doing something through private equity, you don't need the Recovery Act funding, and if there's not a market for the product, the Recovery Act funding is not going to be enough to create a sustained industry.

Mr. JORDAN. Thank you, doctor. Now recognize vice chairman.

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

Now, many of us came to Congress in part of the 2010 elections because of the economy, because of jobs, because of the state of what was going on in our country, and this notion that the government can spend money to create jobs, and the stimulus which was touted as you know never going to get unemployment above 8 percent, we see that we've now got unemployment and it's been there for 24-plus months at 9 percent or hovering around 9 percent. So the Keynesian economics didn't work.

Now, we're being pushed another stimulus, well, we need an additional stimulus because the first stimulus wasn't enough. Now we're going to have a second stimulus, and we're going to spend money. And when I'm out in the district and I hear from some of the supporters of this notion, they say, well, it creates jobs and we want to create jobs. And we all want to create jobs. We want to get this economy back on track, but the government can't do that. It's the private sector's job. The private sector can do it.

So we look at the stimulus, and my question is for Mr. Friedman. All of these jobs that were created, these green jobs, what happens when this money is spent? What happens to those jobs?

Mr. FRIEDMAN. Ms. Buerkle, the Department's \$35 billion plus its loan guarantee authority that came with the Recovery Act, there are a lot of different ways in which it was spent, but let me give you one example.

As I reported in my testimony, the Department used a substantial amount of money to advance its environmental remediation program, remnants of the Manhattan Project at sites around the country, and the money has dried up. The money has come to an end, and between 4,000 and 5,000 people will be losing their jobs between now and the end of December of this year.

So you have to look at each bucket somewhat separately, and certainly in the case of the money that was spent for creation of these jobs, they come to an end, and which is unfortunate for those individuals.

Ms. BUERKLE. And so the arguments that we hear, well, let's spend this money and create jobs, these are short-term jobs, and we will far better served to get a good, solid transportation bill in place which would have shovel-ready jobs eventually, and those jobs and the funding would be available rather than this temporary spending.

Mr. Friedman, I just want to talk a little bit about 1705 loan program, and my question is—and I realize you're going to be looking

into this or you are looking into it and you may not be able to comment on certain portions of it. And this kind of goes to what Mr. Kelly was talking about, this notion that when the government is funding something, it's an endless pit, you know, there's just more money—if it doesn't work, we'll just pour more money into it.

When a program like Solyndra, when you identify that there's such a significant loss, is anything done to make a change midway through that program and say this isn't working and we need to restructure this program so it does work, so we're not throwing good money after bad, and we're not wasting American taxpayers' money?

Mr. FRIEDMAN. Well, Ms. Buerkle, I can talk about the audit work that we've done with regard to the loan guarantee program. The most recent report was issued in March of this year of which we identified problems in the way the Department documented, the way it addressed risks, and mitigated those risks. I can certainly talk about that, but in terms of the specific case that you're referring to, we have acknowledged, as has the FBI and the Department of the Justice, that we have an ongoing criminal investigation, and I can't comment beyond that.

Ms. BUERKLE. And last, I have a few seconds left here, aside from Solyndra, is your office concerned that there will be other losses with programs where we've given money to them and that the government, aka, the American taxpayers, will also sustain losses?

Mr. FRIEDMAN. Well, I—at this point I'm not in a position to—I have not evaluated every loan guarantee in the portfolio, so I'm not in a position to get—to project or to anticipate what may occur or may not occur. So I can't give you really a thorough answer.

Ms. BUERKLE. Thank you very much. Mr. Chairman, I yield back.

Mr. JORDAN. I thank the gentlelady. I now recognize the gentleman from Baltimore, ranking member of the full committee, Mr. Cummings, and then Mr. Labrador.

Mr. CUMMINGS. Mr. Friedman, one of the things you said that was very interesting is that the—that part of the problem was that when these funds went to the States that, in some instances, the employees who were responsible for dealing with these had furloughs were an issue? Sir?

Mr. FRIEDMAN. Yes.

Mr. CUMMINGS. And was that—did you find that the case in many instances?

Mr. FRIEDMAN. There were several jurisdictions, States in which that was the case, Mr. Cummings, and it was there's an irony there which is really unfortunate, which is that here we come to the States with a program that is designed in part to stimulate the economy and to create jobs, and yet, the very people who would administer the program and apply the mechanics to the program, make it work, were furloughed because of the State—the condition of the State's economy. It is an unfortunate irony if that's the right word for it.

Mr. CUMMINGS. And the—and to get these—I mean, it sounds like, and I think Mr. Lewis said something to this effect, also—it seems as if there was an effort to get the programs up and running in a certain amount of time, and in an effort to do that, a lot of

times all the mechanisms weren't in place to effectively accomplish that. Would be that be a fair statement, Mr. Lewis?

Mr. LEWIS. Certainly, one of the premises of the Recovery Act was to get money out there quickly. There are a lot of programs—we did have a lot of new grantees that had not applied for the program before.

Mr. CUMMINGS. And the DOE \$535 million loan guarantee to Solyndra and the subsequent bankruptcy are well-known, and on Monday we learned that Beacon Power Corporation, which received \$43 million in stimulus funds through the loan guarantee program, filed for bankruptcy on October 30th. Now, Mr. Friedman, isn't it true that DOE'S loan programs office was specifically designed to provide funding for companies that because of the type of funding find it difficult to obtain funding from the private sector? Is that an accurate statement?

Mr. FRIEDMAN. Earlier, I think before you returned to the room, I indicated I can't, because of the criminal investigation, discuss particular—

Mr. CUMMINGS. I'm sorry.

Mr. FRIEDMAN. In terms of the generic question, you're absolutely correct. That was the reason for the program, and that was the reason that the office was created as well.

Mr. CUMMINGS. And isn't it true that these companies are generally pursuing—I think this would be in your purview—pursuing cutting-edge technology from battery production to solar to even nuclear power? Is that an accurate statement?

Mr. FRIEDMAN. I believe that's accurate, yes.

Mr. CUMMINGS. Isn't it true that the list of companies funded through DOE's office involves almost 50 companies who have operations throughout the United States and, therefore, when we see some failures, wouldn't that be expected given the high-risk nature of what they do?

Mr. FRIEDMAN. I'm a little reluctant to get into the question of risk and outcomes, but obviously there is a risk, otherwise these firms would not need government—or the government loan guarantee.

Mr. CUMMINGS. And when you look back on what you found, what were your recommendations?

Mr. FRIEDMAN. Well, we recommended with regard to the March—the third of our reports, which was March 2011, we recommended that the Department develop a much more robust system for documenting how it evaluates the risks with each individual applicant and how those risks are mitigated.

Mr. CUMMINGS. Did this funding come under Delaney, Mr. Delaney.

Mr. FRIEDMAN. I'm sorry?

Mr. CUMMINGS. Did this money come under Mr. Delaney's watch?

Mr. FRIEDMAN. Well, I am a member of the Recovery Act Accountability and Transparency Board so I guess arguably all the Recovery Act money was within the purview of the board and Mr. Delaney, so the answer I suppose is yes, but this is a Department of Energy program outside of that.

Mr. CUMMINGS. I got you. Well, let me tell you why I ask that. One of the things that he said was that he was trying to put in mechanisms by which he would prevent these things from happening, and I was just wondering were there prevention efforts here, and if so, why did we have so many problems?

Mr. FRIEDMAN. Is that directed to me?

Mr. CUMMINGS. Yes.

Mr. FRIEDMAN. Certainly, there was a system of due diligence that was exercised by the Department. Was it adequate? You know, that remains to be seen, and the due diligence effort, at least presumably, would have been to identify the risks, to determine what mitigating circumstances or what mitigating factors are or controls can be put in place, was the risk—were the risks tolerable and how you proceed from there. So, yes, there was a due diligence process in place. The adequacy I'm not sure I can comment on.

Mr. CUMMINGS. Thank you, Mr. Chairman.

Mr. KELLY [presiding]. I now recognize Mr. Labrador.

Mr. LABRADOR. Mr. Chairman, I yield my time to you.

Mr. KELLY. Thank you, sir.

Mr. McMahan, I really—these hearings are a great value, I think, for the American people because it's the only time they really get to see how their money is being spent. I look at this as more of a stewardship than anything else. I know it is an elected office, but really, we're stewards of American taxpayer money and we have to be responsible to them for the way this money is being spent. So I've been here 9 months, but I come from the private sector as you do.

Can you discuss a little bit these green jobs? We found out in a prior hearing that a bus driver who's driving a diesel bus, when he switches over to an alternative energy bus now becomes—we've created a green job. So the fact that the American public gets gamed so many times with these marketing efforts to take whatever it is that we're trying to achieve, and I really struggle sometimes to go back home and tell people in northwest Pennsylvania we're spending your money the right way. They say, really, we don't see it that way. So tell me, again, some of the green jobs that you see in your construction business.

Mr. MCMAHON. It's true. It's quite fascinating, because actually it's all the same jobs that currently exist. The goal here is to create a new label. It is—it's just a misnomer to think that somebody who works—who cuts wood from the sustainable forest has any skill that's any different from somebody who cuts wood that doesn't come from one. But if you were to ask the Department of Labor, this current Department of Labor, that is a new skill-set somehow. It literally is—we've had carpenters for a long time. We've had sheet metal workers, reinforcing steel people that maybe they turn bolts to erect a wind turbine, but it's no different than building a coal-fired furnace a couple of years ago, literally.

And you will have people, you know, we've done—LEED standards was started in early 1990's here in D.C. Actually. I actually worked for the guy who helped write them originally back in the early nineties, and we've done probably north of a hundred LEED-certified buildings, several hundred million square feet, just

through the company ourselves, but there's no skill-set difference between these two people.

The idea here really, what they're trying to do in the District is really quite nefarious, and it's nice that they just kind of laid it all out here. They're trying to take a zoning law, the D.C. Green Building Act, and claim that somehow there was a new skill-set required to actually work on things covered that were considered green. Therefore, create this place where they create a new apprenticeship standard.

I mean, I know that we as a company and every other merit shop contractor in the District area, we would all have had our—you know, literally decades of apprenticeship standards trying to get them passed, we'd have them tossed, and therefore, we'd be barred, and this wasn't the only jurisdiction that that was attempted. Texas, northern Virginia, some of those places where attempting to use a zoning bill, claim that somehow the skill-set required a new apprenticeship standard and then people would have to recertify their program.

If I could just quickly answer one quick question, I heard the ranking member discussing about Davis-Bacon wages. Back in Title X of the Energy Act that passed at the end of 2007, there was something included called the Clinton-Sanders amendment. It altered the Workforce Investment Act. For the first time, you were required to actually have a union as a partner in order to qualify for any training grant funds.

Furthermore, the union, in a particular jurisdiction or covered by a particular trade, would have effectively veto power over any grant money that was expended. So it is in the law that—they altered the Workforce Investment Act, which up to this point had never considered union or nonunion affiliation as far as grant funding. This actually requires that you have a union as a partner in order to qualify for the grant funding under the Green Jobs Act that the Inspector General is telling us about.

Mr. KELLY. Thank you. And I do think, again, this is a forum for people like you coming out of the private sector, getting a chance to actually speak to the American people.

Mr. Lewis, Department of Labor, tell me some of these jobs that we were training people for, the skills that we're training them in?

Mr. LEWIS. Well, some of them are very technical. They are very technical skills related to the green energy industry, but some are, as you've heard this morning, they're jobs that can be just as easily applied to other industries. So they could be teaching people to weld for a green manufacturing entity, but they could use that skill-set elsewhere.

Our real concern, and the results of this job at this point is still interim, is that, you know, whether you call it a green job or not, we simply don't see the people getting a job, any job. The rate of placement to what they had intended for this program, and compared to our other programs, is significantly lower.

Mr. KELLY. And I don't doubt for 1 second the intention, and I think government does this a lot, that the intentions are always great. It's just that I've seen much better results coming out of the private sector, when it's your own skin in the game and you have to measure twice and cut once. You know you have that dollar to

spend one time and that's your dollar and there's no backup. There's no safety net. So once it's gone, it's gone, and I think that's the whole purpose of the hearing today.

Every penny we're talking about comes out of the American taxpayers' pocket, and not only do they deserve a positive return on that, they should expect that from us. And when we get to a point that we can no longer objectively describe where their money went and that we have to relabel it or game it in order to make a failure look like it worked, I mean—I would say, Mr. McMahon, you and I have made many decisions in our life, and we go before the people that we represent and we say, look, you know, I made a mistake, I got to tell you, this isn't working. But we also don't have the benefit of unlimited sources of revenue, capital, that we don't have to collateralize, and I think that's the danger of these programs.

Well-intentioned or not, we end up in a situation where we continue to throw good money after bad because we can't stand and tell people, you know what, it was a bad policy. It was a bad program. And we need to backtrack now.

We have money that's been appropriated but not yet spent. There's got to be a way to pull that money back and put it somewhere where it's actually going to have a positive effect.

I can say I really appreciate all of you being here today. I know it's tough to take time out of your personal lives and come here, but it's important for the American people to understand that we do have an accountability that we must face with them, and if it's truly only going to be about reelection, then we shouldn't run again. It has to be about actually reforming, what it is that we're doing, and if we're not doing it the right way, stand up and say we made a mistake and we're going to change it.

So, again, thank you so much for being here, and at this point, the hearing is adjourned. Thank you.

[Whereupon, at 11:31 a.m., the subcommittee was adjourned.]

