U.S. House of Representatives
Committee on Science, Space, and Technology
Subcommittee on Investigations & Oversight

HEARING CHARTER

Green Jobs and Red Tape: Assessing Federal Efforts to Encourage Employment

Wednesday, April 13, 2011
2:00 p.m. – 4:00 p.m.
2318 Rayburn House Office Building

Purpose

The Subcommittee on Investigations and Oversight meets on April 13, 2011 to examine the issue of green jobs and efforts to create them. The term "green jobs" generally refers to employment in the alternative energy and energy efficiency industries. One of the primary goals of the recent growth in federal incentives and funding for alternative energy sources and energy efficiency industries has been the creation of green jobs.

The hearing will examine international efforts to create green jobs, as well as historical efforts domestically, including the American Recovery and Reinvestment Act. In light of the Administration's recently announced "Winning the Future" initiative, the Subcommittee will explore the effectiveness of loan guarantees, subsidies, tax incentives, regulations, mandates, research, and other federal efforts to create green jobs. Under House Rules, the Committee has jurisdiction over all energy research, development, and demonstration projects; all environmental research and development; as well as the commercial development of energy technologies.

Background

Pre-2009 Incentives

Prior to enactment of the American Recovery and Reinvestment Act of 2009 (ARRA), the federal government provided a series of tax incentives for users and producers of green energy. These incentives were continued, and in many cases, expanded with the enactment of ARRA. These pre-existing incentives included tax credits for:

- Biofuel production
- Solar and fuel cell investments
- Energy efficient appliances
- Energy efficient commercial buildings
- Energy efficient new homes
- Renewable energy production
- Residential solar and fuel cell installation

- A range of tax credits for alternative fuel automobile technologies[1]

In addition to tax incentives, renewable energy portfolio mandates are also a means by which the public sector attempts to create green jobs. Currently, there is no federal renewable energy portfolio mandate, but 43 states have renewable energy portfolio mandates set by their State Public Utility Commissions that require a percentage of each state's energy usage to be generated by renewable energy sources such as solar, wind, biomass and hydroelectric.[2] For example, the state with the biggest long-term commitment, Maine, will require 40 percent of its energy to be generated by renewable sources by 2017 while the state with the lowest long-term commitment, Pennsylvania, will require only eight percent by 2020.[3] Seven states have either non-binding targets or non-percentage goals.[4]

Similar to mandates, regulations are often used as a method of encouraging green jobs development. By placing restrictions and limitations on certain energy sectors, governments can artificially influence the market by creating a disincentive for certain energy sources and technologies, therefore making others more financially viable. This increased demand creates jobs in a new sector, but as some argue, this comes at the detriment of employment in the regulated sector. Proponents of regulation as an incentive for job growth argue that the market is already unbalanced when it fails to adequately take into account externalities such as environmental impacts, and regulations simply force the market to account for those externalities.

Loan guarantees are yet another way the federal government attempts to bring about green jobs. Created as part of the Energy Policy Act of 2005, the program leverages federal dollars by allowing the Department of Energy to guarantee the debt of privately owned clean energy developers and manufacturing companies instead of investing directly into these companies through grants or tax subsidies.

Additional federal efforts aimed at increasing green job growth include subsidies, direct expenditures, and research and development. Subsidies and direct expenditures seek to directly affect the energy industry by providing funds to producers or consumers of energy. Federal research and development spending focuses on a variety of goals, such as increasing U.S. energy supplies, or improving the efficiency of various energy production, transformation, and end-use technologies. Research and development expenditures do not directly affect current energy production and prices, but, if successful, they could affect future production and prices.

ARRA Funding

ARRA contained over $60 billion in tax credits and grants to fund various federal, state, local, and private sector efforts related to alternative energy and energy efficiency including $21.6

[1] Energy Provisions in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5), CRS-R40412.
[2] Department of Energy's Office of Energy Efficiency and Renewable Energy summary chart at http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm.
[3] *Ibid.*
[4] *Ibid.* (Note: North Dakota, South Dakota, Utah, Virginia, and Vermont have renewable energy targets instead of mandates. Iowa and Texas will require a certain amount of electric supply, rather than a percentage, to be generated by renewable energy sources.)

billion in tax credits for renewable energy and $45.2 billion for direct appropriations. [5] These funds were in addition to pre-existing tax incentives and federally funded research and development efforts in the same areas. ARRA funding and incentives for alternative energy and energy efficiency had several purposes:

- Research and development by public and private scientists to develop new sources of energy and to lower the cost of existing technologies
- Reductions in overall energy usage through tax incentives and grants to reward particular actions and investments
- Commercialization of alternative energy technologies
- Job creation in these sectors of the economy

ARRA tax credits expanded pre-existing incentives for renewable energy and created several new ones, resulting in more projects becoming financially feasible. ARRA direct appropriations were used for significantly more research and development, increased block grants to states for weatherization of residential properties and consumer purchases of energy efficient appliances, federal grants for advanced battery manufacturing, alternative fueled vehicles, increases in federal building energy efficiency, smart grid development, and loan guarantee programs.[6] The vast majority of the jobs created by ARRA are believed to be in weatherization projects of residential homes.[7]

To address concerns that new funding benefit Americans, Section 1605 of ARRA contained a "Buy American" provision that required stimulus funds to be spent only on American steel, iron, and manufactured items, subject to three exceptions for non-availability, unreasonable cost, and inconsistent with the public interest. The Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) is responsible for issuing these waivers. To date, EERE has issued 44 non-availability categorical waivers and three public interest waivers, two of which are no longer in effect.[8] The categorical waiver items cover a range of items, from specific products such as LED lamps for television studio lights to broad categories such as all Energy Star rated in-wall air conditioners. It appears that no statistics have been collected to determine how many jobs have been created overseas as a result of these categorical waivers, some of which cover broad areas of manufacturing. In addition, large scale wind projects have turned to wind turbines in Europe and China to build American wind farms. These projects have received project waivers to allow the importation of foreign manufactured wind turbines.

FY12 Budget Proposal

This February the Administration released its "Winning the Future" initiative, as well as the "Strategy for American Innovation," and the "Startup American" campaigns. The goal of these

[5] Energy Provisions in the American Recovery and Reinvestment Act of 2009, Congressional Research Service, CRS-R40412.
[6] *Ibid.*
[7] Compiled from quarterly surveys by The Council of State Governments, available at http://www.csg.org/
[8] Department of Energy, Office of Energy Efficiency and Renewable Energy, available at http://www1.eere.energy.gov/recovery/ba_waivers.html.

proposals is to "bring greater income, higher quality jobs, and improved health and quality of life to all citizens."[9] Some of the main goals outlined in these agendas include:

- The development of a Clean Energy Standard which would call for 80 percent of the nation's electricity from "clean" sources by 2035
- Increased funding for the Advanced Research Projects Agency (ARPA-E)
- The creation of three Energy Innovation Hubs
- The Reauthorization of the Clean Energy Manufacturing Tax Credit
- Funding to reach the goal of one million advanced technology vehicles on the road by 2015
- Two $1 billion initiatives for investing in early-stage seed financing and other incentives to invest in high-growth startups
- Permanent extension of the Research and Experimentation Tax Credit

Issues

Defining and Calculating Green Jobs

Jobs are typically considered "green" when they involve alternative energy or increased energy efficiency. More uncertain is how to count jobs that are somewhat related such as the truck drivers who deliver solar panels across America, the state employees who process the tax credits for energy efficient appliances, and the consultants that advise cities and states on how to improve energy efficiency. At its broadest scope, green jobs could include:

- Factory workers that manufacture solar panels, wind turbines, etc…
- Architects and engineers who design these manufactured goods
- Construction workers who increase the energy efficiency of existing homes and buildings by installing insulation, caulking doors, and installing new more efficient windows
- Factory workers who manufacture the same insulation, caulk, and windows
- Truck drivers who deliver energy efficient appliances to job sites
- Construction workers that install solar panels, wind turbines, etc…

However, many of these jobs would still exist even if they were not "green" in nature. Architects and factory workers would still be needed to design and build components for coal mines and natural gas plants. Less efficient windows still need to be manufactured by the same workers, delivered by the same truck drivers, and installed by the same construction workers. Coal miners would be as in demand as they were before, if not more so, should alternative energy projects not be subsidized to the extent they are today.

Energy Savings

A great deal of uncertainty surrounds the energy savings resulting from the ARRA funding. Initially, ARRA grant applicants were required to estimate the energy savings that would result from their proposed projects. However, the Department of Energy's Office of Inspector General

[9] Strategy for American Innovation, available at http://www.whitehouse.gov/innovation/strategy

found that original estimates for the energy savings due to ARRA projects were wildly overestimated:

> *For example, the sum of the state's estimates for anticipated energy savings was 88 billion MBtus based on their initial proposed SEP projects. However, our review of this estimate found that it contained a number of errors and inconsistencies. Management agreed, pointing out that the estimate was not realistic or achievable since the United States' total energy consumption is estimated at 100 billion MBtus.*

The Department is no longer collecting energy savings estimates. [10]

Regulatory Impediments and Underutilized Authority

The creation of jobs that also benefit the environment is a goal shared by many. Unfortunately, the ability to create green jobs can be stymied by regulatory and legal challenges. For example, a wind energy project proposed to be located off Cape Cod called Cape Wind originally filed for its permits in 2001 and has repeatedly faced legal challenges from those opposed to the location of wind turbines offshore. Finally in January 2011, the Army Corps of Engineers issued one of the last permits required for construction to proceed.

Other projects related to green energy such as the construction of Midwestern transmission lines to deliver wind power to large cities have also faced strong opposition. The U.S. Chamber issued a report in March 2011 entitled, Project No Project, highlighting permitting problems and legal challenges faced by energy projects nationwide.[11]

In addition to regulatory hurdles, a number of existing authorities relating to green jobs are underutilized. U.S. government agencies have the authority to enter into energy savings performance contracts (ESPCs) under which private sector entities pay to improve the energy efficiency of federal buildings in return for keeping the savings to pay for their investments with some profit. ESPCs require minimal federal funding and shift the costs of upgrading energy efficiency in federal buildings to the private sector.

Additional Issues

Additional questions relative to green jobs include the following.

- Do incentives actually produce a net increase in jobs?
- Are they an efficient way to increase jobs?
- Are jobs the correct economic output the country should be measuring?
- On a job-for-job basis, should green jobs be subsidized more than non-green jobs?
- Could the same amount of money spent on creating green jobs be more effective in creating jobs in other "non-green" industries?
- Could federal funds spent on renewable projects have a greater employment and environmental impact if the same funds were spent on other energy projects?

[10] OAS-RA-10-17, Status Report: The Department of Energy's State Energy Program Formula Grants Awarded under the American Recovery and Reinvestment Act, Department of Energy, Office of Inspector General, September 2010.

[11] Progress Denied: A Study on the Potential Economic Impact of Permitting Challenges Facing Proposed Energy Project, U.S. Chamber of Commerce, March 2011, available at www.projectnoproject.com.

- Will these newly created jobs be permanent or will they remain in existence only until subsidies for them expire?
- Are these jobs created domestically, or overseas?
- Can these international jobs statistics be accurately tracked?
- Are we borrowing money to create these investments and create these jobs?
- Where are we borrowing this money from?
- Are we funding foreign companies?
- Are domestic companies doing this work overseas?
- Have U.S. subsidies and incentives helped foreign countries expand their own industries to the detriment of the U.S.?
- How does the growth of foreign green industries impact the U.S.?
- What metrics should decide whether federal funding related to green jobs is successful and a wise use of scarce federal funds?
- Should federal funding be shifted more towards basic research and development?

Witnesses

- **Dr. Kenneth P. Green**, Resident Scholar, The American Enterprise Institute

- **Dr. David Kreutzer**, Research Fellow in Energy Economics and Climate Change, The Heritage Foundation

- **Dr. Josh Bivens,** Economist, Economic Policy Institute

- **Dr. David W. Montgomery**, Vice President, NERA Economic Consulting

- **Mr. William Kovacs**, Director of Environment, Technology & Regulatory Affairs Division, U.S. Chamber of Commerce