Statement of Matt Rogers
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United States House of Representatives
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Putting Americans to work, building a clean energy economy, and reducing our dependence on oil.

Chairman Levin, Ranking Member Camp, and Members of the Committee, thank you for the opportunity to appear before you today to report on the progress of "The American Recovery and Reinvestment Act's"(Recovery Act) energy tax credit and grant programs. The Section 48C clean energy manufacturing tax credit and Section 1603 payments in lieu of tax credit programs have been among the most successful energy job creation and innovation programs under the Recovery Act to date, putting America back to work and positioning the US to regain leadership in high technology clean energy manufacturing and generation.

The Department of Energy's Recovery programs are focused on creating good jobs now and accelerating innovation to lay the foundation for long term economic growth and prosperity. To support this work, Congress entrusted the Department of Energy with $36.7 billion in appropriations for grants and loan guarantees and $6.5 billion in power marketing administration borrowing authority. With these resources, the Department of Energy has announced selections for $32 billion in federal funds and obligated $27 billion. The Department's grant and contract programs have outlaid $3.2 billion.

Across the federal government, the Recovery Act investments of $90 billion for clean energy will produce as much as $150 billion in clean energy projects,[1] and existing investment programs could produce up to $90 billion in additional clean energy projects. [2] The Recovery Act directed DOE to work with Treasury to administer $2.3billion in clean energy manufacturing tax credits and, under an interagency agreement, DOE works with Treasury to administer an estimated $16 billion in renewable energy generation payments in lieu of tax credits.

We have also worked closely with our Treasury colleagues to select 183 projects in 43 states to receive the $2.3 billion in available clean energy manufacturing tax credits under Section 48C. The competition for these funds was highly competitive, oversubscribed 3:1 with good projects, allowing us to select a portfolio of great projects to help lead the renaissance in US high technology, clean energy manufacturing. Likewise, we have worked with Treasury to award $3.1 billion in payments in lieu of tax credits to 718 renewable energy generation projects in 44 states. The combination of the 48C tax manufacturing tax credits and the 1603 renewable generation payments has put the United States on the path to doubling both high technology, clean energy manufacturing and renewable generation capacity (excluding conventional

[1] This includes Recovery Act appropriations across all government agencies. http://www.whitehouse.gov/sites/default/files/administration-official/vice_president_memo_on_clean_energy_economy.pdf

[2] This figure represents the estimated project value if all the existing authority for the DOE loan guarantee program is used. The estimate includes Title 17 loan guarantee authority for energy efficiency, renewable energy ($18.5 billion), fossil energy ($8 billion) and nuclear ($20.5 billion for both reactors and front-end), and Section 136 Advanced Vehicle Technology Manufacturing loans ($25 billion). Typically, projects require a minimum 20% equity share.

hydropower) by 2012. These programs were particularly effective in getting money out the door quickly to put people back to work on great projects that would otherwise have been idled in the face of the Great Recession.

These Recovery Act investments in energy are putting Americans to work. During the last full recipient reporting period (Oct-Dec 2009), Federal Reporting.gov reported 51,700 jobs directly attributable to Recovery Act clean energy investments, and the Council of Economic Advisors estimated that the Recovery Act clean energy investments would create 719,000 job years in total. These estimates are consistent with other estimates, like the Lawrence Berkeley National Laboratory report requested by this committee, which also estimated that more than 50,000 additional jobs in 2009 could be attributable to the implementation of the 1603 program. Spending has accelerated in the first three months of the calendar year and the jobs numbers will continue to grow.

The energy tax incentives under the Recovery Act have been effective in creating jobs quickly and restarting industries that were on the verge of shutting down. These incentive programs are laying the foundation for a broad expansion in high technology, clean energy manufacturing, and are positioning the United States to regain global leadership in these high growth markets and remain an important policy tool for the future. That is why the Administration has called on Congress to fund an additional $5billion in clean energy manufacturing projects.

Developing the strongest renewable energy industry in the world

Until the recent financial and economic downturn, the renewable energy industry had been growing rapidly. For example, new wind project installations in the US quadrupled from under 2 gigawatts per year before 2005 to over 8 gigawatts in 2008. Last year, though, the rate of renewable energy installations was expected to have fallen by about half, largely due to an inability to secure financing in this environment. In addition to lost construction jobs, U.S. renewables manufacturers too would have suffered a sudden loss in demand for their products (wind turbines, solar panels, etc.).

The 1603 program has directly addressed the freeze in tax equity markets related to the financial crisis, enabling projects to close financing and begin construction again. Since the beginning of the program last summer, we have seen a dramatic increase in clean renewable energy project development despite industry predictions of a reduction in the face of a challenging economic environment. [3] For example the wind industry predicted a 5gigawatt increase when the US has a record year and installed nearly 10gigawatt [4]

The Section 1603grants go only to U.S. clean energy projects, built in the U.S. by American workers. According to their applications, the projects receiving the 1603 grants have so far helped support more than 10,000 construction jobs and over 2,000 ongoing operating and

[3] In 2008, wind installations increased by an even larger rate (50% with 8,545 MW added) than they did in 2007 (45%, with 5,249 MW added), bumping up wind power's five-year average annual growth rate (2004-2008) to 32%. The previous five-year average annual growth rate (2003-2007) was 29%.
[4] AWEA Year End 2009 Market Report; January 2010; http://www.awea.org/publications/reports/4Q09.pdf and Wind Power Outlook 2009 http://www.awea.org/pubs/documents/Outlook_2009.pdf

maintenance jobs, while bringing more than 4 GW of new renewable energy online. The jobs created by these projects – in engineering, construction, transportation, operations, and maintenance – are good domestic jobs filled by American workers. And, at the same time the program has begun putting people back to work in the renewable energy industry (both in construction and in manufacturing), it will also make an important contribution towards meeting the Administration's goal of doubling renewable energy generation in the next few years.[5]

A recent report, requested by this Committee and published by Lawrence Berkeley National Labs, found that 2,400 megawatts (or 2.4 GW) of wind power, or nearly 25 percent of all wind energy capacity installed in the U.S. in 2009, might *not* have been built last year if the 1603 program were not in place. The authors found that these projects may have supported over 51,000 full-time-equivalent (FTE) construction job-years, and over 3,800 FTE operational job-years. [6]

Applications may only be submitted after the project is placed in service or has begun construction.[7] A completed application must include: the signed and complete application form; supporting documentation; signed Terms and Conditions; and complete payment information. All applications must be received before the statutory deadline of October 1, 2011.[8] DOE and Treasury then review the applications and Treasury makes payment to qualified applicants that have placed their projects in service within 60 days from the date the completed application is received by Treasury.

As of April 9, 2010 DOE and the National Renewable Energy Laboratory have received 1,749 applications requesting $4.6 billion ($4,579,921,910) in payments from the Treasury Department. 1,649 of those projects are already placed in service and 100 are not yet in service.[9] Treasury has now funded over $3.1 billion ($3,108,092,310) in payments to 718 applicants in nearly every state. The total installed electrical capacity for funded projects is 4.51gigawatts. To put this in perspective, this is enough to power over 1.4 million U.S. homes, sufficient to power the populations of Boston, Seattle, Atlanta, Kansas City, and Cincinnati combined.

The Stetson II wind project is a perfect example of the impact the 1603 program is having, allowing development of projects that otherwise would not have been built in 2009. Stetson II is a 25 MW project, built on a ridge within sight of the Stetson I project that was placed in service in January 2009 and was the recipient of one of the first 1603 payments. It is being built by a Maine contractor. The project developer First Wind says that project jobs will likely amount to more than 200 on- site jobs during construction, and after it is built, there will be 5-10 jobs onsite and approximately 125 jobs across the country partially dedicated to support of the facility. It is being built with GE wind turbines.

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[5] "Status Report on Goal of Doubling Renewable Energy in 3 Years" National Renewable Energy Laboratory; September 23, 2009

[6] LBNL; Preliminary Evaluation of the Impact of the Section 1603 Treasury Grant Program on Renewable Energy Deployment in 2009: Mark Bolinger, Ryan Wiser, Naïm Darghouth

[7] Placed in service means that the property is ready and available for its specific use. Construction begins when physical work of a significant nature begins. Work performed by the applicant and by other persons under a written binding contract is taken into account in determining whether construction has begun.

[8] For property placed in service in 2009 or 2010, applications must be submitted after the property has been placed in service and before October 1, 2011.

[9] Qualified property must be originally placed in service between January 1, 2009, and December 31, 2010, (regardless of when construction begins) or placed in service after 2010 and before the credit termination date if construction of the property begins between January 1, 2009, and December 31, 2010. Qualified property includes expansions of an existing property that is qualified property under section 45 or 48 of the IRC

As another example, SunEdison, a solar project developer, was able to accelerate construction of the first stage (4 MW) of an 18 MW PV facility being built in Davidson County, NC due to the 1603 program. Completion and interconnection of the first stage occurred in December 2009 while the original schedule called for the first stage to be completed in mid-2010. The power from this project will be purchased by Duke Energy and will serve 22,000 customers in North and South Carolina. Once fully completed, this particular project will deliver: roughly 550 job-years over lifetime of project, with 310 job-years of installation, integration and maintenance work that would take place directly in Davidson County, where the unemployment rate is more than 14 percent, well above the national average.

The 1603 program is not only increasing the number of renewable energy projects installed in the U.S., it is also having a direct effect on creating the demand needed to build a robust domestic manufacturing supply chain. Manufacturers tend to locate closer to where there is demand for the products. For years, demand for wind energy was much higher in Europe than in the United States, which is a major reason why the U.S. fell behind in wind manufacturing capacity. Indeed, the world's leading turbine manufacturer isn't headquartered in China or Mexico; it's headquartered in Denmark, where wind market incentives have been strong. The 1603 program changed the equation by making it easier to finance renewable energy projects in the United States. The 1603 program has dramatically increased the pace of investment in America's wind industry[10]. In addition, it has helped attract tens of billions of dollars in foreign investment in U.S. project development from firms such as Iberdrola and Horizon, and expanding U.S. wind manufacturing facilities such as Gamesa's plants in Pennsylvania and Vestas' in Colorado.[11] The manufacturing investments attracted by the 1603 program and the promise of new energy legislation will have resulted in the hiring of thousands U.S. workers within the next two years.

Creating a sustainable clean energy manufacturing sector and growing our supply chains

The U.S. has a relatively small share of worldwide manufacturing capacity for clean energy-related industries, such as wind, solar, and batteries. In 2008, the U.S. had 16% of global wind manufacturing capacity (5.4 gigawatts (GW)[12] in the U.S. out of 33 GW worldwide), 6% of global solar manufacturing capacity (0.5 GW out of 9 GW worldwide), and less than 1% of global battery manufacturing capacity.[13]

This is largely because, until recently, incentives for clean energy development and manufacturing have been much larger overseas than in the U.S., meaning that clean energy

[10] At the AWEA Finance & Investment Workshop on October 14th, John Eber, managing director of energy investments at J.P. Morgan Capital Corp., said wind developers can attract debt backing of 40 to 50 percent of total project costs without a federal grant. The grant lets projects get built with 70 to 80 percent support from debt.

[11] This includes $1B of manufacturing investments by Vestas, $6B of project investments by Iberdrola and $4B of project investments by Horizon, all announced after the Recovery Act was passed

[12] Finished wind turbine capacity.

[13] The U.S. supplied less than 1% of global nickel metal hydride manufacturing and a negligible portion of the 3 billion cells per year worth of global lithium ion manufacturing.

manufacturing grew more rapidly in Europe and Asia. Recently, however, the grant and tax provisions under the Recovery Act have made the U.S. a more attractive market for investment in clean energy development and manufacturing. As a result, we are seeing rapid growth of U.S. clean energy markets, and billions of dollars invested in expanding clean energy manufacturing in the U.S.

There is an opportunity for the U.S. to lead the world in high-technology, clean energy manufacturing. In these industries, the U.S. can leverage the R&D and innovations being pursued by companies, universities, and the Department of Energy's national labs into competitively advantaged manufacturing positions.

The U.S. clean energy manufacturing base is starting to expand rapidly. Nevertheless, this new manufacturing growth necessarily lags behind the increased clean energy project development we have seen in the U.S. in recent years.

In order to foster investment and job creation in clean energy manufacturing, the American Recovery and Reinvestment Act included a tax credit for investments in manufacturing facilities for clean energy technologies. Section 1302 of the American Recovery & Reinvestment Act of 2009 Division B[14] amended the Internal Revenue Code by adding a new Advanced Energy Manufacturing Tax Credit ("48C").[15] As a tax credit, the program falls under the jurisdiction of Department of Treasury; it is being administered in cooperation with the Department of Energy (DOE), which led the review and selection of qualified advanced energy manufacturing projects[16] that would receive the 48C tax credits.[17]

ARRA authorized the IRS and Treasury in consultation with DOE to competitively award $2.3 billion in 30% tax credits for qualifying advanced energy projects in new, expanded, or re-equipped domestic manufacturing facilities. In January, President Obama announced the award of the entire $2.3 billion of 48C tax credits to 183 projects in 43 states. Initially the program was more than 3 times oversubscribed. We received 594 applications overall requesting over $10.9billion in credits representing over $30 billion in total project value. After initial review it was deemed that 418 projects were eligible requesting over $8.1billion in credits (representing over $27 billion in total project value). DOE recommended, and IRS awarded, $2.3 billion leaving $5.8 billion in unfunded eligible applications. [18]

[14] 1 Pub. L. No. 111-5 (2009).
[15] 26 U.S.C. 48C
[16] The term 'qualifying advanced energy project' means a project—which re-equips, expands, or establishes a manufacturing facility for the production of: property designed to be used to produce energy from the sun, wind, geothermal deposits or other renewable resources; fuel cells, microturbines, or an energy storage system for use with electric or hybridelectric motor vehicles; electric grids to support the transmission of intermittent sources of renewable energy, including storage of such energy; property designed to capture and sequester carbon dioxide emissions; property designed to refine or blend renewable fuels or to produce energy conservation technologies (including energy-conserving lighting technologies and smart grid technologies); new qualified plug-in electric drive motor vehicles (as defined by section 30D), qualified plug-in electric vehicles (as defined by section 30(d)), or components which are designed specifically for use with such vehicles, including electric motors, generators, and power control units, or other advanced energy property designed to reduce greenhouse gas emissions as may be determined by the Secretary. 48C does not apply to production of electricity or fuel.
[17] *See* IRS Notice 2009-72 §5.01. "The Service will consider a project under the qualifying advanced energy project program only if the U.S. Department of Energy provides a recommendation and ranking of the project."
[18] The final application breakdown is as follows: 594 projects applied requesting a total of $10,902,251,709; 176 were ineligible (did not meet the specified requirements) for $2,783,932,005; 5 did not pass IRS final review; 183 projects were selected for $2.3billion; 235 were eligible but not selected totaling $5,818,319,703

The 48C tax credits are allowed for projects that are placed in service on or after February 17, 2009, when the Recovery Act was signed. Projects must be placed in service before February 17, 2013. The statute favors the selection of projects that are in service early. As a result, some of the selected projects already have been completed and begun operation.

Projects were assessed based on the following statutorily specified review criteria included: greatest domestic job creation (direct and indirect), greatest net impact in avoiding or reducing air pollutants or emissions of greenhouse gases; lowest levelized cost of energy, greatest potential for technological innovation and commercial deployment, and shortest project time from certification to completion. The advanced energy manufacturing facilities helped by this program may generate more than 17,000 jobs. This investment could be matched by as much as $5.4 billion in private sector funding likely supporting up to 41,000 additional jobs.

This tax credit program is already building a robust high technology, US manufacturing capacity to supply clean energy projects with US-made parts and equipment. These manufacturing facilities should also support significant growth in US exports of US manufactured clean energy products.

A strong supply chain means a nationwide network of clean energy companies. The geographic breadth of this network shows these initiatives are creating clean energy jobs all over the country and rebuilding the US manufacturing base. The geographic concentration of some supply chains shows the value of clusters, creating synergies between manufacturers, suppliers, universities, and labs linked into a pocket of regional expertise. The mix of new and old industries shows the expansive impact of the clean energy supply chain. High-tech startups like Amonix and Calstar are constructing large factories to build cutting-edge products and contracting with traditional US manufacturing companies to provide the steel, bolts, and glass necessary to make the most advanced solar panels, wind turbines, and vehicles in the world.

For example, Porocel Industries in Little Rock, Arkansas were selected to receive $2.8M in tax credit for the construction and operation of a new manufacturing plant. The plant will be used for the production of intermediate material used in “Conoco Phillips’ CPreme Anode” –also identified for use by several recipients of DOE funding under the advanced battery manufacturing initiative. ConocoPhillips has developed proprietary anode technology for lithium-ion batteries. This technology utilizes low-cost refinery by-product and, through state-of-the-art processing, upgrades it to produce high-performance anode materials.

Wacker -Chemie /Polysilicon North America Charleston, TN were selected to receive $281million in tax credits to establish a new $1B hyperpure polysilicon plant in Charleston, Tennessee to support the solar PV industry. This will be one of two major plants in the US—Hemlock being the other multi-billion dollar investment in solar production receiving manufacturing tax credits.

W.L. Gore & Associates, Inc., headquartered in Delaware, were selected to receive two credits for $210,000 and $604,350 to re-equip the manufacturing facilities in Elkton, MD. The first will help re-equip the Elkton site with next generation manufacturing assets used in the production of

a key component of fuel cell systems: membrane electrode assemblies (MEAs). The second credit will help the company re-equip their site to produce the Gore Turbine Filter, a breakthrough technology for gas turbine air intake filters that deliver higher fuel efficiency, and lower GHG emissions by eliminating performance reducing deposits in compressors.

AAF-McQuay, Inc. in Verona, VA is the only 48C project in Virginia. They were selected to receive $774,937 in tax credits to re-equip an existing manufacturing facility, which currently produces two types of energy efficient property used in heating, ventilation, and air-conditioning systems. Currently, the facility produces rooftop air conditioning systems and an air-cooled global screw chiller. The newly re-equipped facility will produce highly efficient chillers used in HVAC systems, such as the next generation centrifugal chiller rooftop air-conditioning systems and air cooled world screw chillers. The new centrifugal chillers will achieve energy efficiency by using magnetic motor and bearings which allow it to operate using less oil.

Abound Solar, Inc. Longmont, CO was selected to receive a $12,600,000 tax credit to expand facility capacity with an additional manufacturing line. The solar panels manufactured at the facility will constitute "components" that, after further assembly, will be incorporated into a specified advanced energy property (SAEP) (i.e., a solar PV system). This facility is solely dedicated to commercial production of PV solar panels using cadmium telluride semiconductor technology.

Despite a narrow time frame to apply for the program, the 48C program was greatly oversubscribed, indicating the importance and relevance of such a tax credit.[19] Accordingly, the Administration has asked Congress to consider additional funding for the program. The higher than expected response of applications indicates that the stimulus has provided confidence for American manufacturers to plan capital expenditures in FY10 and to anticipate a tax liability. Any additional money authorized by Congress will provide the opportunity to fund additional projects that were not selected in the initial $2.3 billion. The Department looks forward to working with this Committee going forward as they consider the future of the program.

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The next six months will expect to see an accelerating rate of job creation, specifically in the renewable energy and clean technology manufacturing markets. We look forward to working with all of the recipients as they receive their credits, construct new projects, and expand and build new manufacturing facilities, all while hiring more workers to grow a strong, clean energy economy.

With the help of the Treasury Department we have helped fund great projects at every level that are contributing to job creation and economic growth now and laying the foundation for long-term US leadership in these industries. These two Recovery Act programs are strengthening the

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US clean energy base – by supporting new factories and creating the necessary demand for their products.

Again, I want to thank this Committee for the opportunity to testify today. The 1603 and 48C programs have been critical to the increase in clean energy manufacturing we have seen over the past year. I strongly believe that these programs have been a success, and the Department looks forward to continuing that success in the future.