Statement of Matt Rogers
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The Energy Recovery and Reinvestment Act: Putting Americans to work, building a clean energy economy, accelerating energy innovation, and reducing our dependence on oil.

Chairman Bingaman, Ranking Member Murkowski, 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"(Recovery Act).

Recovery Act Impact

One year after the passage of the Recovery Act, approximately 2 million jobs have been created or saved thanks to the Act's impact on hiring in the private sector, by local and state governments and by non-profits. The Recovery Act's $787 billion came in three pieces: roughly a third in tax cuts directly to the American people, another third in emergency relief for hard-hit families, businesses, and state governments, and a third in investments in the infrastructure and technology, creating platforms for economic growth.

The Department of Energy's Recovery program focuses on the third leg, accelerating innovation to lay the foundation for long term economic growth. To support this work, Congress entrusted the Department of Energy with $36.7 billion in appropriations and $6.5 billion in power marketing administration borrowing authority. The Recovery Act also directed DOE to work with Treasury to provide more than $5 billion in clean energy manufacturing tax credits and generation tax grants. These funds combined with private cost share and leverage will support more than $100 billion in projects.

The Recovery Act investments in energy are putting Americans to work, helping to build a clean energy economy, accelerating energy innovation, and reducing our dependence on oil. During the last full recipient reporting period (Oct-Dec 2009), DOE Recovery Act programs directly created or saved over 16,300 full-time equivalents (FTEs) as reported by recipients. Contractors have reported another 4,000 FTEs have been created or saved at the subcontractor level (not required to report to FederalReporting.Gov) and more still down the supply chain. Meanwhile, Section 1603 programs which provide grants in lieu of tax credits for renewable energy projects are creating a self-reported 12,633 jobs. As spending accelerates this year, we expect that tens of thousands of additional jobs will be created or saved under DOE Recovery Act programs.

As we put people back to work, DOE's Recovery Act is making our homes and buildings more energy efficient, expanding US high technology clean energy manufacturing and generation, modernizing our power infrastructure, transforming the transportation sector, accelerating the clean-up of legacy cold war nuclear sites, and laying the foundation for the next generation of technological and scientific innovation.

Our programs are providing benefits across sectors and across the country. DOE's formula grant selections include over 2,300 state and local governments in all fifty states and territories to receive nearly $11 billion of Recovery Act funds. Native American tribes in over 575 towns have been selected for nearly $55 million in energy efficiency conservation block grants and an additional $27.5 million for a combination of Smart Grid, Weatherization and renewable energy projects. 200 small businesses have received nearly $1 billion in grants and $2 billion in loans. Educational institutions in 43 states have been selected for over $600 million to support 200 projects focused on innovation.

DOE Implementation Status

From the first day after the Recovery Act was signed into law, DOE has been focused on moving the money out the door quickly to create jobs and spur economic recovery. We have used competitive processes to select exceptional projects. We have streamlined DOE operating processes across the board. We are providing unprecedented transparency and insist on clear accountability every day. We are partnering with the private sector to make a meaningful down-payment on the nation's clean energy future.

DOE's $36.7 billion in appropriations came in four different categories each with a different time horizon. DOE received $7.5 billion in the form of contracts for the expansion and acceleration of Office of Science and the Office of Environmental Management projects. To date, $6.8 billion of contract funds have been obligated. Through the Recovery Act, we also received $11.2 billion in formula grants for states, counties, cities, territories, and tribes through the Recovery Act. We have obligated $10.6 billion of the $11.2 billion and have accelerated full obligation of these formula awards, using an unprecedented SWAT team process, to enable the recipients to work through their local competitive selection processes quickly. The third block of funds includes $14 billion in competitive grants. We have obligated $8 billion of these funds to date. These highly competitive processes were over-subscribed with strong projects, 5:1 on average, presenting us with the challenge and the opportunity to select the best 20%, using over 4,500 reviewers. Finally, the loans and borrowing authority take the longest to move as we finance a large portion of the value of the project in the loan guarantee program and the power marketing administration borrowing programs.

In addition, we are providing support to the Treasury in allocating $2.3 billion in renewable energy manufacturing tax credits. We have also been continuously reviewing renewable energy generation grant in-lieu of tax credit applications for Treasury, recommending over $2.5 billion in grants for finished projects thus far.

Working across these funding categories we have made substantial progress over the last year. We are working with more than 3,500 recipients who have been selected to receive over $31.4 billion in DOE-funded contract and grant funds. We have obligated $25.7 billion of the $31.4 billion in funds awarded, and supported Treasury in awarding $4.9 billion in tax credits and payments in lieu of tax credits. In our loan program, we have issued more than $2.1 billion in conditional loan commitments. We have paid out $2.5

billion to recipients of DOE's appropriated ARRA funds, while Treasury has provided recipients an additional $2.6B in the form of Section 1603 payments in-lieu of tax credits. These funds are being matched with nearly $25 billion in private capital. We are ahead of where we expected to be on selections, obligations, and job creation. We are slightly behind where we expected to be on payments based on our plans from last spring

We plan to announce the remaining contract and grant selections before the end of June. We are now working actively with our more than 3,500 recipients to accelerate costing and ensure each delivers on project goals and commitments, on time and on budget. We are confident that the next six months will be the period of most rapid job creation for Department of Energy Recovery Act programs.

The remainder of this statement provides detail on each energy Recovery Act investment area in turn.

Saving consumers money and improving the environment through energy efficiency

Under the Recovery Act, we are making the largest single investment in home energy efficiency in U.S history. For low-income families that are hit hardest by high utility bills, the Recovery Act provides $5 billion for the Weatherization Assistance Program, which funds local agencies to perform home energy audits and weatherization services. We are working closely with our partners to deliver this vital program. Each state has made clear performance commitments and we have worked directly with the Governor's office in every state towards a shared plan to reach these performance targets. We have taken steps to address barriers that we have identified, as well as issues raised by GAO and the DOE Inspector General. During January, states significantly increased their spending and the number of homes weatherized under the Recovery Act, moving monthly output to a preliminary estimate of 17,000 units and we are working with the community action agencies towards meeting their full run rate commitments by the end of March. The Department undertook a broad-based restructuring program to address the initial challenges in program implementation. As a result of these efforts, states reported that they weatherized more than 125,000 homes in 2009, including over 25,000 with Recovery Act funds and based on this reporting are on pace to deliver at least 250,000 homes with Recovery Act funds this year. In fact, since September 2009, we have tripled the pace of Recovery Act-funded home weatherization. Still, our goal is to improve further, reaching run rate performance goals by the end of March 2010 and we are moving forward with additional new measures that should increase our pace of weatherization. The Department will remain focused on providing each of the states and local agencies with the resources they need to quickly and effectively implement this program. We expect to weatherize nearly 600,000 homes with Recovery Act funds by March of 2012 .

The Recovery Act also includes $3.1 billion for DOE's State Energy Program and $300 million to states for energy efficient appliance rebates, showcasing cooperation between federal and state governments. The state energy programs are sponsoring very innovative projects. Ohio is using some of their state energy grant money to increase industrial

energy efficiency, helping companies reduce cost and become more competitive in the market. Idaho is improving energy efficiency in 210 K-12 schools across the state, putting money back into school budgets. The state energy programs appear to be ahead of their plan to ensure more than $1 billion of their $3.2 billion is contracted by the end of March. All of the states already have their appliance rebate funds and most have completed their program offerings, helping consumers improve appliance efficiency significantly.

The Recovery Act provided $3.2 billion to fund the Energy Efficiency and Conservation Block Grant program for the first time, which this committe was instrumental in creating. This program will help over 2,300 cities, counties, states, territories and Indian tribes to develop their own efficiency programs, including: building code development, energy audits and retrofits, efficient public lighting and landfill gas capture. Standing up a new program always takes a little more effort—it took a dedicated 125 person SWAT team in the basement of DOE to process all the new EECBG applications, working with recipients directly on the phone to ensure each application met the statutory requirements and to minimize bureaucratic back and forth. This hard work will pay dividends in the coming months, as states and communities bring innovative projects on line. We are particularly excited about the competitive portion of the energy conservation block grant program, known as Retrofit Ramp up. The leading projects under this program will define new approaches to make energy efficiency services available to all Americans at significantly lower cost.

These formula grant programs have created opportunities for innovation in how the Department of Energy works. Our expanded call center has handled almost 10,000 calls from formula grant recipients, guiding people through the process. We now have dedicated account representatives for each state, providing service continuity. We collaborate with the national weatherization and state energy organizations weekly, building a shared view on performance. Each innovation not only moves this program faster every day, but better positions DOE for long-term base performance as well.

Developing the strongest renewable energy industry in the world

Recovery Act investments and incentives totaling $23 billion combined with more than $40B in private capital are putting us on track to meeting our goal of *doubling* both renewable electricity generating capacity (excluding conventional hydropower) and advanced energy manufacturing by 2012. Recovery Act programs are also quickly expanding high technology, clean energy manufacturing in the U.S.

We are funding a range of renewable energy generation technologies, including wind, solar, and geothermal. DOE has supported Treasury in implementing the 1603 program, which has provided $2.6 billion in 1603 payments to 392 renewable energy generation projects across the country. By partnering with private industry, Treasury and DOE have already funded enough new renewable energy projects through these payments to power over one million homes, enough clean energy to power the homes of everyone living in

Boston, Seattle, Atlanta, Kansas City, and Cincinnati combined. These projects have already been completed.

DOE has also supported Treasury in awarding $2.3 billion in tax credits for 183 clean energy manufacturing projects in 43 states under the 48C program. The manufacturing capacity supported by these grants will produce solar panels, wind turbines, geothermal equipment, nuclear plant components, and energy efficient building products, putting the US on track to double our capacity to manufacture these high technology, clean energy components by 2012. These facilities represent some of the premier companies in renewable manufacturing. These projects will generate more than 17,000 jobs. This investment will be matched by as much as $5.4 billion in private sector funding likely supporting up to 41,000 additional jobs.The interest was extraordinary and the program was oversubscribed by a ratio of more than 3 to 1. The Administration has called on Congress to provide an additional $5 billion to expand the program. Because there is already a deep pipeline of projects, these funds could be deployed quickly to create jobs and support economic activity.

We have announced more than $2 billion in conditional commitments to build renewable energy and grid electrification projects in the US under the Recovery Act including Solyndra (CA), Nordic (ID), and Beacon (NY), and Brightsource (CA). These conditional commitments have proven very effective in bringing private capital off the sidelines and into the market at scale. Solyndra, Nordic, and Beacon are all in construction.

We're also investing over $600 million in grants in the research, development and deployment of renewable energy. For example, $24 million in Recovery Act funding has gone to three universities (in IL, ME, and SC) around the country to improve wind turbine performance and reliability. The Solar Incubator is providing $10 million in Recovery Act funds to help 4 companies in North Carolina and California lower the cost and improve performance of promising PV technologies. We are awarding up to $81 million to 45 geothermal projects in 20 states developing innovative approaches to enhanced geothermal systems, potentially unlocking vast amounts of baseload power.

Transforming the transportation sector

The Recovery Act provided $3.4 billion to help develop the next generation of vehicles and the fueling infrastructure to support these innovative new technologies. This is in addition to $8.4 billion so far from our Advanced Technology Vehicle Manufacturing loan program outside the Recovery Act. These projects aim to transform the transportation sector by creating competition among electrification, natural gas vehicles, advanced biofuels, hydrogen and improvements in internal combustion engine efficiency.

Over the next six years, we expect to make three new electric vehicle plants – the first ever in the United States – and 30 new battery and other electric-vehicle component manufacturing plants fully operational. We've made investments in battery and

component suppliers like A123, Enerdel and Cellgard, as well as manufacturers[1] like Nissan, Tesla, Fisker and Ford to make advanced vehicles in the United States. By 2015, these plants will be expected to have capacity to produce 250,000 electric-drive cars and batteries to power 500,000 plug-in hybrid electric vehicles. We are also building the infrastructure to support these vehicles, including more than 10,000 charging locations in a dozen cities.

We've selected $300 million in Recovery Act grants to 25 Clean City coalitions of public and private fleets, of which $260 million has been obligated to date. These grants significantly expand city- and county-led efforts to reduce petroleum consumption and deploy high-efficiency cars, trucks and buses that run on alternative fuels. The 25 projects support over 9,000 alternative-fuel vehicles, 70 percent of which will run on natural gas, mainly for heavy-duty trucks.

At the same time, Recovery Act investments will support the development and deployment of the next generation of biofuels. Over $600 million in Recovery Act grants will support 19 pilot, demonstration, and commercial-scale bio-refineries. These facilities will convert biomass into fuels and chemicals that otherwise would be produced from oil, while creating jobs and raising farm incomes in rural communities across the country. Before these investments, the development of an advanced biofuels industry was at a virtual standstill as numerous facilities at the pilot stage had faltered during the economic downturn.

More than $100 million from the Recovery Act, plus an additional $87 million in base budget funding, will go to improving the efficiency of heavy-duty trucks and passenger vehicles. With private sector cost-sharing, this will support nearly $375 million in total investment, positioning the US as a leader in heavy duty fuel efficiency and reducing transportation costs across the country.

Investing in a 21st-century grid infrastructure

Our electrical grid is a critical piece of infrastructure, but today it uses century-old technology. It wastes too much energy, it costs us too much money, and it's too susceptible to outages and blackouts. Just as President Eisenhower's investment in an interstate highway system revolutionzed the way Americans travel, our Recovery Act investments in the smart grid and new transmission lines is revolutionizing how we produce, transport and use energy.

The more than $4 billion in Recovery Act smart grid investments are being matched by more than $5.5 billion in private sector funding, supporting 132 projects that will reduce electricity costs, increase reliability, and give consumers more choice and control over their energy use. By 2015, we expect a combination of public and private investment to lead to the deployment of 18 million smart meters nationally (more than double the number currently in service). The Recovery Act is also funding the installation of nearly

[1] Manufacturers Ford, Nissan, Tesla and Fisker are funded by the Advanced Technology Vehicle Manufacturing Program, which is not part of the Recovery Act.

1,000 sensors on the electric transmission system to improve reliability and security, for the first time providing visibility and control across the entire U.S. transmission system. 200,000 smart transformers and nearly 700 automated substations will allow power companies to replace units before they fail, and respond more effectively to restore service when bad weather knocks down power lines. These are important first steps toward the modernization of our power infrastructure.

Supporting the Goal that carbon capture and sequestration (CCS) can be economical in 8-10 years

With $3.4 billion from the Recovery Act ,we are making unprecedented investments in carbon capture and sequestration technologies, attracting approximately $7 billion in private capital. Projects we are supporting are projected to capture more than 10 million tons of CO_2 annually by 2015 and put us on a path to demonstrating that carbon capture and sequestration can be economical by 2020.

Realizing the promise of low-carbon electricity from coal requires an economical solution to capturing CO_2. The leading processes today are amine and ammonia-based processes that cost $60 per ton and have a very significant energy penalty, which has prevented them from reaching widespread commercial implementation. New CO_2 capture technologies, using different solvents, adsorbents and absorbents, hold the promise to significantly reduce the energy penalty, cut capital costs and reduce the cost per ton by more than half. Our innovative grants are funding entirely new approaches such as synthetic enzymes or conversion of CO_2 into valuable fuels or chemicals, that could reduce the cost even more.

Cleaning up the legacy cold war nuclear sites

DOE also has the important role of cleaning up sites across the country associated with the legacy of our nation's nuclear weapons program. DOE's Office of Environmental Management has allocated $6 billion in Recovery Act funding to ongoing cleanup work at 17 sites. The stimulus funding is being used to accelerate cleanup work to reduce the lifecycle cost of EM's cleanup effort. These projects have permanently disposed of over 1,300 cubic meters of transuranic waste and nearly 11,000 cubic meters of low-level waste, and over 400,000 square feet of contaminated facility demolition. The EM program's Recovery Act goal is to help reduce the footprint of land and structures requiring cleanup by 40 percent by 2011.

EM and site prime contractors have obligated approximately $700M in Recovery Act Small Business contracts. In fiscal ear 2009 EM Prime Small Business contractors were awarded about $396 million which exceeded EM's goal of 4.8 percent ($288M) of EM Recovery Act funds by achieving 136 percent of the goal. In fiscal year 2010, EM anticipates additional Small Business contracts to both prime contractors and subcontractors.

These projects have already created nearly 8,000 direct jobs as of December 31, 2009 at the prime and sub-contractor level, in communities like Hanford Washington, Savannah River South Carolina and Oak Ridge Tennessee. The Environmental Management projects were among the first to start and more than 90% of the funds have been obligated and almost 25% has been spent.

Maintaining U.S. leadership in science and technology

The Recovery Act is accelerating the pace of scientific and technological innovation in the energy sector, laying the foundation for sustained future economic growth. There is widespread agreement in the economic community that innovation is a primary driver of long-term economic growth and prosperity. Historically, however, energy has been one of the slowest sectors to innovate, taking decades to change. Nevertheless, when it occurs, the economic impact from energy innovation has been significant. Energy innovation in production and in end-use technologies has been a key ingredient in US economic growth for the last century. Energy innovation is essential to address global energy security and climate change concerns on time and on budget.
Innovation also drives job creation. Long term, high quality jobs stay in industries where there is a high degree of innovative content.

For instance, the Recovery Act included $400 million for the Advanced Research Projects Agency – Energy (ARPA-E), modeled after the Defense Department's famed DARPA. DARPA is widely credited for inventing, among other things, the Internet. ARPA-E will fund high-risk, high-reward energy technology research. Not every project will succeed, but those that do have the potential to radically transform our energy system.

Potentially game-changing research funded through ARPA-E so far includes: Grid-scale liquid metal batteries that could cut battery costs by 90% while doubling energy density; Direct solar fuels – photosynthetic organisms that produce hydrocarbons instead of carbohydrates, combining CO_2, sun and water to produce ultra-clean gasoline; and Super-high-efficiency small wind turbines, leveraging advanced aerospace designs and materials to reduce the cost, improve the reliability and expand the range of wind energy. The projects we have funded under the Recovery Act – and the many great projects we have not been able to fund – highlight the opportunity for the United States to accelerate clean energy innovation and take a global leadership position in clean energy industries globally.

The Office of Science has invested $1.6 billion to advance basic research (e.g. 17 new energy frontier research centers, the world's fastest super computer at Oak Ridge), to expansion science infrastructure (e.g. national synchrotron light source at Brookhaven, a new Continuous Beam facility at TJ lab, new battery user facilities at Argonne) and to increase funding for promising early career scientists. Science is almost 90% obligated and is expected to disburse over 20% of their funds when the next set of data is reported. .

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The next six months will expect to see an accelerating rate of job creation, contracting, and reimbursements. We are working with more than 5,000 recipients to deliver on their commitments to job creation and meet their agreed project milestones, on time and on budget. Our task remains to knock down barriers to ensure each recipient can perform and to hold our funding partners accountable to deliver on their commitments. We have 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.