

## **Department of Energy: Successes of the Recovery Act**

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Through the Recovery Act, the Administration is investing more than \$90 billion in government investments and tax incentives to lay the foundation for the clean energy economy of the future. These Recovery Act investments are putting Americans back to work making our homes and businesses more energy efficient, increasing the use of clean and renewable electricity, cutting our dependence on oil, and modernizing the electric grid. As these clean energy projects continue over the coming months, we'll continue to see jobs added in local communities, further fueling our economic recovery.

Of the \$90 billion, the **Department of Energy (DOE) received \$35.2 billion (\$32.7 in contracts and grants; \$2.5 in 1705 credit subsidy) to support nearly \$80 billion in clean energy projects** that are developing infrastructure and technology to address the nation's energy issues and position the U.S. for leadership in long-term, clean energy industries.

**DOE has consistently been supporting between 40,000-50,000 direct jobs each quarter since Summer 2010. Last quarter alone (Oct-Dec 2011), DOE supported nearly 41,000 direct jobs, the second largest of any federal agency.**

As of February 16, 2012, Department of Energy has outlaid \$22.3 billion, supporting over 15,000 clean energy projects across the country. Over the last twelve months, DOE has averaged monthly outlays of nearly \$900 million in line with our target with our target run rate of \$800 million to \$1 billion per month.

### **The Pillars of the Recovery Act**

DOE invested its Recovery Act funds into several key areas to ensure America's long-term competitiveness:

- Increasing energy efficiency;
- Restructuring the transportation system;
- Doubling renewable generation;
- Investing in smart grid infrastructure;
- Expanding innovative research; and
- Cleaning up our nation's legacy nuclear waste

Below are a series of examples for the types of projects supported under each pillar:

#### **Energy Efficiency - Homes Weatherized**

The Recovery Act's weatherization program has helped more than **650,000 low-income families nationwide** (through December 2011), exceeding the original target of 600,000 homes over the life of the Recovery Act. These retrofits improve the energy efficiency of their homes and help them save money on their energy bills. Families save an average of \$437<sup>1</sup> a year on their energy bills as a result of the weatherization program.

- **Last quarter (Oct-Dec 2011) alone, over 13,000** employees were working as part of the weatherization program. Many of these workers are former construction workers or contractors that were hit hard by the downturn in the housing market.

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<sup>1</sup> Eisenberg, Joel F., *Weatherization Assistance Program Technical Memorandum Background Data and Statistics* ORNL/TM-2010/66, Oak Ridge National Laboratory, Oak Ridge, Tennessee, March, 2010.

## Transportation- Electric Drive Vehicles

As a result of our Recovery Act investments, an advanced vehicle industry is beginning to take root in America. Two years ago, American businesses had just 2 percent of the market for the advanced batteries that will power the vehicles of the future. By 2015, the United States will have the capacity to produce batteries and components to support one million plug-in hybrid and electric vehicles per year, thanks to strategic Recovery Act investments and the Advanced Technology Vehicle Manufacturing loan program.

Our \$2.8 billion investment in electric vehicles is being matched at least **dollar-for-dollar** with private sector funds. Here are some figures to show the scope and impact of these investments.

- **70 private companies and researchers in over 30 states** have received grants to help build the American advanced battery and electric vehicle manufacturing industry from the ground up.
- **Thirty** new advanced battery and electric vehicle component plants are opening across the country as a result of these investments.
- Before the Recovery Act, a 100 mile range electric vehicle battery cost **\$33,000**. Because of the high-volume manufacturing the Recovery Act is spurring, those batteries will cost about **\$16,000** by the end of 2013 and **\$10,000** by the end of 2015.
- Before the Recovery Act, there were **less than 500** electric vehicle charging stations in the U.S. Because of the Recovery Act, there are **over 5,000** charges deployed today and there will be **over 18,000** by 2012.

## Renewable Energy

The renewable energy industry that was being battered by tight credit markets is bouncing back and growing again. Because of the Recovery Act's **\$90 billion** investment in clean energy, the Administration is on-track to meet its target of **doubling** U.S. renewable energy generation by 2012.

- By partnering with private industry, the Department of Treasury and the Department of Energy have already funded **over 20,000** projects nationwide through tax cuts or cash assistance for clean energy manufacturing and production.
- These projects have **enough capacity to power more than one million homes**; that is enough clean energy to power the homes of everyone living in Boston, Seattle, Atlanta, Kansas City, and Cincinnati combined. Factories are whirring to life to manufacture the parts these projects require.

Our Loan Program has played a key role in helping to meet our goal of doubling renewable energy generation in America. The DOE Loan Programs have used Recovery Act funds to finance:

- **The world's largest photovoltaic solar plant** (Agua Caliente)
- Two of the world's largest solar thermal projects that will double the amount of solar thermal power in the U.S. (Abengoa Solar Inc. and BrightSource Energy, Inc.)
- **The world's largest wind farm to date** (Caithness Shepherds Flat in Oregon)
- Supported nearly 3,800 jobs last quarter alone (Oct-Dec 2011)

### **Modernizing the Grid- Smart Grid:**

The more than \$4 billion in Recovery Act smart grid investments are helping to modernize our grid and to build a more stable, secure nationwide electrical system that facilitates access to renewable energy sources and allows consumers to better manage their energy use.

- Recovery Act seed money for smart grid projects in 49 states and two territories is helping build a more stable, secure nationwide electrical grid. From an initial federal investment of over \$4 billion, smart grid award recipients are providing an additional \$5.6 billion in private sector cost-share for a total investment of nearly \$10 billion. This investment in Smart grid technologies and training will help improve the efficiency and reliability of the electrical system by providing operators with better information and control over the flow of electricity, support the broader integration of renewable energy sources onto the grid, empower consumers to reduce their energy use and save money, and train workers to deploy and utilize these new technologies.
- Already, **more than 10.3 million smart meters have been installed in homes and businesses nationwide to help consumers better manage and reduce their energy use and lower their utility bills– and we’re on-track to deploy 15.5 million total smart meters through the Recovery Act.**

### **Innovative Research - ARPA-E:**

ARPA-E is devoted exclusively to funding high-risk, high payoff, game-changing research and development projects to meet the nation’s long-term energy challenges. ARPA-E is funding projects that industry by itself is not likely to undertake because of technical and financial uncertainty. These projects will play a critical role in ensuring the U.S. wins the global race to develop and deploy the next generation of advanced clean energy technologies.

- ARPA-E’s original funding supported six programs: vehicle batteries, carbon capture, advanced fuels, grid scale storage, building efficiency, and power electronics
- **In the one year since the first round of 37 ARPA-E projects were funded (totaling \$151 million), they have attracted over \$200 million in follow-on funding from private sector investors and corporations.**

### **Cold War Legacy Clean-up**

The Department of Energy is also charged with cleaning up the legacy of our nation’s nuclear weapons program. Our Office of Environmental Management (EM) received \$6 billion in the Recovery Act to accelerate cleanup work at 17 sites, reducing the lifecycle costs to taxpayers and helping to protect the environment and the public. The EM projects were among the first to start, and nearly 90 percent of their funds have been spent to date. Many of the original projects came in under budget, allowing the program to reallocate approximately \$300 million to conduct additional cleanup work.

**The \$6 billion investment was expected to reduce the nation’s total nuclear waste footprint by more than 40% (372 sq mi) and dispose of nearly 8,000 cubic meters of transuranic waste. DOE actually exceed this goal, reducing the footprint by 69%, or 641 square miles to date.** EM estimates the \$6 billion investment has reduced its environmental liability for this portion of EM’s scope by \$13 billion.