

## THE WHITE HOUSE

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### **President Obama's Plan to Win the Future by Investing in Clean Energy Research and Development**

In his State of the Union address, President Obama called for winning the future through new investments in research and development (R&D) that will grow our economy and allow America to remain competitive in the 21<sup>st</sup> century. That is why the President's Budget will propose over \$8 billion for research, development, and deployment investments in clean energy technology programs. This represents a one-third increase in funding, which will be paid for with resources that we now spend on subsidizing fossil fuels. The Administration's clean energy R&D priorities focus on developing cutting-edge technologies with real-world applications to advance a clean energy economy, increase industrial and manufacturing efficiency, reduce energy demand in buildings, and reach our goal of having 1 million advanced technology vehicles on the road by 2015.

- **Expand ARPA-E to spur innovation:** The President will propose investing in the innovation of promising new technology by more than doubling pre-existing support for the Advanced Research Projects Agency – Energy (ARPA-E) program.
- **Double the number of Energy Innovation Hubs to solve key challenges:** The President's plan proposes convening scientists and innovative thinkers from across disciplines to reach breakthroughs on tough problems. New Energy Innovation Hubs will support research in targeted areas.
- **Focus on applied R&D to achieve clean energy goals:** The President's Budget will double investment in energy efficiency, including in industrial productivity, vehicle technology R&D for advanced batteries, and building technology R&D to cut energy consumption. This investment will improve our ability to deploy these and other clean energy technologies.

### **The President's Commitment to Clean Energy R&D**

The President's Budget will advance clean energy through funding a number of priority areas:

- **Expanding ARPA-E to spur innovation:** The President's Budget will more than double total funding to-date for the Advanced Research Projects Agency – Energy (ARPA-E) program. This funding will support transformational and cutting edge energy research with real-world applications across areas ranging from grid technology and power electronics to batteries and energy storage.
- **Doubling the number of Energy Innovation Hubs to solve key challenges:** Innovation and breakthroughs often happen when scientists and thinkers from different disciplines have a chance to collaborate on some of our toughest problems. We must continue the tradition of

fostering American technological creativity through cross-discipline collaboration. The Budget will propose establishing three new Energy Innovation Hubs that will bring together top scientists to work in teams on cross-disciplinary research related to critical areas. These new Hubs will join three existing Hubs which are exploring building efficiency, liquid fuel from sunlight, and nuclear reactor modeling and simulation.

- **Focusing on applied R&D, innovative manufacturing and deployment to achieve clean energy goals:** The Budget will also support the “\$1 a Watt” initiative, aimed at making solar energy cost competitive; increased funding for geothermal energy, which can provide 24-hour renewable energy; and industrial efficiency to keep U.S. manufacturing competitive. The Budget supports research on advanced vehicle technologies. R&D funding will also improve advanced manufacturing for materials technologies related to energy, such as flexible electronics for lighting, batteries, and solar cells, as well as materials for electric vehicles and wind turbines.

### **Building on Progress**

- **The Recovery Act funded ARPA-E for the first time in the program’s history:** The Obama Administration funded ARPA-E for the first time ever with \$400 million as part of the Recovery Act. This funding is being used to support over 100 projects, including several initiatives on battery technology, one of which is geared towards developing a battery that will take an electric vehicle over 300 miles on a single charge. ARPA-E focuses on transformational energy research that industry by itself cannot or will not support, the success of which would provide dramatic benefits for the nation. The program is intended to bring freshness, excitement, and urgency to energy research, attracting many of the nation’s best and brightest minds—from experienced scientists and engineers to young students and researchers to entrepreneurs.
- **New Energy Innovation Hubs will complement three pre-existing Hubs that were first funded in FY2010:** The new Hubs funded in this year’s Budget will complement existing Hubs that were established in FY2010. One of these existing Hubs focuses on nuclear energy modeling and simulation, a second on energy efficiency in buildings, and a third explores methods to generate fuel from sunlight.
- **Applied R&D priorities dovetail with Administration efforts to deploy advanced technology vehicles, increase efficiency, and achieve clean energy goals:** The clean energy R&D priorities that will be supported through the President’s Budget, including increased emphasis on solar and geothermal energy, complement policies that are focused on the deployment of these technologies. For example, investments in vehicle R&D go hand-in-hand with improvements to the electric vehicle tax incentive, as well as the new \$200 million “Race to the Top” competitive grant program to encourage communities to improve readiness to adopt electric vehicle technology.