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**Statement of Chairman Lamar Smith (R-Texas)**  
*Department of Energy Oversight: Energy Innovation Hubs*

**Chairman Smith:** Today, the Subcommittee on Energy will examine the Department of Energy's (DOE) Energy Innovation Hubs and provide important oversight for the Department's approach to collaborative research and development.

DOE Energy Innovation Hubs encourage cooperation across basic science, applied energy, and engineering research and development programs. The hubs represent a new model for integrating basic research and development with applied research to create new technologies. Through the hubs, DOE brings together teams of researchers from the national labs, academia, and industry to solve specific energy challenges.

Currently, the Department operates four hubs – two with a focus on applied energy challenges and two using basic research to advance technology development. The Department first established the innovation hub model within its Office of Nuclear Energy in 2010 with the establishment of the Consortium for Advanced Simulation of Light Water Reactors, or CASL. CASL's diverse team of experts in reactor physics and materials sciences use super computers to model and simulate nuclear reactors.

This work will help make reactors safer, improve their performance, and increase their operational lifetime, which is critical to sustainable zero-emission nuclear energy in our country. Funded through the Office of Energy Efficiency and Renewable Energy, the Critical Materials Institute was established in 2011 to address domestic shortages of rare earth metals and other materials critical for American energy security.

Led by the Ames National Lab, a leading center for materials science and technology, researchers work to solve critical materials challenges. These include the development of new material sources, the increase in efficiency in manufacturing, and better methods to recycle and reuse materials. The Office of Science sponsors two hubs that focus on basic research directed at how energy is produced from sunlight and ways to advance battery storage.

The Joint Center for Artificial Photosynthesis, led by the California Institute of Technology, conducts basic research with the goal of designing efficient energy conversion technology that can generate fuels directly from sunlight, water, and carbon dioxide. This research presents the opportunity to recreate the energy potential of natural photosynthesis.

The research and development conducted at the Joint Center for Energy Storage Research hub, commonly known as JCESR and led by Argonne National Lab, develops new battery storage

technology. Researchers at JCESR study how different materials perform at the atomic and molecular level inside a battery.

By examining materials, these researchers are able to develop batteries that have more capacity, power, and a longer-life span. This energy storage research could have groundbreaking impacts on not just the solar industry, but also on all forms of energy and on the reliability of our electric grid.

As DOE pursues new ways to conduct research and development, benchmarks to measure progress and the responsible use of American taxpayer dollars must be a top priority. With a price tag of approximately \$90 million per year for the existing DOE hubs, Congress should conduct appropriate oversight to ensure that limited research dollars are well-spent.

I thank our witnesses today for testifying on their important research. And I look forward to a productive discussion on the research goals of the four DOE hubs. I also want to thank the ranking member of this subcommittee, Rep. Grayson, for working with me to include targeted authorization language for the hubs in the America COMPETES Reauthorization Act of 2015, which passed the House last month.

The Department of Energy should prioritize the ongoing cooperation between the national labs and academia in order to solve basic scientific challenges. It should also partner with American entrepreneurs to solve energy challenges through new technologies. Leveraging limited resources through partnerships will keep America at the forefront of cutting-edge science.

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