COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

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Statement of Chairman Lamar Smith (R-Texas)

Innovation in Solar Fuels, Electricity Storage, and Advanced Materials

Chairman Smith: Thank you, Mr. Chairman. Today we will examine American innovation in solar fuels, electricity storage and advanced materials.

The Department of Energy's Office of Science is the nation's lead federal agency for basic research in the physical sciences. This type of fundamental research allows scientists to make groundbreaking discoveries about everything from our universe to the smallest particle. It has led to transformative breakthroughs in energy science that will allow the private sector to develop innovative energy technologies.

Today's hearing will provide a status update on the Department's basic research in solar chemistry, energy storage and advanced materials.

Electricity storage is one of the next frontiers in energy research and development. Innovation in batteries could help bring affordable renewable energy to the market without costly subsidies or mandates.

By investing in the basic scientific research that will underpin and lead to new advanced battery technology, we can enable utilities and others to store and deliver power produced elsewhere. This will allow us to take advantage of energy from the diverse natural resources available across the country.

Another high reward application of energy basic research is solar fuels, also known as artificial photosynthesis. Through the study of chemistry and materials science, researchers are developing systems that can use energy from sunlight to yield a range of chemical fuels.

Our last topic for today's hearing is advanced materials research. By examining substances at the atomic level, researchers can develop materials with the exact qualities necessary for an application, like thickness, strength, or heat resistance. These new materials could provide the capability for quantum computing systems that will fundamentally change the way we move and process data.

Basic scientific research – like the work funded by DOE's Office of Science – requires a long-term commitment. While this groundbreaking science can eventually support

the development of new advanced energy technologies by the private sector, Congress must ensure limited federal dollars are spent wisely and efficiently.

Federal research and development can build the foundation for the next major scientific breakthrough. As we shape the future of the Department of Energy, our priority must be basic energy science and research that only the federal government has the resources and mission to pursue.

This will enable the private sector, driven by the profit motive, to develop and move groundbreaking technology to the market across the energy spectrum, create jobs, and grow our economy.

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