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

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Statement by Chairman Randy Weber (R-Texas)

The Future of Fossil: Energy Technologies Leading the Way

Chairman Weber: Today, we will examine the status of the early-stage research performed by industry, non-profit institutes and the Department of Energy national laboratories to enable advancements in fossil energy technologies.

Global demand for fossil fuels will hold steady in the near-term and is projected to increase far into the future. Our abundant natural resources—including coal, oil and natural gas—can and should be produced to meet this demand.

However, these fuels should be utilized with efficient technologies that minimize the environmental impact. Early-stage research funded by the federal government coupled with efforts to develop new technologies by the energy industry are critical to ensuring we can use our resources long into the future.

Over the years, this partnership between the labs and industry has led to the development of advanced scrubber technologies to significantly reduce the release of NOx, SOx, and other unwanted byproducts from fossil-based power plants.

Because of this technology-led success, today we often focus on another byproduct of fossil power production—carbon dioxide (CO2).

But unlike other emissions, carbon dioxide can potentially have a number of key uses in industrial applications. As our knowledge in chemistry advances, so does our ability to capture and repurpose carbon waste as an industrial product.

These utilization technologies have the potential to convert carbon dioxide into building materials or even reuse CO2 as part of the power generation cycle instead of steam.

Because of the potential benefits to this technology, industry is investing in research to advance carbon utilization. This industry engagement has advanced independently of any federal regulation, and combines private sector investment and the tools and technical assistance provided by national labs, state research facilities and universities.

Early-stage research in the national laboratory system also supports the development of new energy production technologies.

For example, at Lawrence Livermore National Laboratory, researchers have developed a 3-D printed polymer that uses bacteria to convert methane, the primary component of natural

gas, into methanol at room temperature and pressure. This technology has the potential to reduce any methane leaked from natural gas production by cost effectively capturing and converting it to liquid methanol at small scales.

This research led by the national labs can now be taken up by industry to improve the extraction and efficient use of natural gas products. This partnership is a win-win for science, energy and the environment.

However, in recent years, the use of our limited taxpayer research and development dollars has shifted away from fundamental research like this to the support of large-scale technology demonstration projects—ones that industry has the ability to fund on its own.

The research community and the private industry would be better served if we focused federal investment on the early-stage research that has a proven track record of producing transformative energy technologies.

I want to thank our panel of witnesses for their testimony today and I look forward to hearing what role Congress should play in advancing fossil energy research.

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