



COMMITTEE ON  
**SCIENCE, SPACE, AND TECHNOLOGY**  
REPUBLICANS Frank Lucas, Ranking Member

**Energy Subcommittee Ranking Member Randy Weber**  
**Energy Subcommittee Hearing Statement**  
**“Fossil Energy Research: Enabling our Clean Energy Future”**  
June 19, 2019

---

Thank you, Chairman Lamb, for hosting this hearing. Today, we will have the opportunity to hear about exciting new research and development in fossil energy.

Last year in the United States, coal and natural gas comprised 64% of net electricity generation, with that number expected to only dip to 58% by 2040. The use of fossil fuels in the power sector isn't going anywhere. We have incredible domestic fossil energy resources, and our economic stability depends on the power they produce.

So it's no surprise that we have a robust industry here at home investing in developing the next generation of technologies to produce and use American fossil fuels more efficiently, more safely, and at a lower cost for American consumers.

Today's hearing is an opportunity for private sector organizations and DOE national labs to highlight their leading roles in fossil energy innovation. The scope and range of technologies being pursued is as vast as the untapped oil and gas reserves in Texas!

We'll hear from expert witnesses about research in materials science that can prevent CO<sub>2</sub> leaks in storage formations under high temperatures, pressures, and chemical conditions. I'm also excited to hear about a joint project between the Nuclear and Fossil Offices at DOE that uses supercritical carbon dioxide as the working fluid, rather than steam, to dramatically increase energy conversion efficiency at 1/10<sup>th</sup> the cost.

While there are significant opportunities for worthy and exciting research in this field, it's our job in Congress to focus federal agencies on the best use of federal funds.

That means directing the Department of Energy to focus on the basic and early stage research industry cannot conduct on its own, collecting long term data and maintaining expertise to provide industry with the tools necessary to achieve technology breakthroughs. Once a technology is developed, industry is best suited to take the lead, building on DOE research to commercialize technologies.

We've seen incredible research and technology successes through collaborative, public-private partnerships, and it's clear this is the model that ensures federal research investments give us the most bang for our buck.

One such example is the Air Products production facility in my home district.

This facility, which is one of only two industrial plants in the United States where carbon capture is currently in use at-scale, captures over one million tons of carbon dioxide per year. This CO<sub>2</sub> is then transported via pipeline for use in enhanced oil recovery.

With support from DOE, the technology developed and deployed at this facility is reducing the emissions from local refineries, and producing affordable, American fuel to power our economy.

Today, DOE is making smart, targeted investments in early stage research to advance the next generation of production and emissions control technologies through the DOE Fossil Energy Research and Development (F-E-R and D) program.

Funded at \$740 million in FY 2019, the FER&D program conducts research that supports clean, affordable, and efficient use of domestic fossil energy resources. In order to ensure these limited research dollars are spent wisely, we must focus funding towards projects that are truly cutting edge – applying DOE's supercomputers, light sources, and expertise towards developing next generation materials and maximizing efficiencies.

The complex fossil energy research challenges we face today will require an all hands-on deck approach. Academia, industry, and the Department of Energy are the ideal partners to develop these solutions. I look forward to hearing about these partnerships from our witnesses today.

I'm particularly interested to hear from Dr. Erik Webb – who joins us from Sandia National Lab – about how the DOE labs can take a leading role in this effort.

I want to thank our all witnesses for testifying today, and the Chairman for holding this hearing.

**###**