



Opening Statement of Chairman Frank Lucas

Energy Subcommittee Hearing

Unearthing Innovation: The Future of Subsurface Science and Technology in the United States

July 26, 2023

Good afternoon. Today, the Energy Subcommittee will explore the status of U.S. subsurface science and technology research, a field of study that is highly relevant for Americans around the country, including in my home state of Oklahoma.

Our country has significant subsurface energy resources, and, if harnessed correctly, these resources have the capability to provide all Americans with clean baseload power and secure energy storage for generations to come.

Subsurface science encompasses a broad range of technologies and energy sources, ranging from next generation mining and minerals extraction to advanced geothermal energy and carbon sequestration.

A strong understanding of subsurface systems is essential, not only for harnessing today's resources, but also for expanding our clean energy portfolio, sustaining critical domestic supply chains, and ensuring the long-term storage of carbon dioxide and nuclear waste.

Despite significant advances in recent years, the fundamental and applied research in these fields faces unique challenges associated with accessing the subsurface. That's why robust support for subsurface R&D is critical for U.S. energy independence and national security.

On the Science Committee, we prioritize the fundamental and early-stage research that leads to groundbreaking technologies. And subsurface science is truly one of these areas, a multidisciplinary field of study that maximizes return on investment by advancing several key clean energy pathways at once.

It is an important segment of our all-of-the-above clean energy strategy.

While I look forward to hearing from all our subsurface experts here today, I'm particularly pleased to see representation from the U.S. geothermal industry.

Advanced geothermal technologies have the potential to transform the U.S. energy sector. Geothermal is a source of clean and renewable energy that is always "on."

Yet although the United States leads the world in geothermal power production, geothermal still contributes less than one percent to the total utility-scale U.S. electricity generation.

While I've seen the value of geothermal energy in my district with Oklahoma's thriving geothermal heat pumps industry, more work needs to be done to allow the rest of the country to access the full power of this resource.

Federally funded research programs at the Department of Energy (DOE) have a history of paving the way for industry innovation.

It is critically important to our clean energy future that they have the support they need to pursue research that industry cannot undertake.

That's why, three years ago, the Science Committee worked to get my bill, the Advanced Geothermal Research and Development Act, signed into law as part of the bipartisan Energy Act of 2020.

This legislation provided DOE with a comprehensive reauthorization of its geothermal technologies R&D activities, including its Frontier Observatory for Research in Geothermal Energy (FORGE) program, directing DOE to partner with industry and academia to improve the next generation of geothermal energy systems.

Just last week, a participant of the FORGE program, Fervo Energy – here with us today – announced a record achievement for an enhanced geothermal system site.

I hope that this afternoon, we can get a clear picture of the outcome of some of these kinds of investments, and recommendations for appropriate next steps.

I also look forward to our larger discussions that will improve our understanding of the subsurface environment and how DOE and U.S. industry are advancing groundbreaking activities to meet our present and future energy resource needs.

Recently, I was fortunate enough to visit Baker Hughes' research facilities in Oklahoma and saw firsthand the potential for industry collaboration and technology transfer between subsurface energy sectors and applications.

If we want to ensure a diverse portfolio of clean energy technologies now and in the future, we in Congress should prioritize this kind of important fundamental research and partnerships.

I want to thank our witnesses for their testimony and I look forward to a productive discussion.