Opening Statement of Chairman Frank Lucas

Full Committee Hearing
Innovation Through Collaboration: The Department of Energy's Role in the U.S. Research Ecosystem

March 8, 2023

Good morning. Today, the Science Committee will examine the Department of Energy's role in the federal research enterprise.

DOE is the nation's largest federal sponsor of basic research in the physical sciences and is a world leader in energy technology development and innovation. As such, it is uniquely able to partner with other federal research agencies to address our most critical national science and technology challenges.

This hearing will serve as a legislative hearing for three bills we plan to introduce soon that would authorize a number of DOE's existing interagency research partnerships. We'll also use the information from today's discussions to inform the development of future legislation in this area.

DOE has a wide range of assets at its disposal that can be leveraged for research partnerships. It operates 17 world-leading national laboratories which steward cutting-edge research in high priority areas and maintains and operates 28 scientific user facilities, which serve as essential resources for the research and development community.

Together, this network of facilities supports tens of thousands of researchers each year and provides a foundation for U.S. competitiveness in emerging technologies.

We're here today to discuss how we can leverage DOE's tremendous expertise and resources to help other federal research agencies address cross-cutting scientific challenges. I hope to examine how these partnerships are already benefitting Americans and how we can craft legislation to ensure agencies can continue collaborating on strategic research to enhance U.S. competitiveness for the next generation.

For example, partnering on genomics-based research helps DOE and the U.S. Department of Agriculture overcome the challenges inherent in developing low-cost, high-efficiency biofuels.

Working together, the agencies can improve crop science, maximize carbon storage, enhance precision agriculture technologies, and identify ways to combat invasive species, among many other areas.

DOE and NOAA partner to improve climate modeling, weather prediction, and other activities that require analysis of extremely large and complex data sets. Leveraging DOE's high-performance computing capabilities can improve NOAA's forecasting and advance DOE's machine learning abilities.

DOE and NASA have a long history of collaboration, on fundamental science research and particularly on nuclear propulsion and power for spacecraft. The Voyager spacecrafts—launched more than 40 years ago—continue to operate with DOE's power system. DOE and NASA can work together on the critical challenges of building a lunar surface infrastructure and efficiently powering a crewed journey to Mars.

Similarly, DOE and NSF have an active and extensive history of collaboration. These agencies collaborate on a wide range of research topics such as physics, quantum information sciences, artificial intelligence, and advanced manufacturing.

By combining their resources, DOE and NSF support large-scale discovery science and the development of international scientific resources like the Vera C. Rubin Observatory.

I'm looking forward to hearing more from our witnesses about the potential for future collaboration to enhance U.S. competitiveness.

As the United States faces growing competition from the Chinese Communist Party, it's never been more important to maximize our federal R&D resources. One aspect of that is examining how we can best utilize interagency partnerships to strengthen American science and technology.

Last summer, Congress passed the CHIPS and Science Act, which includes detailed program direction and substantial funding for DOE research programs and critical research infrastructure.

CHIPS and Science also includes investments in NSF, NIST, and NASA, as well as provisions to protect these investments from theft and interference by adversaries.

Overseeing the implementation of CHIPS and Science will be a priority issue for our Committee this year, and I expect that many hearings will touch on this topic. Prioritizing support for our federal science research agencies like DOE and its Office of Science is one pillar of our oversight plans this Congress.

To build on these investments, protect them from administration turnover, and maximize return on investment of taxpayer dollars, there is a need for legislation to secure our essential interagency research. Setting the seal on DOE's partnerships with agencies like NASA, NOAA, the NSF, and the USDA means we're making the best use of our resources when we tackle challenges like furthering space exploration, improving weather forecasting, and advancing production agriculture.

I'm looking forward to speaking with experts about how we in Congress can capitalize on this opportunity.

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