



COMMITTEE ON

SCIENCE, SPACE, AND TECHNOLOGY

REPUBLICANS Frank Lucas, Ranking Member

Opening Statement of Ranking Member Randy Weber

Energy Subcommittee Hearing: Fostering a New Era of Fusion Energy
Research and Technology Development

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Thank you, Chairman Bowman for holding this hearing and thank you to our witness panel for joining us this morning. Today's topic is one that many of us are very familiar with, but we remain extremely intrigued by – fusion energy.

In the most basic of terms, fusion energy aims to create the equivalent of a controlled sun and harness it as a power source here on earth. Easy enough, right? But as you might imagine, the extreme temperatures, pressures, and confinement conditions required to do this also require a highly specialized environment. This makes achieving fusion energy one of the greatest challenges in experimental physics today.

The potential benefits of a fusion reactor are beyond calculation. The fuel is abundant and widely accessible, the carbon footprint is functionally zero, and the radioactive waste concerns are almost nonexistent. If we are serious about a clean energy future with lower power sector emissions, there is no ambition that fits the bill better than fusion.

The Department of Energy supports fusion R&D primarily through its Fusion Energy Sciences program. In fiscal year 2021, the FES received \$672 million, but the House passed bipartisan bill I was proud to cosponsor, the DOE Science for the Future Act, seeks to nearly double that by fiscal year 2026.

This shows our overwhelming support for current research efforts and a bipartisan desire to leverage the untapped potential of fusion. I'd like to thank my colleague, Energy Subcommittee Chairman Bowman, as well as Ranking Member Lucas and Chairwoman Johnson for their leadership on this bill.

Domestically, DOE funds a diverse portfolio of fusion energy research through its world-leading national laboratory system and cutting-edge experimental facilities and resources, like the National Spherical Torus Experiment Upgrade at Princeton Plasma Physics Laboratory and the National Ignition Facility at Lawrence Livermore National Laboratory. I look forward to hearing from esteemed representatives from these laboratories today.

Internationally, DOE supports U.S. contributions to the ITER project, which is a major international collaboration to design, build, and operate a first-of-a-kind research facility to achieve and maintain a successful fusion reaction in the lab. Although it is located in beautiful southern France, a significant percentage of total U.S. awards and obligations to ITER are carried out right here in the United States, funding research and component fabrication in American universities, national labs, and industry. And while the U.S. contributes 13 percent of the costs of ITER, we gain 100 percent of the scientific discoveries from this project. That's a good deal!

This is why full funding for ITER is also included in the DOE Science for the Future Act. Upholding our end of this deal is imperative to the success of U.S. fusion energy, and to America's standing and credibility as a global scientific collaborator. I look forward to hearing more on this from Dr. Kathryn McCarthy, the Director of U.S. ITER Project Office.

Another necessary contributor to fusion research is, of course, the private sector. Due to robust DOE investment in this critical science, there are already 13 fusion energy companies here in the U.S. Today we will hear from one of these companies - Commonwealth Fusion Systems, a startup aimed at commercializing fusion energy and has collaborated with the National Labs through FES's Innovation Network for Fusion Energy (INFUSE) program.

Together, our witness panel represents unique areas of fusion energy research. They each have a story to tell on how we've progressed over the last decade and where we are headed in the next.

No matter how you look at it, achieving commercial fusion energy technology will require strong U.S. leadership and consistent investment in discovery science. Meeting our goal of producing unlimited, emission free power through fusion energy will truly take all of you here today. I want to again thank all of our witnesses for being here and yield back the balance of my time, Mr. Chairman.