



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

Opening Statement of Ranking Member Frank Lucas

Energy Subcommittee Hearing

The Department of Energy's Office of Science: Exploring the Next Frontiers in Energy Research and Scientific Discovery

January 15, 2020

Today we welcome Dr. Chris Fall, the Director of the Department of Energy's Office of Science to discuss the program's priorities for fiscal year 2020 and beyond.

Before he joined the Office of Science in 2019, Dr. Fall served as Acting Director of the Advanced Research Projects Agency – Energy (ARPA-E). These are two DOE programs where, I am pleased to say, the Science Committee has found a lot of bipartisan agreement over the years. I look forward to carrying on that tradition this Congress and I would like to thank Dr. Fall for his work.

DOE is a world leader in technology development and scientific innovation. Through the Office of Science, the Department funds robust research programs across the scientific disciplines – from materials science and mathematical modeling to fusion energy science and the study of neutrinos.

Discoveries made through the Office of Science are the force behind the development of next-generation energy technologies. They are the cornerstone of our clean energy future. If we are serious about the climate issues we discussed this morning, then we should be equally serious about our support for this agency and bold investments in basic research.

The Science Committee has jurisdiction over all of the Office of Science research and development activities and its 10 DOE National Laboratories - which totals \$7 billion in annual spending at DOE. This afternoon, our discussion with Dr. Fall will focus on programs within this critical jurisdiction.

This Committee has consistently supported robust funding for the Office of Science.

In particular, its Basic Energy Sciences, High Energy Physics, Advanced Scientific Computing Research, and Fusion Energy Sciences programs have long received bipartisan support from this Committee.

For example, Committee members on both sides of the aisle have steadily supported full funding for U.S. contributions to the ITER project, a high priority fusion energy experiment funded through the Office of Science. I was pleased to see that the fiscal year 2020

appropriations package included enough funding to maintain our participation in this world-leading international research collaboration. Fusion is the next great scientific frontier – with the potential to produce near-limitless, zero emission power for centuries.

Another one of our great areas of bipartisan agreement is for the Advanced Scientific Computing Research (ASCR) program, one of the Office of Science's top priority programs. ASCR supports the Department's goal of completing of the world's first exascale computing system.

Exascale systems will perform one billion, billion calculations per second and developing one is critical to enabling scientific discovery, strengthening national security, and promoting U.S. industrial competitiveness. Thanks to DOE's targeted investments, the United States now hosts the top two fastest supercomputers in the world – Summit at Oak Ridge National Laboratory, and Sierra at Lawrence Livermore National Laboratory. And the Department is on track to reach exascale by 2021. As other countries like China race to develop exascale systems of their own, DOE's continued strong support of advanced computing is essential to maintain U.S. leadership in this field.

In order to support innovation in next-generation science, DOE must also invest in research infrastructure and cross-cutting research initiatives with other Federal agencies.

This includes Office of Science initiatives in critical research areas like quantum information science and artificial intelligence, as well as key investments in our nation's light sources and neutron sources.

I want to thank Chairwoman Fletcher for holding this hearing and Dr. Fall for his testimony today. I look forward to a productive and valuable discussion. Our twin goals of addressing today's climate challenges with affordable and reliable clean energy solutions, and ensuring that the United States remains a world leader in science and energy technology for years to come, require that we continue our shared commitment to prioritize basic research supported by this critical agency.