

OPENING STATEMENT
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House Committee on Science, Space, and Technology
Subcommittee on Energy
“The Future of U.S. Fusion Energy Research”
March 6, 2018

Good morning, and thank you Chairman Weber for holding this hearing. It is clear that a breakthrough in fusion energy research could be a major step in enabling our clean energy future. Fusion has the potential to provide clean, abundant energy to the world, all while producing essentially no greenhouse gas emissions. Though we aren't there yet, the policy decisions and research investments we make now could well enable that key breakthrough to come much sooner.

The largest and most well-known fusion experiment in the world is the ITER project. I had the opportunity to tour ITER in 2015 and was quite impressed with the progress being made under the leadership of Dr. Bigot, and I am very pleased that he is testifying again today. As Director General, Dr. Bigot has brought significant, positive changes to the management of ITER, including a comprehensive and realistic schedule, budget, and plan to get the project back on track. The project is far more transparent, and by all accounts the management team's agility and responsiveness to addressing issues as they arise have improved dramatically under his tenure.

So once again, I thank you for traveling from France to be here with us today, Dr. Bigot, and I look forward to hearing more details on the progress of the project. As you expressed to me previously, ITER can be an important step forward to harness the power of fusion for the benefit of the entire world.

Although ITER tends to get much of the attention when we discuss fusion research, it is certainly not the only fusion-related investment we are making. The funding allocated to ITER in FY 2017 is only about 13% of the DOE Fusion Energy Sciences budget. ITER will solve problems that the fusion research community can build upon, and ensuring its success is crucial. Yet while this experiment has the potential to answer key scientific and engineering questions in fusion energy, the successful operation of ITER alone will not be sufficient to enable the construction of a commercial scale fusion reactor, nor is it the only path forward.

There are many promising fusion energy technologies and concepts worthy of further exploration, and it would be a terrible mistake if we did not find a way to better support these new innovative approaches through federally funded research and development. The Department's Fusion Energy Sciences program is perfectly positioned to create these opportunities, but the funds devoted to it don't seem commensurate with the potential benefits. That is unfortunate.

In this year's budget proposal, the Fusion Energy Sciences program (FES) would receive a \$40 million cut, which is a 10.5% decrease from previous year funding. FES is one of only two programs that are slated for cuts of this magnitude in the Office of Science budget. What is most disappointing is that it comes at a time when there is so much more work to do in this field. We should be increasing our investments in fusion research, not slashing them.

During the last Administration, some of the researchers pursuing alternative concepts to achieve fusion energy generation were able to find funding opportunities at DOE – just not from the Office of Science. ARPA-E is currently carrying out a three-year program to explore the potential for one of these concepts to lead to a reactor with far lower costs than more conventional approaches. But again, this Administration fails to recognize this important work and unique opportunity, and instead has proposed to completely eliminate ARPA-E in the last two budget proposals. I am hopeful that informed Congressional leaders will join me in supporting ARPA-E and keep this Administration from shutting it down.

Finally, I would like to welcome Dr. Mark Hermann from the National Ignition Facility (NIF). NIF is a critical component of our nuclear weapons stockpile stewardship program as well as our research efforts to explore the potential of inertial confinement fusion. I am looking forward to your testimony along with that of the other distinguished experts on the panel.

Thank you Mr. Chairman. I yield back.