OPENING STATEMENT

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Committee on Science, Space, and Technology
Energy Subcommittee Hearing
"An Overview of Fusion Energy Science"
April 20, 2016

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 make that key breakthrough come sooner.

The largest and most well-known fusion experiment in the world is the ITER project. I had the opportunity to tour ITER last year and was quite impressed with the progress being made under the leadership of Dr. Bigot and I am very pleased that he is testifying today. The current rate of progress has not always been characteristic of ITER. I am pleased that, as the new Director-General, Dr. Bigot has brought on significant changes to ITER, including a new schedule, budget, and plan to get the project back on track. The project is more transparent than ever before and by all accounts the management is far more agile and responsive.

In February, we received the Department of Energy's *Report on the Status of the ITER Project*, which indicated substantial management improvements had been achieved over the past year. And just last week, an independent expert assessment of the new schedule was completed which, as noted in Dr. Bigot's testimony, found similar progress in his short tenure to date.

So once again, I thank you for traveling from France to be here with us today, Dr. Bigot. It is good to see you again 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 2016 is only about 25% 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. While the ITER 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 building 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.

But recently, some of these researchers *have found* funding opportunities at DOE – just not from the Office of Science. Instead, 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. We are fortunate to have Dr. Scott Hsu here today, who received the largest award from this program. I believe that his testimony will spark the interest of many here today to go beyond the well-justified call for more funding for fusion research, and also take a closer look at the full range of fusion research activities we should be supporting.

Thank you Mr. Chairman. I yield back.