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FACT SHEET

Q&A

Investing in Fusion Research Crucial to U.S. Competitiveness

An Interview with Stewart Prager - Director of the U.S. Department of Energy's Princeton Plasma Physics Laboratory

QUESTION: Why should the U.S. maintain its funding of the fusion program and retain its leadership?

ANSWER: The first reason is U.S. competitiveness, both the specific competitiveness in fusion and the general competitiveness in science and technology. If we are going to prosper economically, we absolutely have to be competitive in science and energy research and development. Whoever controls the energy sector, whoever innovates with the science, is going to be economically dominant. Fusion is a perfect case study of where we can be either retaining our competitiveness or we can give it up. If the latter, we will be importing fusion reactors. Second, in fusion, our contributions are needed. The U.S. has a workforce for fusion that is second to none. In other countries, they have outbuilt us and they may have better hardware. But, since the U.S. has been at this for quite a while and has operated world-class facilities, we have a broad and deep workforce of fusion physicists and engineers. That's a fabulous workforce that takes time to nurture. Also, producing fusion energy is a complex, multi-faceted problem and others are not doing everything. We have ideas for facilities here in the U.S. that are needed in the world fusion program. You can ask the question, if the U.S. just disappears from fusion will the rest of the world get there? I think so, but I don't think they'll get there as rapidly as they would if the U.S. contributed. And time is important in this problem.

QUESTION: What kind of aggressive fusion research programs are being pursued in other countries?

ANSWER: There has been a surge of interest in Asia. South Korea has blasted onto the fusion scene and recently begun operating a new experiment. This type of new experiment was actually designed to be built at the Princeton Plasma Physics Laboratory (PPPL). But it was cancelled by the Department of Energy because of lack of funds.