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A Challenge to America: Develop Fusion Power Within a Decade

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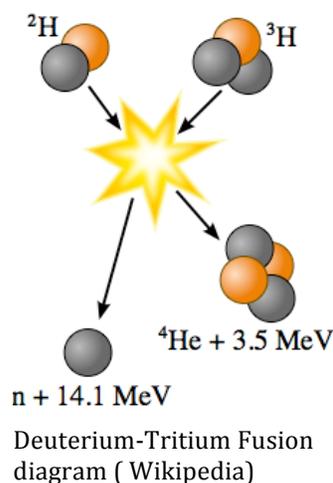
America's economy and security depend upon reliable sources of power. Over the next few decades, almost all of the power plants in the U.S. will need to be replaced, and America's dependence on fossil fuels presents serious national security concerns. They [sap](#) our economy, exacerbate climate change, and constrict our foreign policy. Our newfound boom in natural gas and oil production will ease but not eliminate these underlying issues.

The only way that we can resolve these challenges, including reducing greenhouse gas emissions in a timeframe that avoids the worst consequences of climate change, is to develop next-generation sources of clean base load power. In short, America needs to produce energy that is clean, safe, secure and abundant, and to do it now.

[Energy](#) from fusion has huge potential. Fusion produces no greenhouse gases, and, unlike nuclear fission, it does not produce long-lived radioactive waste. Further, there is no chance of a runaway reaction that could lead to a Fukushima-type meltdown event. Fusion energy is also virtually unlimited. It is produced by fusing together two hydrogen atoms. It will revolutionize the energy system when commercialized.

But there is a major problem: America has not accepted the challenge.

Researchers in fusion energy have made significant advances, but progress has stalled because of budget cuts and annual funding fluctuations. Given the current support for fusion research and development, commercializing fusion power remains many decades away. This cannot and need not be the case.



The American Security Project, a nonpartisan national security think tank, of which we are board members, has released a new report, "Fusion Power, a 10-Year Plan for Energy Security" that details how America can accelerate fusion development. This generation's Apollo program should be new R&D in fusion energy. We need a national commitment to develop fusion power. This would mean committing \$30 billion over the next ten years – with the goal of achieving demonstration levels of fusion power. This will set the stage for full-scale commercial power that can drive American prosperity for centuries to come.

We can begin today. If we are serious about fusion development, the president should appoint a fusion power commissioner with the authority to organize and streamline the research, development, and deployment of fusion power, especially by directing new areas of research and development within our national laboratories. We know that any government program is plagued with overlapping entities and different budget authorities. A fusion power commissioner could cut through the red tape and avoid bureaucratic delays.

With new authorization from Congress, America's scientists could begin today to build the next generation of facilities to develop and prove the feasibility of fusion power. Our scientists are ready today to begin constructing new fusion facilities that could lead the world and drive innovation. In short order, they could begin construction of new machines that would show how to build and operate a real power plant operated by fusion. We know that our economic competitors in [China](#) and [Russia](#) have begun work on such facilities. We can beat them, but only if we can get to the starting line.

Why is action on fusion from Congress and the president important? What would fusion really give us? The truth is that fully commercializing fusion energy would bring us monumental benefits.

First, developing fusion energy will provide a clean source of power that can fully break America's dependence on fossil fuels. This will provide numerous security benefits. Second, pioneering a new high-tech industry will bring vast new streams of revenue to America's leading industrial companies, creating thousands of new jobs and strengthening our overall economy. Third, developing fusion energy will lead to countless spinoff innovations in robotics, supercomputing, and superconducting materials. Fourth, pursuing fusion will be a clarion call to bright young American minds to enter the critical fields of science, technology, engineering and mathematics. Finally, achieving practical fusion power will cement American leadership in solving some of the world's critical problems, and drive American competitiveness in the coming decades.

Other countries already have ambitious plans to develop fusion. The U.S. will be left behind if Congress and the president fail to make the smart investments we know are necessary.

We cannot afford not to make the needed investments.

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