

Reduce Fusion Energy Sciences (FES) Spending to FY 2008 Levels

SAVINGS IN MILLIONS OF DOLLARS

2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2016-2020	2016-2025
\$178	\$178	\$179	\$181	\$185	\$189	\$193	\$198	\$202	\$206	\$901	\$1,889

Heritage Recommendation:

Reduce Fusion Energy Sciences (FES) spending. This proposal saves \$178 million in 2016, and \$1.9 billion over 10 years.

Rationale:

Fusion technology has much potential to offer inexhaustible quantities of energy without the byproduct of spent nuclear fuel that results from nuclear fission—the way that conventional nuclear power plants produce electricity. While research on fusion should continue, the question is whether the federal government should be involved and to what extent. Currently, there are 63 public and private universities, 11 national laboratories (eight belong to the DOE), and 29 international institutions that have fusion or plasma physics programs. Furthermore, at least 10 private companies are pursuing their own means to develop fusion technologies. The basic science for fusion energy already exists, which is why several start-up companies are raising capital for their own fusion reactors, and why bigger companies are investing in fusion technologies.

Although the universities and private companies have received federal funding, now is the time to reduce the DOE's involvement in studying plasmas. The DOE should remain involved, perhaps by continuing to participate in the International Thermonuclear Experimental Reactor (ITER) program, an effort to advance fusion technology, but more of the research should be driven by the private sector. One area to cut would be the Enabling R&D program, which develops and improves “the hardware, materials, and technology that are incorporated into existing fusion research facilities, thereby enabling these facilities to achieve higher levels of performance.”³⁸

Additional Reading:

- Nicolas Loris, “Department of Energy Budget Cuts: Time to End the Hidden Green Stimulus,” Heritage Foundation *Backgrounder* No. 2668, March 23, 2012, <http://www.Heritage.org/research/reports/2012/03/departments-of-energy-budget-cuts-time-to-end-the-hidden-green-stimulus>.

Calculations:

Savings are expressed as budget authority and were calculated by comparing current spending levels to estimated levels, had FY 2008 spending increased only for inflation. The FY 2008 spending level of \$294.3 million is found on page 16 of Nicolas Loris, “Department of Energy Budget Cuts: Time to End the Hidden Green Stimulus,” Heritage Foundation *Backgrounder* No. 2668, March 26, 2012, http://thf_media.s3.amazonaws.com/2012/pdf/bg2668.pdf. The FY 2014 funding level of \$505.7 million can be found on page 164 of House of Representatives, 113th Congress, 2nd Session, “Energy and Water Development Appropriations Bill, 2015,” <http://appropriations.house.gov/uploadedfiles/hrpt-113-hr-fy2015-energywater.pdf>. Estimated spending for 2014, if held constant at the 2008 spending level (plus CPI inflation as reported by the Bureau of Labor Statistics), would have been \$331 million, as compared to the enacted level of \$506 million. The \$175 million difference between the two spending levels was increased at the same rate as discretionary spending in the CBO's most recent August 2014 baseline discretionary spending projections.