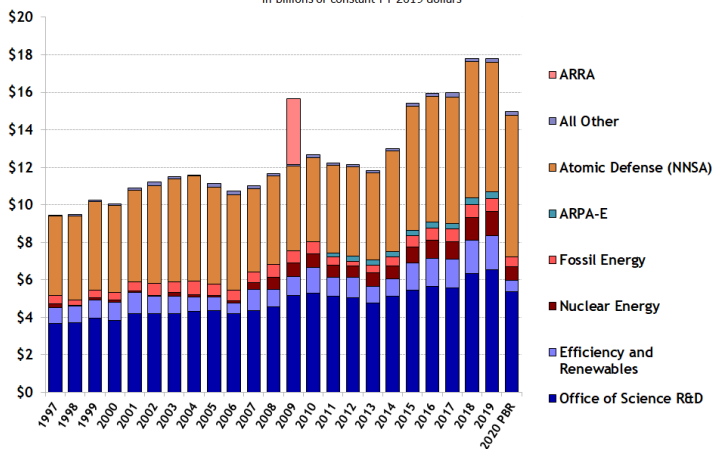




The Department of Energy (DOE) Office of Science is critical to advancing U.S. science and energy frontiers. DOE is the leading source of federal investment in basic physical science research, providing nearly 47 percent of total funding. In fields such as high energy and nuclear physics, nuclear medicine, heavy element chemistry, plasma physics, and magnetic fusion, DOE is the primary government sponsor. In addition to the physical sciences, DOE plays a key role in ensuring continued U.S. leadership in other fields of scientific research including the biological sciences, computing, and engineering.

**Trends in DOE R&D, FY 1997-2020**  
in billions of constant FY 2019 dollars



Note: DOE modified its R&D accounting practices such that totals after FY 2014 are elevated and not directly comparable to prior years. Source: Agency and OMB budget data and documents. R&D includes conduct of R&D and R&D facilities. © 2019 AAAS

Source: AAAS, 2019

The DOE Office of Science supports the world's largest collection of major scientific user facilities across the country. Annually, DOE supports more than 33,000 researchers from universities, industry, and federal agencies at 28 user facilities. These facilities include particle accelerators, experimental reactors, high-precision instruments, synchrotrons and light sources, supercomputers, and high-resolution mass spectrometers.

## AAU urges Congress to provide \$7 billion for the DOE Office of Science and \$400 million for ARPA-E in FY20

The Advanced Research Projects Agency-Energy (ARPA-E) supports high-risk, high-reward research that the private sector will not conduct. Since 2009, ARPA-E has funded more than 400 potentially transformational energy technology products including:

- A one-megawatt silicon carbide transistor the size of a human fingernail;
- Microbes that use hydrogen and carbon dioxide to create more energy efficient fuels for transportation; and
- A compressed air system that significantly improves energy storage.

AAU recommends \$400 million for ARPA-E in FY20. This funding level will allow the agency to continue making awards to university-based researchers for high-risk projects that are too far from product development to be supported by industry.

**AAU urges Congress to reach a bipartisan budget agreement to lift the Budget Control Act's harmful discretionary caps in FY20 and FY21 and allow for additional resources to meet the nation's significant investment needs.**