

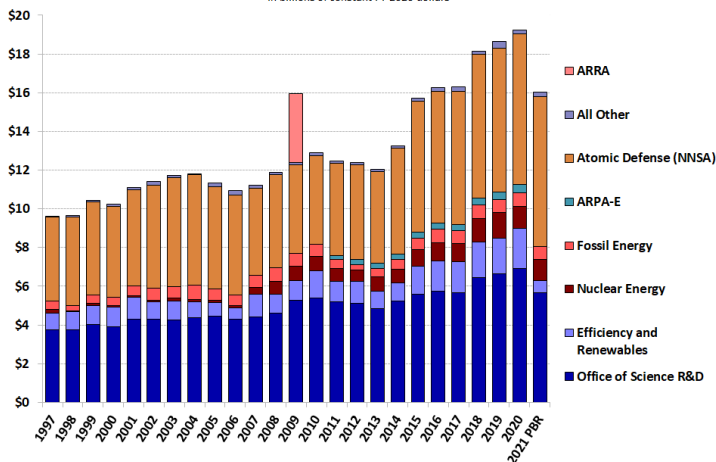


Association
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Inquiry · Innovation · Impact

Department of Energy Research

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. As such, DOE is the primary sponsor of high energy and nuclear physics research, nuclear medicine, heavy element chemistry, and plasma physics. DOE also plays a leading key role in maintaining continued U.S. leadership in other fields including the biological and environmental sciences, high performance and quantum computing, and the development of novel materials.

Trends in DOE R&D, FY 1997-2021
in billions of constant FY 2020 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. © 2020 AAAS

The Office of Science also supports the world's largest collection of major scientific facilities, with 17 National Laboratories across the country. Every year, DOE supports more than 33,000 researchers from universities, industry, and federal agencies at 28 user facilities within the National Labs. 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 \$7.4 billion for the DOE Office of Science and \$450 million for ARPA-E in FY21

The Advanced Research Projects Agency-Energy (ARPA-E) supports promising research too risky for industry to support but that — if successful — could have transformative impacts. Since 2009, ARPA-E has funded over 400 energy technology projects, 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 \$450 million for ARPA-E in FY21. This funding level will allow the agency to continue investing in university-based research for high-risk projects that are too far from product development to be supported by industry.

Since 2009, ARPA-E has provided approximately \$2 billion in R&D funding for more than 800 energy technology projects.

Source: arpa-e.energy.gov