



ASSOCIATION OF
PUBLIC &
LAND-GRANT
UNIVERSITIES

FY 2021 Appropriations Priorities

Energy, Water Development, and Related Agencies

Agency	Account	APLU FY2021 Request
Department of Energy (DOE)	Office of Science	\$7.4 billion
DOE	Advanced Research Projects Agency – Energy (ARPA-E)	\$450 million

DEPARTMENT OF ENERGY (DOE)

OFFICE OF SCIENCE

APLU FY2021 Request: \$7.4 billion

FY2021 PBR = \$5.8 B; FY2020 = \$7.0 B; FY2019 = 6.585 B

The Department of Energy's Office of Science competitively funds our nation's research universities to enhance energy security, discover innovations that fuel our economy, and ensure America remains a science and technology leader. APLU urges Congress to fund the DOE Office of Science with an appropriation of \$7.4 billion in FY2021, a four percent real growth increase from FY2020. This increase would continue support for leading-edge energy research and educating the next generation of scientists. An increase of four percent real growth also aligns with the American Academy of Arts and Sciences report Restoring the Foundation¹ which recommends annual real growth of four percent for federal basic research to close our nation's scientific research shortfall, ensure we prevent an innovation deficit, and keep the U.S. a global leader in science and technology.

The Office of Science is our nation's largest supporter of foundational research in the physical sciences, the steward of 10 national laboratories, and the lead federal agency supporting fundamental research for energy production and security. Through Office of Science-supported research, we now have new materials for industrial use that include super-tough glasses and super-strong steels, and nano techniques to invent a new kind of reusable sponge that can absorb 90 times its weight in oil during oil spills. Accelerator science and technology have also yielded tools that improved airport security, redefined cancer therapy, and brought safe water to millions. DOE Office of Science is currently focusing on advanced and sustainable energy, artificial intelligence and machine learning, genomics, high performance computing, large-scale scientific instrumentation, and quantum information science. Increased funding will support these crucial initiatives to ensure that the U.S. remains a leader in these industries of the future.

The Office of Science also prepares our next generation of STEM researchers, inventors, and entrepreneurs. Through its Early Career Research Program, DOE provides funds for outstanding scientists early in their careers helping to stimulate research careers in the disciplines supported by the

¹ American Academy of Arts and Sciences, "Restoring the Foundation: The Vital Role of Research in Preserving the American Dream" 2014. Updated 2018. Available at <https://innovation-imperative.herokuapp.com/index.html>

DOE Office of Science. Additionally, the Office of Workforce Development for Teachers and Scientists (WDTs) sponsors student internships and other education and training programs at DOE's 17 national laboratories. The DOE laboratories also provide opportunities for STEM training and education, annually engaging over 250,000 K-12 students, 22,000 K-12 educators, 4,000 undergraduate interns, 3,000 graduate students, and 1,600 postdoctoral researchers who will be among our nation's future energy leaders.

ADVANCED RESEARCH PROJECTS AGENCY-ENERGY (ARPA-E)

APLU FY2021 Request: \$450 million

FY2021 PBR = \$0; FY2020 = \$425 M; FY2019 = \$366 M

ARPA-E provides funding to some of our nation's brightest minds in cross-disciplinary research teams to radically transform how we generate, store, and use energy. By leveraging talent in all sectors—from universities, to private industry, to government labs—ARPA-E fosters a robust and cohesive community of energy researchers and technology developers to advance high-potential, high-impact energy technologies. These technologies can radically transform how we generate, store, and use energy.

APLU requests funding ARPA-E at least at \$450 million in FY2021 to support additional solicitations and an increase in support for Scale-up and Demonstration projects. An increase of four percent real growth aligns with the American Academy of Arts and Sciences report Restoring the Foundation which recommends annual real growth of four percent for federal basic research accounts.

In 2017, the National Academies of Science noted that “ARPA-E has the ability to make significant contributions to energy R&D that likely would not take place absent the agency's activities.” Thanks to federal investment in ARPA-E, 76 companies have been formed, 2,489 peer-reviewed journal articles have been published to advance knowledge, and 346 patents have been issued by the U.S. Patent and Trademark Office. Continued funding for this game-changing agency will lead to more groundbreaking technological developments that boost our nation's economy and keep the U.S. at the forefront of energy advancement.

About the Association of Public and Land-grant Universities

APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities. With a membership of over 200 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, our U.S. member campuses enroll 4.3 million undergraduates and 1.2 million graduate students, award 1.2 million degrees, employ 1.1 million faculty and staff, and conduct \$46.7 billion in university-based research.