

DEPARTMENT OF ENERGY RESEARCH

STONY BROOK UNIVERSITY urges Congress to provide at least **\$7.4 billion** for the Department of Energy Office of Science in FY21.

The Department of Energy's Office of Science plays a critical role in enhancing energy security, building our future economy and ensuring America remains a leader in various fields of science and technology. 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 for educating the next generation of scientists. The Office of Science is our country's largest supporter of foundational research in the physical sciences, helping to advance the fundamental science knowledge base and train future scientists. Robust funding for the Office of Science is necessary to ensure we prevent an innovation deficit and build a better America by remaining a global leader in science and technology.

The United States risks falling behind as economic competitors like China recognize the value of research and science grow their investments in these areas. In order to maintain our position as the global innovation leader, funding scientific research, including at the Office of Science, should be a priority. The technological advances funded by federal science agencies like the DOE are the basis of our nation's economic growth and aid in our national defense, and it is essential we continue to grow these investments.

Delivering discovery science and transformative technology



National Synchrotron Light Source II located at Brookhaven National Laboratory

Primarily supported by the U.S. Department of Energy's (DOE) Office of Science, Brookhaven National Laboratory (BNL) is a multidisciplinary laboratory co-managed by Stony Brook University with seven Nobel Prize-winning discoveries, 37 R&D 100 Awards, and more than 70 years of pioneering research that continues to improve our quality of life, grow our economy, and secure our nation.

In January, BNL was chosen as the site to host a multibillion-dollar high-speed atom smasher — an electron-ion collider that is capable of dissecting the mysterious subatomic material that forms the basis of everything in the universe. The collider will be the first of its kind in the United States.

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.

Highlights from Stony Brook University's Recent DOE Funded Research:

- Revolutionizing batteries—SBU scientist Dr. Esther Takeuchi, recipient of the prestigious National Medal of Technology and Innovation, developed the miniature battery that powers most of the world's lifesaving pacemakers and personal defibrillators. Her research now focuses on storing energy generated by wind and solar power.
- Enhancing the performance of Reactivity Controlled Compression Ignition (RCCI), an emerging combustion technology that has the potential to simultaneously reduce fuel consumption and emissions, while providing Americans with greater freedom of mobility at lower costs.
- Developing a new cost-effective High Temperature Superconductor (HTS) cable, which would provide the foundation for the next generation electric power grid worldwide.

DOE funding supports Stony Brook's Advanced Energy Research and Technology Center (AERTC)

A national leader of energy research, Stony Brook's AERTC partners with other universities and research institutions, energy providers, private industry, New York State and DOE to develop advanced, cutting-edge technologies that explore ways of producing and promoting clean energy.



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