

THE DEPARTMENT OF ENERGY
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Department of Energy Announces \$39 Million to Strengthen University-Led Nuclear Energy Research and Development

51 Projects Aim to Cut Carbon Pollution, Create Clean Energy Jobs and Strengthen America's Nuclear Energy Industry

Washington, D.C. – The Department of Energy today announced that it has awarded up to \$39 million in research grants aimed at developing cutting-edge nuclear energy technologies and training and educating the next generation of leaders in the U.S. nuclear industry. Speaking at the U.S. Department of Energy's annual Nuclear Energy University Programs (NEUP) workshop in Chicago, Assistant Secretary Peter Lyons said the grants would support up to 51 projects at colleges and universities around the country.



Assistant Secretary
for Nuclear Energy
Dr. Peter Lyons

Through NEUP, the Department is working to leverage the research and development capabilities of American universities and colleges to enhance U.S. leadership in the global nuclear energy industry. NEUP builds upon the Obama Administration's efforts to ensure that nuclear power is a part of our clean energy mix. Through programs like NEUP, the Department is taking action to restart the nuclear industry as part of a broad approach to create new clean energy jobs and cut carbon pollution.

“The Obama Administration continues to believe that nuclear energy has an important role to play as America moves to a clean energy future,” said Secretary of Energy Steven Chu. “As part of our commitment to restarting the American nuclear industry and creating thousands of new jobs and export opportunities in the process, we are investing in cutting-edge nuclear energy research projects that can develop the technologies required to advance our domestic nuclear industry and maintain global leadership in the field.”

The 51 awards announced today are led by 31 U.S. universities in more than 20 states. Other universities, industry leaders, and national laboratories will serve as collaborators and research partners. The projects selected for negotiation of award cover four nuclear energy research fields including Fuel Cycle Research and Development; Reactor Concepts Research, Development and Demonstration; Nuclear Energy Advanced Modeling and Simulation; and Transformative Research.

Fuel Cycle Research and Development – \$12.4 million

Under this program researchers will develop and demonstrate methods to recycle used fuel to enable the safe, secure and sustainable expansion of nuclear energy, while minimizing proliferation and terrorism risks. Research conducted through this program is focused on developing options that use resources efficiently, reduce waste generation and enable effective waste management. One of the projects being funded is:

Clemson University (Clemson, SC) – Researchers will study the interaction of used fuel with storage containers under extreme conditions to help ensure public and environmental safety during the treatment and disposal of radioactive waste.
DOE award: \$1,000,000

Reactor Concepts Research, Development and Demonstration – \$11.9 million

This program aims to develop new and advanced reactor designs and technologies that broaden the applicability of nuclear reactors while addressing the technical, cost, safety and security issues associated with different reactor concepts. One of the projects being funded is:

Utah State University (Logan, UT) – Researchers will model heat transfer through fluid flows within a nuclear reactor, improving reactor safety and design. The resulting data will be made available in a consolidated database for nuclear energy industry experts and researchers, supporting a wide range of related studies and reducing future testing costs. DOE award: \$635,860

Nuclear Energy Advanced Modeling and Simulation – \$4.9 million

Under this program researchers aim to develop cross-cutting tools used to efficiently design and engineer next generation nuclear energy technologies. Advanced modeling and simulation tools help improve the safety and efficiency of reactor operations while reducing the costs associated with building prototypes and running large-scale experiments. One of the projects being funded is:

Colorado State University (Fort Collins, CO) – Researchers will help develop future sustainable nuclear fuel cycles using model simulations of fuel behavior and performance in reactors. The research will provide a cost effective means to accelerate the development of these new cycles and improve fuel performance. DOE award: \$1,098,250

Transformative Research – \$9.8 million

This research focuses on innovative nuclear science and engineering projects that encourage the development of game-changing nuclear energy technologies, including advanced reactor and fuel cycle concepts. One of the projects being funded is:

Pennsylvania State University (State College, PA) - Researchers will support the development of a sensory system for gauging the effects of aging on advanced nuclear plant components. It will also improve physical measurement accuracy and reduce uncertainty in component life expectancy. DOE award: \$455,628

For the full list of projects selected for award and for additional information about NEUP visit the [Nuclear Energy University Programs](#) website.