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Secretary Chu Announces \$38 Million for 42 University-Led Nuclear Research and Development Projects

Washington, D.C. - U.S. Secretary of Energy Steven Chu today announced the selection of 42 university-led research and development projects for awards totaling \$38 million. These projects, funded over three to four years through the Department's Nuclear Energy University Program, will help advance nuclear education and develop the next generation of nuclear technologies.

"We are taking action to restart the nuclear industry as part of a broad approach to cut carbon pollution and create new clean energy jobs," said Secretary Chu. "These projects will help us develop the nuclear technologies of the future and move our domestic nuclear industry forward."

Twenty-three U.S. universities will act as lead research institutions for projects in 17 states. Other universities, industries, and national laboratories will serve as collaborators and research partners. The projects focus on four nuclear energy research areas:

Fuel Cycle Research and Development (13 projects, \$11,823,154)

The goal of this research area is to research and demonstrate technologies that will enable the safe and cost-effective management of the used fuel produced by the current and future nuclear fuel cycle in a manner that reduces proliferation risk. The research conducted in the program is focused on developing novel technology options that will improve used fuel storage, recycling and disposal options, with performance in cost and environmental consequences significantly improved from current technology performance. Project awardees in this area are below. Actual project funding will be established during contract negotiation phase.

- California State University, Long Beach - \$1,390,252
- Clemson University - \$614,690
- Drexel University - \$1,149,327
- Idaho State University - \$650,000
- Pennsylvania State University - \$1,377,444
- Rensselaer Polytechnic Institute - \$810,141
- University of Florida - \$894,042
- University of Michigan - \$931,603
- University of Michigan- \$406,712
- University of Missouri, Columbia - \$541,286
- University of Nevada, Las Vegas - \$989,800
- University of Wisconsin, Madison - \$616,073
- Washington State University - \$1,451,784

Generation IV Reactor Research and Development (20 projects, \$19,855,912)

The goal of this research area is to research and develop the next generation of nuclear reactors that will produce more energy and create less waste. The focus is developing new reactor technologies with higher safety, economic, and sustainability performance. The program will involve research on crosscutting technologies that will accelerate the development of advanced reactor concepts, including fuels, materials, and reactor modeling. The program also investigates small and medium-sized reactor concepts. If commercially successful, small modular reactors would significantly expand the options for nuclear power and its applications, and may prove advantageous compared to the Generation III+ nuclear plants in terms of economics, performance, and security. The research program is focused on the key technology challenges for these concepts and supports cross-cutting activities, including Modeling and Simulation, Structural Materials, Energy Conversion, Nuclear Instrumentation and Control, and Innovative Manufacturing Approaches. Project awardees in this area are below. Actual project funding will be established during contract negotiation phase.

- Georgia Institute of Technology - \$1,046,277
- Idaho State University - \$1,287,921
- Johns Hopkins University - \$1,183,239
- The Ohio State University - \$1,366,627
- Pennsylvania State University - \$1,000,000
- Rensselaer Polytechnic Institute - \$475,005
- University of California, Berkeley - \$1,320,667
- University of California, Santa Barbara - \$995,232
- University of Cincinnati - \$833,109
- University of Michigan - \$996,581
- University of Michigan - \$1,181,379
- University of Minnesota - \$1,366,163
- University of Minnesota - \$854,542
- University of Missouri, Columbia - \$703,064
- University of Nevada, Las Vegas - \$451,269
- University of South Carolina - \$1,366,626
- University of Washington - \$899,518
- University of Wisconsin, Madison - \$1,352,040
- University of Wisconsin, Madison - \$525,206
- University of Wisconsin, Madison - \$651,447

Light Water Reactor Sustainability (2 projects, \$764,140)

The goal of this research area is to develop technologies and other solutions that can improve the reliability and sustain the safety of current reactors, and provide information to inform decisions on extending the life of current reactors. Research elements are focused on the understanding of fundamental aging and degradation behavior in reactor materials, creating improved inspection and monitoring technologies, fostering development of advanced fuels, and incorporating risk-informed, performance-based techniques in safety margin characterization and life-extension decision making. Project awardees in this area are below. Actual project funding will be established during contract negotiation phase.

- Mississippi State University - \$345,941
- North Carolina State University - \$418,199

Mission-Relevant Investigator-Initiated Research (7 projects, \$5,556,816)

This research area focuses on creative, innovative, and "blue sky" research. This area includes research in the fields or disciplines of nuclear science and engineering such as, but not limited to, Nuclear Engineering, Nuclear Physics, Health Physics, Nuclear Materials Science, Radiochemistry or Nuclear Chemistry. Examples of topics of interest are new reactor designs and technologies; advanced fuel cycles, including advanced nuclear fuels; alternate aqueous and dry processes, including volatility and ionic liquids; instrumentation and control/human factors; radiochemistry; and fundamental nuclear science. Project awardees in this area are below. Actual project funding will be established during contract negotiation phase.

- Idaho State University - \$597,252
- North Carolina State University - \$1,129,304
- Pennsylvania State University - \$870,613
- University of California, Berkeley - \$380,653
- University of Cincinnati - \$1,242,019
- University of Michigan - \$798,943
- University of Wisconsin, Madison - \$538,032

A list of selected projects can be found at:

http://nuclear.gov/pdfFiles/NEUP_FY10_RDAwards.pdf

Additional information on the Nuclear Energy University Program is available at <https://inlportal.inl.gov/portal/server.pt?open=512&objID=600&mode=2>.

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