U.S. Department of Energy

NEUP nuclear energy university program

Michigan Ion Beam Laboratory members work on advancing the understanding of ion-solid interactions by providing unique and extensive facilities to support both research and development in the field. Photo courtesy of Joseph Xu, Michigan Engineering, Communications & Marketing.

Consolidated Innovative Nuclear Research & Development

The Consolidated Innovative Nuclear Research (CINR) Funding Opportunity Announcement (FOA) consists of three research and development (R&D) components. The **Nuclear Energy University Program (NEUP)** awards competitively funded research and development opportunities in two main areas—fuel cycles and reactor concepts. The **Nuclear Energy Enabling Technologies (NEET) Crosscutting Technology Development (CTD)** program funds research that complements NEUP R&D. Programs partner with the **Nuclear Science User Facilities** (NSUF) program to provide R&D funds with access to one-of-a-kind facilities to enable research not typically available to university and industry researchers.

Nuclear Energy University Program

University research integrated with overall DOE-NE program priorities

Fuel Cycle: Evolution of sustainable fuel cycle technologies that improve energy generation, enhance safety, limit proliferation risk, and reduce waste generation and resource consumption.

Reactor Concepts: Preserving the remaining commercial light water reactors as well as improving emerging advanced designs, such as small modular reactors, liquid-metal-cooled fast reactors, and gas- or liquid-salt-cooled high-temperature reactors.

Nuclear Energy Enabling Technologies

Technology development focused on applicability to multiple reactor designs

Advanced Manufacturing: Fabrication and repair techniques to increase viability of existing reactors or improve speed of manufacturing for new nuclear plants.

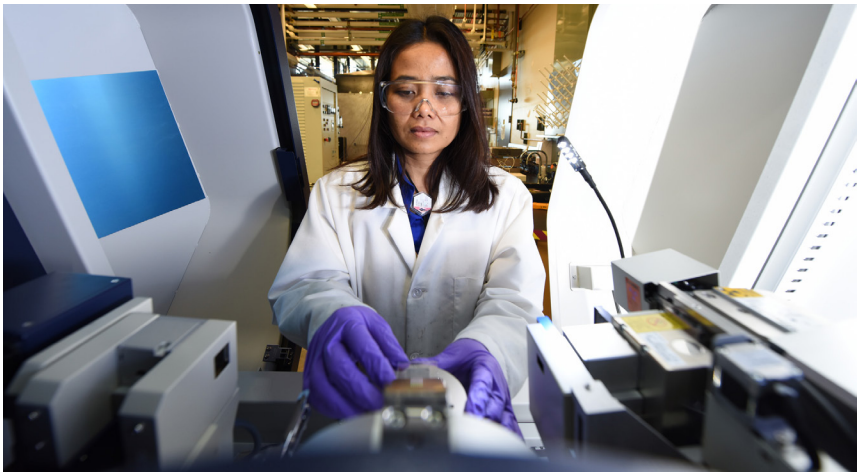
Advanced Sensors and Instrumentation: Demonstration of new sensor, instrumentation or controls technologies that enhance the operations of nuclear facilities.

Nuclear Science User Facilities

Unique capability access to enhance university and industry research projects

Joint R&D and NSUF research projects: NEUP and NEET project funds are combined with NSUF access to enhance research projects with one-of-a-kind testing capabilities.

NSUF Access Only projects: Allows industry leads to access NSUF facilities for large ion irradiations, neutron irradiations or post-irradiation examination work to enhance industry-funded research projects.



Jatuporn Burns operates the x-ray diffractor in the Advanced Materials Laboratory at the Center for Advanced Energy Studies in Idaho Falls, Idaho. Photo courtesy of Chris Morgan, Idaho National Laboratory.

R&D Awards

Since 2009, the NEUP and CINR opportunities have received more than 6,500 pre-applications and over 2,900 full applications. From those applications, DOE-NE has awarded 658 research and development projects to 142 different academic, national laboratory and industry research institutions.

These projects have resulted in support for 1,867 students, over 1,200 scientific publications and over 10,000 citations in other scientific works.

Release Date: October 2019

NEUP	NEET	NSUF
561 Projects	71 Projects	23 Projects
95 Insitutions	29 Insitutions	17 Insitutions
45 Awards/year	9 Awards/year	5 Awards/year
$800K PROJECTS	$1M PROJECTS	$500K PROJECTS
Average # of pre-apps 570	3 TECHNICAL AREAS: Advanced Manufacturing, Sensors & Instrumentation, Materials	$10 million in NSUF facility access/year
Average # of full apps 225		
$409,896,147 Total R&D Funding: 2009-2019	$62,329,237 Total R&D Funding: 2012-2019	$17,904,599 Total R&D Funding: 2016-2019

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