



**U.S. DEPARTMENT OF
ENERGY**

Nuclear Energy

US Approach to Competitive Nuclear Energy Research

US/UK Collaboration Successes and Opportunities

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U.S. Department of Energy**

**4th UK Nuclear Academics Discussion Meeting
September 9, 2015**



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President Obama's Energy Goals

"We can build the next-generation nuclear reactors that are smaller and safer and cleaner and cheaper."

Ohio State University- March 22, 2012



"Today, I'm announcing a new national climate action plan, and I'm here to enlist your generation's help in keeping the United States of America a leader -- a global leader -- in the fight against climate change."

June 25, 2013, Georgetown University

"...the debate is settled. Climate change is a fact. And when our children's children look us in the eye and ask if we did all we could to leave them a safer, more stable world, with new sources of energy, I want us to be able to say yes, we did."

President Obama's 2014 State of the Union Address





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Secretary Moniz on Nuclear Energy



“The Energy Department is committed to strengthening nuclear energy’s continuing important role in America’s low carbon future, and new technologies like small modular reactors will help ensure our continued leadership in the safe, secure and efficient use of nuclear power worldwide.”

*New Investment in Innovative Small Modular Reactor,
December 12, 2013*

“All-of-the-above is not merely a slogan, but a clear-cut pathway to creating jobs and at the same time reducing carbon emissions, which recently stood at their lowest level in 20 years... President Obama has made clear that he sees nuclear energy as part of America’s low carbon energy portfolio. And nuclear power is already an important part of the clean energy solution here in the United States.”

The National Press Club, February 19, 2014

Nuclear Energy University Program (NEUP) and Integrated University Program (IUP) Objectives

- **NEUP and IUP Missions** – In support of the NE research and development (R&D) mission, engage U.S. university community, provide resources to conduct research and related infrastructure improvements, and student fellowship/scholarship grants supporting university-based nuclear science and engineering research and development of the next generation workforce
- **Nuclear Energy Traineeships** – New for 2016. U.S. university-led consortium to address critical workforce needs in radiochemistry. Focused, graduate-level training: curriculum development, internships, summer school, workshops, seminars, stipend, tuition. 5 year effort, individual students supported 2 years.





NEUP Award Map and FY 2014 Summary

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FY 2016 Research Award Opportunities

Nuclear Energy

- US DOE issued its Consolidated Innovative Nuclear Research competitively-awarded research project solicitation on August 13th
- Although all US funding is limited to US universities, national labs and US incorporated industries, **international research partners are strongly encouraged.**
- Each section of the solicitation allows for international partners. Pre-applications due September 17th. IRP applications due December 3rd.
- (New for FY 2016) worksopes supporting the Office of Environmental Management, including radioactive waste management requiring Japanese collaboration (inspired by the UK/US collaboration model), enhanced glass forms for nuclear waste immobilization, and nuclearized robotics.

FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT



U. S. Department of Energy
Idaho Operations Office

Fiscal Year 2016 Consolidated Innovative Nuclear Research
Funding Opportunity Announcement:
DE-FOA-0001281

Announcement Type: Initial 8/7/2015 Draft
Amendment 00001 (8/13/2015)
Amendment 00002 (8/18/2015)

CFDA Number: 81.121

Informational Webinar: August 10–12, 2015
(Video links and presentations will be made available at www.neup.gov)

Issue Date: August 13, 2015

Letter of Intent (Mandatory only for NSUF Applications)
Due Date: August 27, 2015 at 8:00 p.m. ET

Pre-Application (Mandatory except for IRPs and MS-EM-1)
Due Date: September 17, 2015 at 8:00 p.m. ET

IRP Application
Due Date: December 3, 2015 at 8:00 p.m. ET

Full Application
Due Date: February 18, 2016 at 8:00 p.m. ET



Continued UK/US Collaboration Success

- US and UK researchers continued their collaborative success in FY 2015. Six awarded NEUP projects included UK research collaborators, four of which received funding from the Engineering and Physical Sciences Research Council (EPSRC). Thus, \$3.2 million provided by the Department to the lead U.S. universities is augmented by an additional £1.7 million (\$2.6 million) allocated by EPSRC to associated UK research collaborators.
- Since 2012, this strategic partnership has resulted in 8 projects totaling \$28.9 million worth of research, significantly increasing the value of each country's investment in pursuit of mutual clean energy research objectives.
- US DOE looks forward to continued US/UK collaborations!

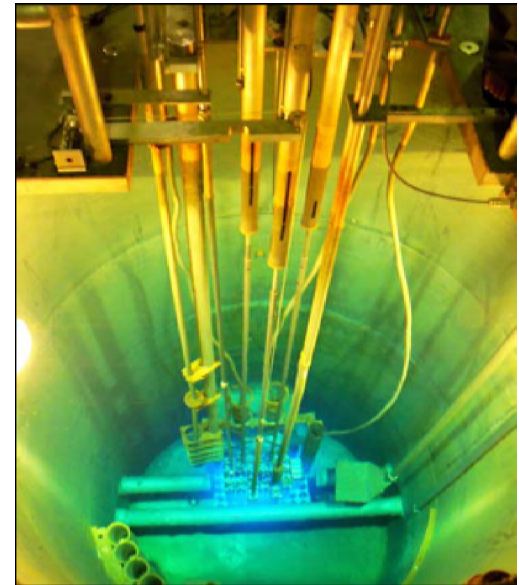


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Global Energy Distribution



as indicated by nighttime electricity use