

Early Returns on GAIN Voucher: Dynamic Natural Convection for Passive Heat Removal

November 6, 2017

The DOE Office of Nuclear Energy GAIN Initiative Voucher program recently awarded a voucher to DYNAC Systems, LLC in order to simulate the performance of a Dynamic Natural Convection (DNC) system with the Idaho National Laboratory's (INL) RELAP5-3D code. It combined the most sophisticated nuclear safety code with the most extensive experience in nuclear safety analysis accumulated at INL. The first RELAP results gained in only 4 weeks of effort are already proving very valuable to DYNAC. Initial results showed that following a station black-out (SBO) in a 3-loop Pressurized Water Reactor (PWR) outfitted with DNC systems, reactor pressures and temperatures drop continuously without safety valves ever opening. As a consequence, no water is lost from the Reactor Coolant Systems (RCS) or the steam generators throughout the event. Initial RELAP5-3D results compared favorably with those provided earlier by another code (MAAP) in demonstrating the effectiveness of DNC in terminating severe external events in Light Water Reactors.



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INL Site Conditions and Properties

September 2015

This report provides a high-level review of potential technical commercial, and natural components likely to influence the planning, preparing, and positioning for the future by investment in the build-out of energy systems at Idaho National Laboratory.



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DOE Announces New Funding Opportunity to Support Advanced Nuclear Reactor Power

October 20, 2017

ARPA-E Provides up to \$20 Million in Funding for Technologies to Enable Lower Cost, Safer Advanced Nuclear Plant Designs

WASHINGTON, D.C. — Today, the U.S. Department of Energy (DOE) announced up to \$20 million in funding for projects as part of a new Advanced Research Projects Agency-Energy (ARPA-E) program: Modeling-Enhanced Innovations Trailblazing Nuclear Energy Reinvigoration (MEITNER). MEITNER projects seek to identify and develop innovative technologies that can enable designs for lower cost, safer, advanced nuclear reactors. The ARPA-E team developed this funding opportunity in close coordination with DOE's Office of Nuclear Energy.



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DOE-NE Releases FY2018 Scientific Infrastructure FOA

October 20, 2017

DOE-NE has released the FY 2018 Scientific Infrastructure Support for Consolidated Innovative Nuclear Research Funding Opportunity Announcement (DE-FOA-0001773). The infrastructure support program will be administered by the Nuclear Science User Facilities program office. This FOA supports research reactor upgrades and general scientific infrastructure for universities only.

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[Read More at NSUF »](#)

DOE-NE Releases FY 2018 CINR FOA

October 19, 2017

DOE-NE has released the FY 2018 Consolidated Innovative Nuclear Research (CINR) Funding Opportunity Announcement (FOA). The FOA contains workscopes for NEUP, NEET, and NSUF research areas. Changes to the FY 2018 CINR FOA include:

- No pre-applications for NEUP or NEET-CTD R&D
- Two new workscopes for R&D
- No IRP workscope
- PI's are only eligible to compete as many applications as they may have with existing eligibility requirements
- All NSUF applications require the NSUF Access Request (a combination of the LOI and pre-app)
- NSUF-2 will be out of phase (delayed) with respect to the rest of the FY 2018 CINR process
- FY 2018 projects are scheduled to begin on Oct 1, 2018

Note: The NSUF Access Requests (required for NSUF-1, NEAMS-2, and NSUF-2) are due on an aggressive timeline so PIs who are submitting in these areas are encouraged to engage with NSUF staff to complete their applications as soon as possible. Guidance for submitting the Access Request is available here: [FY 2018 NSUF Access Request Guidance](#)

Revised CINR Schedule:

October 25, 2017: Informational webinar detailing process changes and scope updates. Register for the webinar here: <https://attendee.gotowebinar.com/register/1983443496345981954>

November 8, 2017: NSUF Access Requests Due

January 12, 2018: NSUF Statement of Work for NSUF-1 and NEAMS-2 Workscopes Due

January 23, 2018: Full R&D/NSUF-1 Applications Due

April 26, 2018: NSUF Statement of Work for NSUF-2 Workscope Due

May 17, 2018: NSUF-2 Full Applications Due

[FY 2018 Consolidated Innovative Nuclear Research FOA \(DE-FOA-0001772\)](#)

[Submit an Application](#)

[Additional Resources](#)

[FY 2018 R&D Technical Points of Contact](#)

[FY 2018 CINR Webinar Presentations](#)

[Nuclear Science and Engineering Sourcebook](#)

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If you have a regulatory question for NRC, please see the [GAIN Regulatory Tab](#) to submit your question.