

FY 2023 Scientific Infrastructure Support for Consolidated Innovative Nuclear Research FOA DE-FOA-0002733

**Informational Webinar
August 9 - 11, 2022**

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Outline

- FOA Overview
- NSUF Integration
- Reactor Upgrades
- General Scientific Infrastructure
- Best Practices
- Pitfalls to Avoid
- Contact Information



FOA Highlights

- Funding Mechanism
 - Funding supplied by the Department of Energy's Office of Nuclear Energy (DOE-NE)
 - Grants issued by the Department of Energy Idaho (DOE-ID)
- Two Funding Opportunities for U.S. Universities
 - Reactor Upgrades (RU)
 - General Scientific Infrastructure (GSI)
- Find the FOA (DE-FOA-0002733) at www.grants.gov
- Submit applications at www.neup.gov
- Additional information at nsuf.inl.gov/Page/infrastructurefoa

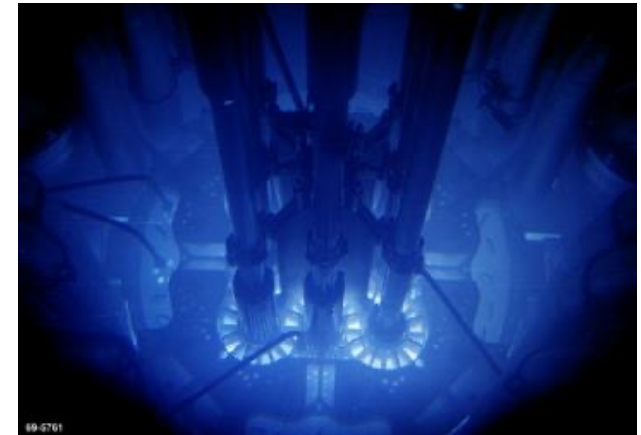
Important Dates

- FOA release date: [August 2022](#)
- Applications due: [November 9, 2022](#)
- Anticipated award announcement: [June 2023](#)



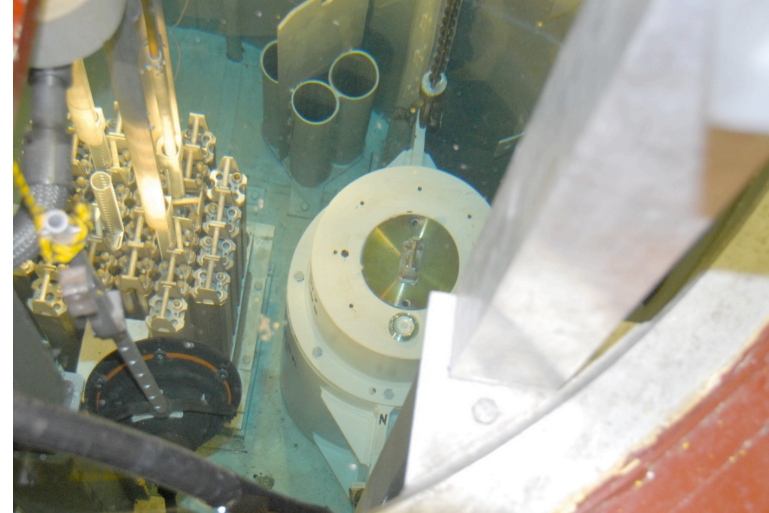
Nuclear Science User Facilities (NSUF)

- DOE-NE provides nuclear energy researchers access to world-class capabilities to facilitate the advancement of nuclear science and technology through NSUF
 - Access to NSUF and its partner facilities is granted through a separate competitive proposal process
- To apply to areas in this FOA, the applicant is required to demonstrate the ability and willingness to join NSUF as a partner if an offer is extended
- If NSUF determines the new equipment/capability adds significant value to DOE, the awarded institution may be invited to join NSUF, so the equipment is available to other researchers.



FOA Organization

Area 1 – University Reactor Upgrades Infrastructure Support



Area 2 – University General Scientific Infrastructure Support

University Reactor Upgrades (RU)

- **Award Size**
 - Maximum individual award: \$5,000,000
 - Expected award range: No more than \$1,500,000
 - DOE anticipated to award several smaller awards
- **Estimated Funding Level**
 - Approximately \$2.5 million
- **Period of Performance**
 - Typically, 1 year (if additional time is need it may be requested and justified in application)

Only educational reactors fueled by DOE are eligible

- List can be found in Part I.C.1.1 of FOA
- Each institution is permitted to submit one application for each research reactor they operate.



RU Review Criteria

- Each application will receive a merit review by DOE, university peers, and NSUF reviewers
- **Review Criteria**
 - (55%) **Safety and/or Security** – Potential of the requested equipment, instrumentation, or modification to:
 - Enhance the safety, performance, control, or operational reliability of research reactor systems; or
 - Increase the quality, safety/security, or efficiency of the operation of the research reactor facility
 - (15%) **Impact** – Potential of the requested equipment, instrumentation, or modification to facilitate, improve, or expand ongoing DOE-NE research and training capabilities
 - (15%) **Utilization** – As a result of the proposed equipment, the amount of student and faculty usage of the research reactor facility, and the amount and variety of research and/or services provided by the facility
 - (15%) **Execution** – Capability to implement the full scope of the project, including timely project completion, personnel qualifications, budget, and feasibility.

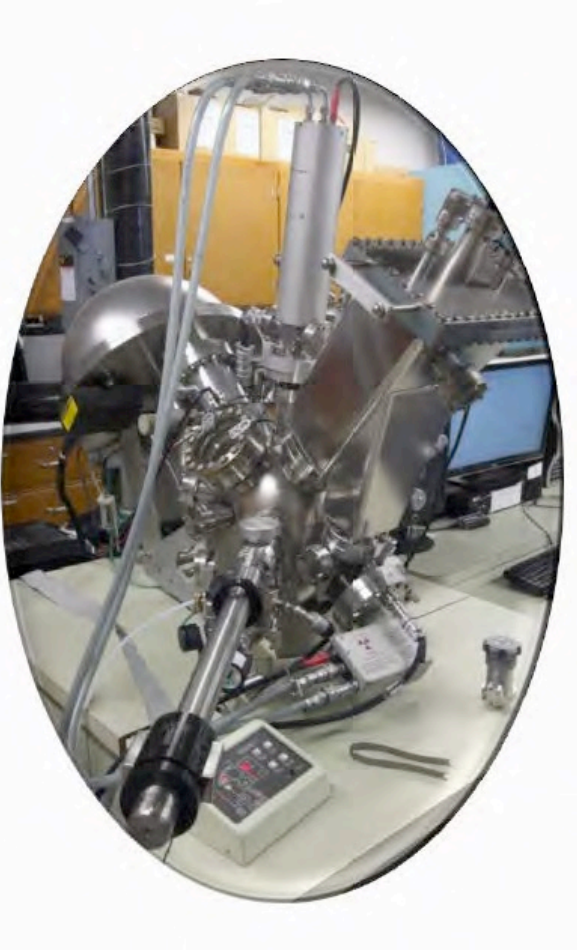
RU Focus Area – Console Spare Parts

- A high priority for this call is the procurement of spare parts and associated hardware for research reactor control consoles
 - These systems are vital for continued safe and reliable reactor operation
 - Established vendors are leaving the market
- Proposals to support continued long-term operation of the university research reactor by purchasing spare parts, subsystems, channels, and detectors will be highly regarded.



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General Scientific Infrastructure (GSI)



- Award Size
 - Maximum DOE funding per individual university award: \$5,000,000
 - Anticipated award size \$250,000
- Period of Performance
 - Typically, 1 year (if additional time is need it may be requested and justified in application)
- Eligibility
 - US universities are eligible to submit applications
 - One application per institution can be submitted to the GSI area of this FOA.
- University cost match (1:1) required after \$250,000
- Estimated Funding Level
 - Approximately \$2.5 million.

GSI General Requirements

- Applications can be submitted for equipment, software, instrumentation, and associated non-reactor upgrade requests that support nuclear energy-related R&D or education.
- Funding requests may include, but are not limited to, equipment and instrumentation for specialized facilities, classrooms and teaching laboratories, and non-reactor NS&E research.
- Infrastructure requests that support the sharing and use of equipment and instrumentation by multiple campuses of a university, multiple universities, or national laboratories are encouraged.



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FY 2022 GSI Focus Areas

- NSUF performs an annual Nuclear Energy R&D capabilities gap analysis to identify areas for investment
 - Applications addressing these identified needs will be given higher priority
- For FY 2023, specific areas of interest are:
 - Capabilities to perform work on radioactive/irradiated materials (>5mr/hr. @ 30 cm, beta/gamma only)
 - **No other specific focus areas for FY 2023**

GSI Reminder of Excluded Areas

NSUF provides access to high-performance computational resources at INL at no cost to users.

- Applications requesting purchase of scientific computing equipment (such as institutional clusters, high-performance computing [HPC] nodes) will not be entertained.
- See nsuf.inl.gov or hpc.inl.gov for information on accessing HPC resources.



Courtesy of Eric Whiting, Director of Scientific Computing (INL)

GSI Review Criteria

Each application will receive a merit review by DOE, university peers, and NSUF reviewers.

Review Criteria

- (25%) **Impact** – Potential of the requested equipment, instrumentation, or modification to facilitate, improve, or expand ongoing DOE-NE research and training capabilities
- (25%) **Utilization** – As a result of the proposed equipment, the amount of student, faculty, or researcher usage of the capabilities, and the amount and variety of research or services provided by the facility
- (25%) **Execution** – Capability to implement the full scope of the project including timely project completion, personnel qualifications, budget, and feasibility
- (15%) **NSUF Priority** – Importance of the proposed upgrade to NSUF as either improving an existing partner facility or as a potential partner facility
- (10%) **Educational Innovation** – Uses of equipment for educational purposes.

GSI Cost Sharing & Cost Match

Cost Matching

- Cost match is required on university **GSI projects** that exceed **\$250,000**
- Dollar for dollar matching requirement, up to the project ceiling of \$5,000,000
 - For example, if the project's total cost was \$350,000; the university would be responsible for \$50,000 and DOE's share would be \$300,000
- Anticipated award range will be around **\$250,000** for most applications.
- **Cost sharing** is encouraged but not required in this FOA.
- Contact the DOE-ID Contracting Office with questions.

Pitfalls to Avoid

The infrastructure requested should be individual, discrete, and definable items or capabilities that will:

1. Support, maintain, or enhance the institution's capacities to attract and teach high-quality students interested in nuclear energy-related studies.
2. Build the institution's research or education capabilities.
3. Enhance the institution's capabilities to perform R&D relevant to DOE-NE's mission.

Focus on a single, synergistic goal or capability:

- A proposal made of several uncorrelated equipment requests does not meet the goals of this FOA.

Try not to duplicate existing capabilities:

- To see NE R&D capabilities in the U.S., review the Nuclear Energy Infrastructure Database (NEID) available at <https://nsuf-infrastructure.inl.gov>.

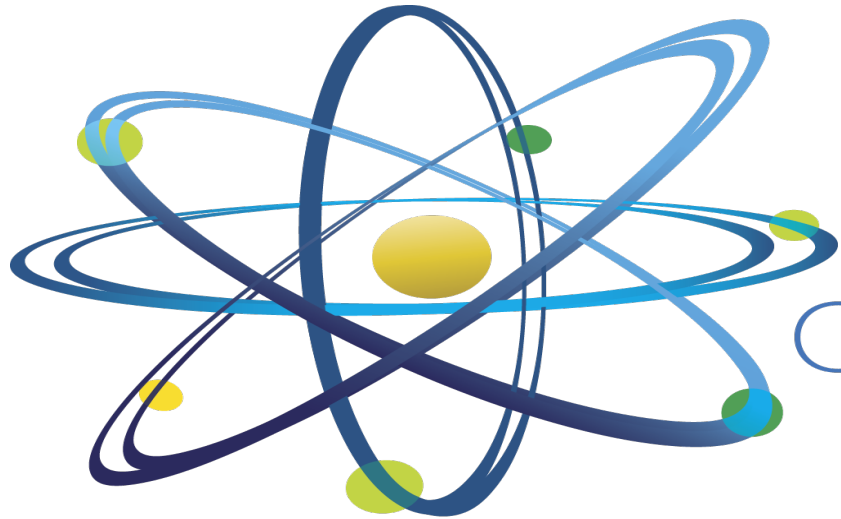
Specifically list any DOE-NE R&D program relevance.

Contact Information



- Technical questions can be submitted to:
 - Brenden Heidrich (TPOC)
 - NSUF@INL.gov
 - The Infrastructure FOA Q&A section at <https://nsuf.inl.gov/Page/infrastructurefoa>
- Procurement questions can be submitted to:
 - Andrew Ford (DOE-ID Contract Specialist)
 - fordaj@id.doe.gov
- Application Site
 - www.neup.gov

Questions?



Clean. **Reliable. Nuclear.**