REQUEST FOR INFORMATION (RFI)

DE-SOL-0008318

Base: April 13, 2015
MOD 0001: July 19, 2018
MOD 0002: March 30, 2023

Input on Potential Office of Nuclear Energy Infrastructure Areas for Competitive Opportunities

Office of Nuclear Energy

Office of Nuclear Energy Technologies

Table of Contents

1 Introduction

NE's mission is to advance nuclear energy science and technology to meet United States (U.S.) energy, environmental, and economic needs. NE has identified the following goals to address challenges in the nuclear energy sector, to help realize the potential of advanced technology, and to leverage the unique role of the Government in spurring innovation:

1. Enable continued operation of existing U.S. nuclear reactors.
2. Enable deployment of advanced nuclear reactors.
3. Develop advanced nuclear fuel cycles and spent nuclear fuel management options.

Developing and maintaining a national RD&D framework to achieve NE's mission requires an integrated approach involving people, tools, facilities, and knowledge tied to strategic partnerships. The infrastructure (i.e., tools and facilities) for nuclear research is a critical part of this framework.

NE currently solicits and awards general scientific infrastructure enhancements to universities and national laboratories, as well as university research reactor upgrades through an annual Scientific Infrastructure Support for Consolidated Innovative Nuclear Research (CINR) Funding Opportunity Announcement. The awards made through this mechanism primarily focus on supporting infrastructure for localized research and training needs.

NE is exploring options for expanding the infrastructure program to enhance the regional or national impact of university research reactors and other nuclear energy research capabilities. Options being considered include expanding the scope and breath of infrastructure projects and expanding the reach of capabilities through consortia, partnerships and/or reactor sharing.

In FY 2023 and FY 2024 there is a specific focus on revitalizing existing nuclear research infrastructure. Infrastructure projects that are tied to one of the following three focus areas will be of particular interest:

- Nuclear cyber-physical security,
- New digital technologies in advanced nuclear reactors, and
- Development and safety assessments of small modular reactors.

For more information on NE's programs, please visit the [Office of Nuclear Energy | Department of Energy](#) website.

Please note that there is a separate [RFI for Research and Development (R&D)](#)

2 Requested Information

DOE is seeking information, comments, feedback, and recommendations from interested parties to

determine what capabilities supporting research, training, and technology demonstrations are of highest interest to the nuclear energy research community. In addition to receiving feedback on the aforementioned capabilities, DOE seeks input on other high priority nuclear energy-related infrastructure needs including information on the potential benefit, location, funding model, and feasibility of establishing, maintaining, and operating such facilities. It is currently envisioned that, in general, supported facilities could become part of the Nuclear Science User Facilities, which provides access to national nuclear energy infrastructure through a competitive process or through full cost recovery mechanisms.

Replies to this request should follow the general organization of Section 2 of this RFI and information should be as succinct as possible. Respondents are encouraged to provide information on all parts of this RFI; however, not every part of the RFI need be answered to submit a response to the RFI.

2.1   Cover Page

Responses shall include a cover page containing the following information:

(1) RFI title and reference number,
(2) Names, phone numbers, and e-mail addresses for the principal points of contact,
(3) Company or affiliate name and address, and
(4) Date of submittal.

2.2   Infrastructure Recommendations

NE is requesting that respondents of this RFI consider providing input to the following questions:

1. What research capabilities or technologies do you believe are most critical to revitalizing nuclear research infrastructure, and what challenges exist to their implementation or use? NE is not assuming that "nuclear research infrastructure" is limited to reactors and is interested in understanding all types of creative and cost-effective approaches to revitalizing U.S. nuclear research capabilities.

2. Are the following areas a priority for the nuclear energy research community and why? What other areas are a priority?

    - Nuclear cyber-physical security,
    - New digital technologies in advanced nuclear reactors, and
    - Supportive technologies in the development of small modular reactors, including their safety assessments.

3. What award structure would best support universities trying to revitalize nuclear research infrastructure? (e.g. consortia, or other types of partnerships, award phasing concepts, infrastructure projects awarded independently or combined with each other and /or with research, education, or outreach in support of a broad outcome, etc.)

4. If multiple infrastructure funding opportunities were available, is there a preference to respond to all simultaneously or have separate opportunities spread throughout the year? Additionally, is there a preference for specific timeframes for those funding opportunity announcement, proposal deadline, and award cycles?

5. NE is exploring how to support expanded outreach through a reactor sharing program to utilize research reactors as regional resources to increase interactions with underserved communities such as MSIs and K-12 institutions. What components of a research reactor sharing program would be most impactful to drive regional engagement with university research reactors?

6. What gaps exist in current regional and/or national university nuclear research infrastructure?

7. What additional information should NE consider in designing or implementing the above opportunities to ensure that historically disadvantaged communities are actively engaged in both the design and execution of projects and included in sharing the benefits of such investments?

2.3 Other Information

Provide any other relevant information you feel is important and not otherwise already covered.

3 Participant Eligibility to Respond to RFI

Information is being sought from educational institutions, National Laboratories, private-sector institutions, international research entities, and any other interested party.

4 Program Guidelines

This market research request is done under the Federal Acquisition Regulation (FAR), Parts 10 – Market Research and FAR subpart 15.201(e) – Requests for Information.

5 Intellectual Property Rights

Participants are advised that their RFI response package should be submitted without any restrictive markings. However, if restrictions are required to fully explain a response, the participant is responsible to mark the cover page and any and all submittal documents appropriately. Respondents are strongly discouraged from placing any restrictive markings on submissions as they may limit DOE's ability to use the submitted information.

6 Communications Protocol

Responses must be submitted through www.NEUP.gov to be considered. You must create an account to access the submission site. Submit electronic submissions through the "Applications" function at www.NEUP.gov. If you have problems completing the registration process or submitting your response, send an email to NEUP@inl.gov.

Participants are advised that any indication of interest, in the affirmative, is not meant to imply nor in any way impart an obligation on the part of the Government that an award will be forthcoming for the offered work or project.

7 Submission Time and Date

The DOE will continually accept responses to this RFI, DE-SOL-0008318, as long as it remains active. For submitted information to be considered for inclusion in the work scopes developed for grant opportunities, a response is required no later than **5:00 p.m. Eastern Time** as follows:

RFI RESPONSE DUE DATE	FOR WORKSCOPE DEVELOPMENT GRANT YEAR
May 15, 2023	2024
May 13, 2024	2025
May 12, 2025	2026
May 11, 2026	2027

This announcement does not impose any obligation on the Government, nor does it signify any intent for a contract or other form of award.

8 Disclaimers

    a. DOE does not plan to send individual acknowledgements or replies to respondents to the RFI. However, DOE may conduct one-on-one meetings with entities that respond to this request if clarification or additional information is required to improve the DOE's understanding of the comments provided. If DOE decides to hold one-on-one meetings, applicable interested parties will be contacted. The decision to meet with a company one-

on-one has no bearing on the worthiness of its RFI submittal or on any future offerings.

b. This is a request for information only. It has no direct relation to other DOE Funding Opportunity Announcements or solicitations. DOE does not presently intend to solicit or award any kind of contract or financial assistance award; this RFI is issued only with the intent of obtaining information.

c. Any response to this RFI is voluntary and does not commit to Government to any expense or obligation. This request does not impose any obligation on the Government or signify a firm intention to enter into a contract. No costs associated with responding to this RFI or participating in any subsequent meetings will be borne by the Government.

d. DOE does not intend to publish the results of the responses to this RFI.