

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



U. S. Department of Energy

Idaho Operations Office

Fiscal Year 2023

**Scientific Infrastructure Support for Consolidated
Innovative Nuclear Research**

**Funding Opportunity Announcement:
DE-FOA-0002733**

Announcement Type: Initial

CFDA Number: 81.121

Informational Webinar: August 9 – 11, 2022
(video links and presentations will be available at www.NEUP.gov)

Issue Date: September 16, 2022

Application Due Date: November 29, 2022 at 7:00 p.m. Eastern Time

Registration Requirements

There are several one-time actions applicants must complete in order to submit an application in response to this Announcement (e.g., obtain Unique Entity Identifier (UEI) number, register with the System for Award Management (SAM), and create an account on the NEUP.gov website at: www.NEUP.gov. Applicants, who are not registered with SAM, should allow up to five weeks to complete this requirement. It is suggested that the process be started as soon as possible.)

The applicant must complete or have already completed the following actions:

1. Obtain a UEI number. UEI website: <http://www.sam.gov/>.
2. Register with the SAM. SAM website: <http://www.sam.gov/>. For more information about SAM registration for applicants please refer to: <https://www.sam.gov/content/entity-landing>
3. Create an account on the NEUP.gov website, using the “Sign In” tab in the top right hand corner. To create an account: 1) click “Create a new account”; 2) fill out the required information and click “Create User”; and 3) fill out the information in the “My Information” section.

Questions

Questions regarding the **content of this funding opportunity announcement (FOA)** must be submitted using the contact information found at Part VII, Section B, of this FOA. DOE will try to respond to a question within three (3) business days, unless a similar question and answer have already been posted on the website.

Application Preparation

Applicants must prepare the application package and application forms from the NEUP.gov website: www.NEUP.gov.

Additional instructions are provided in Section IV of this FOA.

Application Submission

Instructions and a copy of the FOA can be found at www.NEUP.gov.

Electronic applications and instructions are available at the NEUP website. To access these materials: (1) go to www.NEUP.gov; (2) select “Sign In” from the top right hand corner of the screen; (3) enter your user credentials; (4) select “Applications” from the menu; and (5) click on “Create New Application” for the type of application you are creating. Apply at www.NEUP.gov. If you have any questions about your registration, contact the INR Integration Office at 208-526-7804 or at neup@inl.gov.

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LIST OF ACRONYMS

CFR	Code of Federal Regulations
CINR	Consolidated Innovative Nuclear Research
COI	Conflict of Interest
DE	Department of Energy (FOA Number)
DOE	Department of Energy
FC R&D	Fuel Cycle Research and Development
FFATA	Federal Funding and Transparency Act of 2006
FOA	Funding Opportunity Announcement
FSRS	FFATA Subaward Reporting System
FY	Fiscal Year
GSI	General Scientific Infrastructure
HBCU	Historically Black Colleges and Universities
HPC	High-Performance Computing
INL	Idaho National Laboratory
MSI	Minority-serving Institution
NE	Office of Nuclear Energy
NEAMS	Nuclear Energy Advanced Modeling and Simulation
NEID	Nuclear Energy Infrastructure Database
NEUP	Nuclear Energy University Program
NS&E	Nuclear Science & Engineering
NSUF	Nuclear Science User Facilities
OMI	Other Minority Institutions
PDF	Adobe Portable Document Format
PI	Principal Investigator
RC RD&D	Reactor Concepts Research, Development and Demonstration
R&D	Research and Development
SAM	System for Award Management
SF	Standard Form
UEI	Unique Entity Identifier
U.S.	United States

CHECKLIST FOR AVOIDING COMMON ERRORS

Item	Issue
Page Limits	Strictly followed throughout application, including particular attention to: <ul style="list-style-type: none"> - Project Summary/Abstract File - Project Narrative File - Project Team Curriculum Vitae (CV)
Protected Personally Identifiable Information	None present in the application
Project Summary / Abstract	Name of applicant, Principal Investigator (PI), PI's institutional affiliation(s), project title, objectives of the project, description of the project, potential impact, and major participants
Budget	Use current negotiated indirect cost and fringe benefit rates
Budget Justification (attached to budget)	Justify all requested costs
Vendor Quotes (Referenced costs (catalog pricing) or other basis for estimate)	Submit vendor quotes for any single item over \$5,000
Current and Pending Support	Ensure complete listing of all activities, including brief abstract of scope of work for all items listed, regardless of source of funding
Certifications and Assurances	Ensure that signatures are completed for both sections of the certifications and assurances documentation (typically, three (3) signatures are required).
Font Size	Pay particular attention to required font format and sizes, typically, Times New Roman, 11 pt. font.
Forms	Use associated links for any/all forms.

PART I – FUNDING OPPORTUNITY DESCRIPTION

A. STATEMENT OF OBJECTIVES

This Funding Opportunity Announcement (FOA) is for General Scientific Infrastructure Support for Consolidated Innovative Nuclear Research and University Research Reactor Upgrades Infrastructure Support for the U.S. nuclear research community. It is referred to in this document as the “Infrastructure FOA.”

A.1. Background and Objectives

The Department of Energy’s (DOE) Office of Nuclear Energy (NE) provides funding to support crosscutting nuclear energy research and development (R&D) and associated infrastructure support activities to develop innovative technologies that offer the promise of dramatically improved performance for advanced reactors and fuel cycle concepts, while maximizing the use of DOE resources and the sustainability of the existing light water reactor fleet.

The development of nuclear energy-related infrastructure and basic capabilities in the research community is necessary to promote R&D that supports nuclear science and engineering (NS&E), DOE-NE’s mission, and the Nation’s nuclear energy challenges. Accordingly, DOE intends to facilitate the education and training of nuclear scientists, engineers, and policy-makers through graduate and undergraduate study, two-year programs, and R&D that is relevant to the Department and the U.S. nuclear energy industry in general.

The Nuclear Energy University Program (NEUP) supports university-based infrastructure and R&D in key NE program-related areas:

- Fuel Cycle Research and Development (FC R&D);
- Reactor Concepts Research, Development and Demonstration (RC RD&D); and
- Nuclear Energy Advanced Modeling and Simulation (NEAMS)

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

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

The request should focus on a single, synergistic goal, or capability. Applicant must demonstrate the educational or R&D connection between requested pieces of equipment. Applications made of several uncorrelated equipment requests are not of interest. A request should not duplicate existing capabilities.

NE reserves the right to respond to potential shifts in priorities during FY 2023 that may be driven by events, policy developments, or Congressional/budget direction. DOE-NE will factor such considerations into decisions related to the timing and scale of award announcements associated with this FOA.

A.2 Major DOE-NE Funded Research Programs

To review DOE-NE R&D capabilities in the United States, refer to the Nuclear Energy Infrastructure Database (NEID), available at <https://nsuf-infrastructure.inl.gov> (account login required). Information on the current DOE-NE research programs can be found at DOE-NE's website: <https://energy.gov/ne>.

B. RELATED COLLABORATIVE OPPORTUNITES

Utilization of equipment acquired as a result of this Infrastructure FOA may have the potential to enhance or benefit currently funded or proposed DOE-NE R&D projects.

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 the NSUF. Access to the capabilities of the NSUF is granted through a separate competitive proposal process. The NSUF provides state-of-the-art experimental irradiation testing and post-irradiation examination facilities, as well as technical assistance in design and analysis of reactor experiments at no cost to the user. This access allows university, national laboratory, and industry researchers and their collaborators to build on current knowledge to better understand the complex behavior of materials and fuels in the radiation environment of a nuclear reactor.

The NSUF at the Idaho National Laboratory (INL) and its partner facilities represent a prototype laboratory for the future. This unique model is best described as a distributed partnership with each facility bringing exceptional capabilities to the relationship, including reactors, beamlines, state-of-the-art instruments, hot cells, and most importantly, expert mentors. Together, these capabilities and people create a nation-wide infrastructure that allows the best ideas to be investigated, using the most advanced capabilities. Information about existing capabilities within the NSUF can be found on the website (nsuf.inl.gov) or a more general overview of capabilities throughout the world can be found in the NEID available at <https://nsuf-infrastructure.inl.gov>.

Awarding of infrastructure grants through this FOA is one of the methods to expand the NSUF to serve more users. The role that a requested capability might play should be emphasized in an application. If the NSUF determines the new equipment/capability adds significant value to DOE, the host institution may be invited to join the NSUF partnership so the equipment is available to other researchers. As the NSUF focuses on investigating the effects of irradiation on nuclear fuels and materials, applications for capabilities that can accommodate work with radioactive/irradiated materials (>5mr/hr @ 30 cm, beta/gamma only) will be given higher priority.

The NSUF provides access to high-performance computational (HPC) resources at INL at no charge to users. Consequently, applications requesting to purchase scientific computing equipment (such as institutional clusters, HPC nodes, etc.) will not be entertained. See nsuf.inl.gov or hpc.inl.gov for information on accessing HPC resources through the NSUF.

To apply to any of the areas in this FOA, the applicant is required to demonstrate the ability and willingness to join the NSUF as a partner should NSUF offer an invitation.

- Visit the NSUF website <https://nsuf.inl.gov> and contact nsuf@inl.gov for information on becoming an NSUF partner.

C. FUNDING OPPORTUNITIES

DOE is seeking applications under the Infrastructure FOA in the following areas:

1. University Research Reactor Upgrades Infrastructure Support; and
2. General Scientific Infrastructure (GSI) Support for Universities

Number of applications allowed:

- One application per reactor under the University Research Reactor Upgrade Infrastructure Support; and
- One application can be submitted under GSI.

For example, if a university operates two (2) research reactors, it may submit a total of three applications under this FOA (one for each reactor for a total of two under the University Research Reactor Upgrades Infrastructure Support area and one under the GSI area for a total of three applications).

Note: An application to either of these FOA areas is restricted to equipment for activities supporting research, teaching, and education, such as the purchase, set-up, and vendor installation costs for equipment and instrumentation, as well as building modifications that immediately support the installation and operation of the equipment. The following costs are not allowed under this FOA:

- The application cannot include hiring or other human capital costs;
- Indirect costs are not allowed;
- The application cannot include the cost of routine operation and maintenance of equipment;
- Installation costs for equipment and instrumentation that are beyond the vendor's standard installation cost are not allowed;
- Institution-specific costs, not specific to the equipment or instrumentation, are the responsibility of the applicant. For example, if a vendor needs to meet safety and health requirements to access the campus or a facility, then these costs are the responsibility of the applicant; and
- Funds are restricted to equipment for activities supporting research, teaching, and education. Upgrades to increase operational profit or support for commercial activities are not allowed.

Note: DOE has initiated a priority effort to develop and maintain a national R&D framework to achieve NE's research missions, requiring an integrated approach involving people, tools, facilities, and knowledge, tied to strategic partnerships. Experimental infrastructure (i.e., tools and facilities) is a critical piece of this framework. However, these capabilities, especially radiological and nuclear facilities, required to handle nuclear material, are expensive to build and maintain. Therefore, thoughtful management of new capability procurement is required, while also providing researchers with an effective mechanism to obtain access to unique nuclear energy research facilities.

Accordingly, although requests for infrastructure support in response to this FOA are not restricted, DOE reserves the right to consider the results of its ongoing evaluation of priorities as part of the award selection process.

D. University Research Reactor Upgrades Infrastructure Support

D.1 Statement of Objectives

This section describes the objectives for University Research Reactor Upgrades Infrastructure Support. This area of the FOA supports the DOE-NE program missions as previously described in Part I, Section A.1, Background and Objectives.

The following research reactors are eligible to submit applications under this section of the FOA:

1	Idaho State University	13	The Ohio State University
2	Kansas State University	14	University of California, Davis
3	Massachusetts Institute of Technology	15	University of California, Irvine
4	Missouri University of Science & Technology	16	University of Florida
5	North Carolina State University	17	University of Maryland, College Park
6	Oregon State University	18	University of Massachusetts, Lowell
7	Pennsylvania State University	19	University of Missouri, Columbia
8	Purdue University	20	University of New Mexico
9	Reed College	21	University of Texas at Austin
10	Rensselaer Polytechnic Institute	22	University of Utah
11	Rhode Island Nuclear Science Center	23	University of Wisconsin, Madison
12	Texas A&M University	24	Washington State University

Each institution is permitted to submit a **single, separate** application for each research reactor that it operates.

Purposes of the program, include:

1. Upgrade and improve U.S. university nuclear research and training reactors: Applications should be directed to the upgrade of the research reactor or to the purchase/maintenance of equipment and instrumentation for activities related to the safety, performance, control, or operational reliability of the research reactor, including security/safety enhancements required by the federal/state/local regulatory agencies; or
2. Equipment and instrumentation that significantly improve or expand the research, instruction, training capabilities, or operating capabilities related to DOE-NE program missions (e.g., utilization or handling of radiological or radioactive materials) of the research reactor facility, including radiation detection and measurement equipment; and
3. Contribute to strengthening the academic community's nuclear engineering infrastructure.

Please note the following:

- The primary purpose of this FOA is the safety, security, and operational reliability of the university research reactors (Item 1, Purpose of the program, above). Applications addressing those needs will be given highest priority.
- A high priority for this FOA 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. Due to the small market, one vendor has announced in 2019 that it will be exiting the market in 2024, and other vendors may not be reliable suppliers. Replacements often take months from order to delivery. Applications to support continued long-term operation of the university research reactor by purchasing spare parts, subsystems, channels, and detectors will be highly regarded.
- DOE-NE reserves the right to award portions of a request so that available funding can have the highest impact for the research reactor community.
- Infrastructure requests that support the sharing and use of equipment and instrumentation by multiple campuses of a university or multiple universities are encouraged.

Requests for equipment and associated upgrades, specifically for general scientific laboratories, are addressed in Part I, Section C.2 of this FOA.

D.2 General Scientific Infrastructure (GSI) Support for Universities

Statement of Objectives

Part I, Section C.2 describes the objectives of GSI support for the DOE-NE program missions as previously described in Part I, Section A.1, Background and Objectives. Additionally, universities can submit applications that support DOE-NE's mission and objectives by specifically supporting or improving the instructional mission of the university.

Universities are permitted to submit **one single** application to GSI support section of this FOA area per institution.

General requirements:

- Under this FOA, 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 with national laboratories are encouraged.
- Equipment and associated upgrades specifically for university research reactors are the subjects of the University Research Reactor Upgrades Infrastructure Support opportunity discussed in Part I, Section C.1.

PART II – AWARD INFORMATION

Note: The following requirements apply to all FOA areas, unless specific requirements are identified.

A. TYPE OF AWARD INSTRUMENT

DOE anticipates awarding grants to universities.

B. ESTIMATED FUNDING

The estimated amounts identified for each FOA area is contingent upon Congressional appropriations and is subject to significant change.

B.1 University Research Reactor Upgrades Infrastructure Support

DOE currently estimates that it will fund approximately **\$2.5 million** in awards for University Research Reactor Upgrades Infrastructure Support.

B.2 General Scientific Infrastructure (GSI) Support

B.2.1 University General Scientific Infrastructure (GSI) Support

DOE currently estimates that it will fund approximately **\$2.5 million** in awards for University GSI support.

C. MAXIMUM AND MINIMUM AWARD SIZE

- For the two FOA areas, the maximum amount of funding available for an individual award under this area is identified as the FOA ceiling, and the minimum amount of funding available for an individual award under this area is identified as the floor. The ceilings and floors are listed below:

Anticipated Minimum and Maximum Award Size	Federal Floor (i.e., the minimum amount for an individual award made under this announcement)	Federal Ceiling (i.e., the maximum amount for an individual award made under this announcement)	Anticipated Awards	Cost Share/ Cost Match Requirement
University Research Reactor Upgrades Infrastructure Support	None	\$5,000,000	Several smaller awards that are no more than \$1,500,000/each	No Cost Share/ No Cost Match
University General Scientific Infrastructure Support	None	\$5,000,000	Average award will be \$250,000 for the total project period	No Cost Share/ 1:1 Cost Match >\$250k*

*For details, refer to Part III.C - Cost Matching for General Scientific Infrastructure (GSI) Support Applications

D. EXPECTED NUMBER OF AWARDS

The estimated amounts, identified for each FOA area, are contingent upon Congressional appropriations and are subject to change. However, at this time, DOE anticipates making numerous awards under each FOA area, depending on the quality of the submissions and availability of funds. DOE reserves the right to make no awards under this announcement.

E. PERIOD OF PERFORMANCE

DOE anticipates making awards with an estimated project period of one (1) year, beginning October 1, 2023. Additional time, if needed, may be requested and justified in the application.

F. TYPE OF APPLICATION

DOE will accept only new applications under this announcement.

PART III – ELIGIBILITY INFORMATION

Note: The following requirements apply to all FOA areas, unless specific requirements are identified.

A. ELIGIBLE APPLICANTS

Universities and Colleges: In accordance with 2 CFR 910.126(b), eligibility for award is restricted to U.S. universities and colleges.

In addition, NE strives to ensure energy justice and is fully committed to broadening the inclusion and contribution of those communities that have been historically underserved within its programs. Minority-serving institutions (MSIs), including Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs), or institutions located in a disadvantaged community, are highly encouraged to apply to this FOA.

Information on Minority Serving Institutions (MSI) can be found at <https://www2.ed.gov/about/offices/list/ope/itudes/eligibility.html#tips>. This information predominately covers institutions that have been awarded grants through the Department of Education and does not include all institutions that may meet the definition of an MSI. **This resource is not an exhaustive list of minority-serving institutions.**

For purposes of identifying MSIs in NE's application system, NE is using a directory based off of 2020 U.S. Department of Education data compiled by Rutgers University's Center for MSIs, which can be found here: <https://www2.ed.gov/about/offices/list/ope/itudes/2022eligibilitymatrix.xlsx>. This list is also not an exhaustive list of MSIs but will be used as a starting point for auto-identifying MSIs.

If applicants believe that their institution qualifies as an MSI and is not listed, please contact neup@inl.gov with an explanation for how the university meets the conditions of being considered an MSI.

B. COST SHARING

For university participants, cost sharing is not required, but is encouraged.

C. COST MATCHING FOR GENERAL SCIENTIFIC INFRASTRUCTURE (GSI) SUPPORT APPLICATIONS

To maximize the use of available DOE-NE funding, cost matching is required for universities on a 1:1 dollar match for requested amounts in excess of \$250,000 for applications under the General Scientific Infrastructure (GSI) Support for research or teaching. For example, if a \$300,000 project is proposed, cost matching requirements apply to \$50,000 of this amount (the amount over \$250,000), and the recipient would be required to contribute \$25,000. This requirement may not be waived. There is no cost matching requirement for University Research Reactor Upgrades Infrastructure Support Awards.

For cost match, applicants may include the following costs as allowable in accordance with the applicable cost principles:

- a. Cash;
- b. Personnel costs;
- c. The value of a service, other resource, or third party in-kind contribution determined in accordance with the applicable circular of the Office of Management and Budget [**Note:** In-

kind contributions, like any other cost, need to be incurred during the award project period (e.g., DOE cannot give credit for costs incurred prior to the award, including prior development costs, unless otherwise authorized by the applicable cost principles)];

- d. Indirect costs or facilities and administrative costs; and
- e. Any funds received under the power program of the Tennessee Valley Authority (except to the extent that such funds are made available under an annual appropriation act).

Applicants shall not include:

- a. Revenues or royalties from the prospective operation of an activity beyond the time considered in the award;
- b. Proceeds from the prospective sale of an asset of an activity; and
- c. Other appropriated Federal funds.

D. OTHER ELIGIBILITY REQUIREMENTS

NSUF Partner Facilities

To apply to any of the areas in this FOA, the applicant is required to demonstrate the ability and willingness to join the NSUF, as a partner, should the NSUF offer an invitation.

- Visit the NSUF website (<https://nsuf.inl.gov>) and contact nsuf@inl.gov for information on becoming an NSUF partner.
- If the NSUF determines the new equipment/capability adds significant value to DOE, the equipment/capability may be invited to join the NSUF so the equipment is available to other researchers. Information about existing capabilities within the NSUF can be found on the website (nsuf.inl.gov) or a more general overview of capabilities throughout the world can be found in the NEID available at [NSUF-infrastructure.inl.gov](https://nsuf-infrastructure.inl.gov).

PART IV – APPLICATION AND SUBMISSION INFORMATION

Note: The requirements apply to all FOA areas, unless specific requirements are identified.

A. ADDRESS TO REQUEST APPLICATION PACKAGE

Electronic applications and instructions are available at the NEUP.gov website. To access these materials: (1) go to www.NEUP.gov; (2) select “Sign In” from the top right hand corner of the screen; (3) enter your user credentials; (4) select “Applications” from the menu; and (5) click on “Create New Application” for the type of application you are creating. Apply at www.NEUP.gov.

B. DOCUMENT FORMAT REQUIREMENTS

All non-budget documentation (use templates where provided) is to be prepared using standard 8.5” × 11” paper with 1-inch margins (top, bottom, left, right), using a font size no smaller than Times New Roman 11 point. This is a requirement for all pages included in the document, (i.e., table of contents, references, etc.). The preferred file format is Adobe Portable Document Format (PDF) for all documents except for spreadsheets. All spreadsheets are to be uploaded in Excel file format to the online application. Do NOT lock any cells in the spreadsheet.

Applicants must comply with all pertinent page limitations. Any text (including references and data tables) in a document that does not adhere to the requirements listed above (except graphics, graphs, charts, and equations) will be removed from the document and will not be reviewed. DOE reserves the right to dismiss applications that violate formatting requirements. Signature blocks must be signed by the designated official.

Documents should be saved using the document naming suggestion at the bottom of each document description. The tracking ID will automatically be generated by the application system and can be found at the top of the application form under “Tracking ID.”

DOE reserves the right to dismiss applications, which it deems, after initial review, to lack enough detail for reviewers to adequately judge technical merit. Applications submitted with corrupted, incomplete, or incorrect files may be dismissed without further review.

C. LETTER OF INTENT AND PRE-APPLICATION

C.1 Letter of Intent

Letters of Intent are not required.

C.2 Pre-applications

Pre-applications are not required.

D. CONTENT AND FORM OF APPLICATION

Applicants **must** complete the mandatory forms, and any applicable optional forms (e.g., Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. Files attached to the forms must be in Adobe Portable Document Format (PDF) and merged into a single PDF file, unless otherwise specified in this announcement.

D.1 SF-424 – Application for Federal Assistance

Complete all required fields in accordance with the pop-up instructions on the form. The correct form to use is the Application for Federal Assistance SF-424 (OMB 4040-0004), which is available at: www.NEUP.gov or through the link, [SF-424](#). The list of certifications and assurances referenced in Field 21 can be found on the DOE Financial Assistance page at: <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Certifications and Assurances.

Save form as “FY 2023 SF424 Fed Assist (Insert Tracking ID#).pdf.”

D.2 Project/Performance Site Location(s)

Insert the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note: the Project/Performance Site Congressional District is entered in the format of the two-digit state code followed by a dash and a three-digit Congressional district code (i.e., VA-001). Hover over the field in the form for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

Save form as “FY 2023 Performance Site (Insert Tracking ID#).pdf.”

D.3 Project Summary/Abstract File

The one (1) page project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). Do not include any proprietary or sensitive business information in this document, because, if an award is made, the Department may make it available to the public.

Page limit: 1-page, Save this information in a file named "FY 2023 Summary Abstract (Insert Tracking ID#).pdf.”

D.4 Project Narrative File

The project narrative must not exceed eight (8) printed pages, including cover page, table of contents, charts, graphs, maps, photographs, references, and other pictorial presentations while complying with the document format instructions in Part IV, Section B. Applicants must comply with all pertinent page limitations.

DOE reserves the right to dismiss applications that violate formatting requirements. Signature blocks must be signed by the designated official. EVALUATORS WILL REVIEW ONLY EIGHT PAGES, AS SPECIFIED ABOVE. Do not include any Internet addresses (URLs) that provide information necessary to review the application. See Part VIII, Section D, for instructions on how to mark proprietary application information.

Page limit: 8-pages, Save the information in a single file named " FY 2023 Project Narrative (Insert Tracking ID#).pdf.”

The project narrative must include the following:1. **Narrative Cover Page** containing the following information:

- a. Name of organization;
- b. Announcement number;
- c. FOA Opportunity Title (e.g., University Research Reactor Upgrades Infrastructure Support or General Scientific Infrastructure Support);
- d. Technical and business points-of-contact for the applicant, denoting the names, titles, addresses, telephone and facsimile numbers, and electronic mail addresses;
- e. Principal Investigator's (PI's) name, telephone number, facsimile number, e-mail address, and organization name/unit; and
- f. Names of team members or partnerships.

2. **Project Objectives**

This section should provide a clear, concise statement of the specific objectives/aims of the proposed project, including the following:

- a. Briefly describe the NS&E program(s) at your school. If you do not have a current program, describe your plans to establish such a program;
- b. Provide a narrative that describes how your application will further NS&E R&D and education;
- c. Discuss the proposed objectives and goals for use of the equipment;
- d. Discuss how the request enables the university's learning mission;
- e. Discuss how the request fills institutional and/or national infrastructure gaps, and complements existing infrastructure and personnel capabilities; and
- f. Discuss ties to the DOE-NE mission and/or NSUF.
- g. Buy America Requirements for Infrastructure Projects: Include a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. See Appendix A for applicable definitions and other information to inform this statement

3. **Merit Review Criterion Discussion**

The section should be formatted to address each of the merit review criterion and sub-criterion listed in greater detail in Part V, Section A.2, as well as A.3. Applicants shall provide sufficient information to enable reviewers to evaluate the application in accordance with the merit review criteria and other selection factors.

4. **Project Timetable and Description of Work**

This section should outline as a function of time, year by year, all the important activities or phases of the project, including any activities planned beyond the project period. Successful applicants must use this project timetable to report progress. This section should also include a scope of work and execution plan with detail appropriate to the complexity of the project. This will form the basis for the Project Implementation merit review listed in Section V, A.2.1.3 and A.2.2.3.

Applicant must demonstrate the educational or R&D connection between requested pieces of equipment. Applications made of several uncorrelated equipment requests are not of interest.

5. **Relevance and Outcomes/Impacts**

This section is a justification for the proposed project and should explain the relevance of the effort to the mission of DOE-NE and the expected outcomes and/or impacts. This section should include a clear statement of the importance of the project in terms of the utility of the outcomes and the target community of beneficiaries. List all applicable DOE-NE funded R&D projects in this section. Specifically list any DOE-NE R&D program relevance.

6. **Roles of Participants**

Describe the capabilities and qualifications of the PI and application team to accomplish the proposed work. This should include personnel information for any expertise required to accomplish the proposed project. References should be specific to individuals. The PI should state explicitly whether there is any expertise that must be acquired to complete the project and the plan to acquire the expertise (new hires, consultants, etc.).

7. **Facilities and Other Resources**

Identify the facilities (e.g., office, laboratory, computer, etc.) to be used at each performance site listed, and, if appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the other resources available to support the project such as machine and electronics shops.

8. **Equipment**

- a. List important items of equipment synergistic to the proposed capability and, if appropriate, note the location and pertinent capabilities of each.
- b. Describe comparable equipment, if any, already at your organization or within the DOE complex, and explain why it cannot be used. Review the NEID available at <https://nsuf-infrastructure.inl.gov> for information about existing capabilities.

9. **Utilization**

- a. Provide a narrative that describes how your application will allow for researcher usage, both within the institution and by other entities.
- b. Provide a measure of the amount of use expected for the requested equipment and instrumentation by both the proposing institution and others within the research community.
- c. If there is a preexisting capability, provide a description of how readily accessible and/or currently utilized the resource is by other entities.

D.5 Project Team Curriculum Vitae (CV)

Applicants must provide a CV for the PI. CVs are limited to a 2-page maximum. CV must include the following:

- Contact Information.
- **Education and Training**: Undergraduate, graduate, and postdoctoral training. Identify institution, major/area, degree, and year.

- **Research and Professional Experience:** Beginning with the current position, list, in chronological order, professional/academic positions with a brief description.
- **Publications:** Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.
- Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications.
- **Synergistic Activities:** List no more than 5 professional and scholarly activities related to the effort proposed.

CVs should be provided for all staff providing significant and required expertise on the project, following the instructions provided above.

- 2-page limit. Save each CV as a separate file titled, "FY 2023 CV 'Insert PI Name' (Insert Tracking ID#).pdf."

D.6 SF-424A Excel, Budget Information – Non-Construction Programs File

Applicants must provide a separate budget for each year of support requested, and a cumulative budget for the total project period. Use the SF-424A Excel, "Budget Information - Non Construction Programs" form on the DOE Financial Assistance Forms page at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>.

Applicants may request funds under the appropriate Object Class Categories, as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (see Part IV, Section G).

Save this information in a single file named "FY 2023 Budget SF424A (Insert Tracking ID#).xls."

D.7 Budget Justification File

Applicants must justify the costs proposed in each Object Class Category/Cost Classification category. Provide an equipment list with the following information:

Equipment. Provide the following:

- a. Identify clearly the equipment (e.g., description, manufacturer part number, etc., if known);
- b. Explain how the proposed equipment meets the definition of "equipment" at 2 CFR 200.33, as opposed to items of supply;
- c. Explain the need for the equipment to accomplish the project;
- d. Indicate the unit cost and quantity for each item to be purchased; and
- e. Explain how the cost estimates for equipment purchases are established, are determined to be fair and reasonable, and are consistent with applicant institution's established procurement procedures (compliant with 2 CFR 200.17-200.326). Include available supporting documents such as quotes or catalog pricing for the proposed equipment.

If cost sharing is proposed, applicants must have a letter from each third party contributing to the cost sharing (i.e., a party other than the organization submitting the application), stating that the third party is committed to providing a specific minimum dollar amount of cost sharing. The budget justification file should also identify the following information for each third party contributing cost sharing: 1) the name of the organization; 2) the proposed dollar amount to be provided; 3) the amount as a percentage of the total project cost; and 4) the proposed cost sharing - cash, services, or property.

Note: there are restrictions on the use of funds under this FOA:

1. The application cannot include hiring or other human capital costs;
2. Indirect costs are not allowed, except as specified in this FOA;
3. The application cannot include the cost of routine operation and maintenance of equipment;
4. Installation costs for equipment and instrumentation that are beyond the vendor's standard installation cost are not allowed;
5. Institution-specific costs, not specific to the equipment or instrumentation, are the responsibility of the applicant. For example, if a vendor needs to meet safety and health requirements to access the campus or a facility, these costs are the responsibility of the applicant;
6. Funds are restricted to equipment for activities supporting research, teaching, and education; and
7. Upgrades to increase operational profit or support for commercial activities are not allowed.

Save the budget justification information in a single file named "FY 2023 Budget Justification (Insert Tracking ID#).pdf."

D.8 Vendor Quotes

Submit vendor quotes, referenced costs (catalog pricing), or other basis for estimate for any single item over \$5,000. This is required even though the applicant may intend to submit the contract for open bids following the award.

Save file as "FY 2023 Vendor Quotes (Insert Tracking ID#).pdf."

D.9 Cost Sharing

If cost sharing is proposed, applicants must have a commitment letter from each third party contributing to the cost sharing (i.e., a party other than the organization submitting the application), stating that the third party is committed to providing a specific minimum dollar amount of cost sharing.

Save file as "FY 2023 Commitment Letter (Insert Tracking ID#).pdf."

D.10 Past, Current, and Pending Support

Identify funding that is pending or has been awarded, for similar activities related to nuclear infrastructure/curriculum within the last three years. Please identify by source and amount requested/awarded.

Save this information in a file named "FY 2023 Support (Insert Tracking ID#).pdf."

D.11 Interim Conflict of Interest Policy (Required for All Applicants)

a. Policy

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy) can be found at [Financial Assistance Letter No. FAL 2022-02 | Department of Energy](#). This policy is applicable to all non-Federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under the DOE financial assistance award. DOE’s interim COI Policy establishes standards that provide a reasonable expectation that the design, conduct, and reporting of projects funded wholly or in part under DOE financial assistance awards will be free from bias resulting from financial conflicts of interest or organizational conflicts of interest. The applicant is subject to the requirements of the interim COI Policy and within each application for financial assistance, the applicant must certify that it is, or will be by the time of receiving any financial assistance award, compliant with all requirements in the interim COI Policy. The applicant must flow down the requirements of the interim COI Policy to any subrecipient non-Federal entities.

The Recipient is required to disclose, manage, and report conflicts of interest as per the DOE interim COI Policy. Check the appropriate box on the application form certifying compliance with the COI Policy. If any disclosures need to be made, upload a COI document to the COI disclosure area of the application form.

Save this sheet in a single file named “FY 2023 COI Disclosure (Insert Tracking ID#).pdf.”

D.12 SF-LLL Disclosure of Lobbying Activities (Required for All Applicants)

Identify any funds, other than Federal appropriated funds, that have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement.

Save this form as “FY 2023 SF-LLL (Insert Tracking ID#).pdf.”

Applications must include the following documents, which are located at <http://www.NEUP.gov>. DOE reserves the right to dismiss any application package that does not include all required forms.

D.13 Certifications and Assurances

Applicants must complete and attach the Certifications and Assurances form found on the DOE Financial Assistance Forms Page at: [Certifications and Assurances for Use with SF-424 | Department of Energy](#).

Name File: “FY 2023 Cert & Assurances “Insert ID #”

Required Form/File	Format	File Name	Signature Required
Application for Federal Assistance – SF-424	Form	FY 2023 SF424 Fed Assist (Insert Tracking ID	Yes

Required Form/File	Format	File Name	Signature Required
		#.pdf	
Project/Performance Site Location(s)	Form	FY 2023 Performance Site (Insert Tracking ID #).pdf	
Project Summary/Abstract File	PDF	FY 2023 Summary Abstract (Insert Tracking ID #).pdf	
Project Narrative File (limit of 8 pages)	PDF	FY 2023 Project Narrative (Insert Tracking ID #).pdf	
Project Team Curriculum Vitae (limit of 2 pages per Vitae)	PDF	FY 2023 CV “Insert PI Name” (Insert Tracking ID #).pdf	
SF-424A Excel - Budget Information for Non-Construction Programs	Excel	FY 2023 Budget SF424A (Insert Tracking ID #).xls	
Budget Justification File	PDF	FY 2023 Budget Justification (Insert Tracking ID #).pdf	
Vendor Quotes (applicable if over \$5K)	PDF	FY 2023 Vendor Quotes (Insert Tracking ID #).pdf	
Cost Sharing Commitment Letter(s) (if applicable)	PDF	FY 2023 Commitment Letter (Insert Tracking ID #).pdf	
Past, Current, and Pending Support (if applicable)	PDF	FY 2023 Support (Insert Tracking ID #).pdf	
Conflict of Interest Statement Certification Conflict of Interest Disclosure (if applicable)	PDF	FY 2023 COI Disclosure (Insert Tracking ID #).pdf	
SF-LLL Disclosure of Lobbying Activities	Form	FY 2023 SF-LLL (Insert Tracking ID #).pdf	Yes
Certifications and Assurances	Form	FY 2023 Cert & Assurances (Insert Tracking ID #).pdf	Yes

E. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE reserves the right to request additional or clarifying information, for any reason deemed necessary, including, but not limited to:

- Indirect cost information;
- Environmental Checklist;

- Other budget information;
- Name and phone number of the Designated Responsible Employee, for complying with national policies prohibiting discrimination (see 10 CFR 1040.5); and/or
- Representation of Limited Rights Data and Restricted Software, if applicable.

F. SUBMISSION DATES AND TIMES

F.1 Letter of Intent Due Date

Letters of Intent are not required.

F.2 Pre-application Due Date

Pre-applications are not required.

F.3 Application Due Date

Applications must be received by November 29, 2022, no later than 7:00 PM Eastern Time. Applicants are encouraged to transmit applications well before the deadline. **APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.**

G. INTERGOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 - Intergovernmental Review of Federal Programs.

H. FUNDING RESTRICTIONS

Funding for all awards is contingent upon the availability of funds appropriated by Congress for the purpose of this program.

- **Cost Principles.** Costs must be allowable, allocable, and reasonable, in accordance with the applicable Federal cost principles referenced in 2 CFR part 200.
- **Pre-award Costs.** Recipients may charge to an award resulting from this announcement, pre-award costs incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, provided the costs are allowable in accordance with the applicable Federal cost principles referenced in 2 CFR part 200. Recipients must obtain the prior written approval of the Contracting Officer for any pre-award costs that are for periods greater than this 90-day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if, for any reason, the applicant does not receive an award or the award is made for a lesser amount than the applicant expected.

H.1 Prohibition related to Foreign Government-Sponsored Talent Recruitment Programs

a. Prohibition

Persons participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk* are prohibited from participating in projects selected for federal funding under this FOA. Should an award result from this FOA, the recipient must exercise

ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an individual on the project team is or is believed to be participating in a foreign government talent recruitment program of a foreign country of risk. DOE may modify and add requirements related to this prohibition to the extent required by law.

b. Definitions

- 1. Foreign Government-Sponsored Talent Recruitment Program.** An effort directly or indirectly organized, managed, or funded by a foreign government to recruit science and technology professionals or students (regardless of citizenship or national origin, and whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to physically relocate to the foreign state for the above purpose. Some programs allow for or encourage continued employment at U.S. research facilities or receipt of Federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.
- 2. Foreign Country of Risk.** DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

H.2 Buy America Requirements for Infrastructure Projects

Federally assisted projects which involve infrastructure work, undertaken by applicable recipient types, require that:

- all iron, steel, and manufactured products used in the infrastructure work are produced in the United States; and
- all construction materials used in the infrastructure work are manufactured in the United States.

Whether a given project must apply this requirement is project-specific and dependant on several factors, such as the recipient's entity type, whether the work involves "infrastructure," as that term is defined in Section 70914 of of the Bipartisan Infrastructure Law, and whether the infrastructure in question is publicly owned or serves a public function.

Applicants are strongly encouraged to consult Appendix A of this FOA to determine whether their project may have to apply this requirement, both to make an early determination as to

the need of a waiver, as well as to determine what impact, if any, this requirement may have on the proposed project's budget.

I. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

I.1 Where to Submit

Applications must be submitted through www.NEUP.gov.

I.2 Application Validity Timeframe

By submitting an application in response to this FOA, applicants agree that their applications are valid for at least one year from the date set forth for receipt of applications to this FOA. DOE reserves the right (with the concurrence of the applicant) to use the submitted application(s) to make additional awards during this one-year time frame, even after DOE's initial selection announcement has occurred.

PART V – APPLICATION REVIEW INFORMATION

Note: The following requirements apply to all FOA areas, unless specific requirements are identified.

A. CRITERIA**A.1 Initial Review Criteria**

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that:

- a. Proposed work is relevant to the DOE-NE mission;
- b. Applicant is eligible for an award;
- c. Information and documents, required by the FOA, have been submitted; and
- d. Applications submitted do not exceed the number of applications permitted per institution:
 - i. No more than one application per research reactor under the University Research Reactor Upgrades Infrastructure Support area; and
 - ii. No more than one application under the GSI area.

Applications that fail to pass the initial review will not be forwarded for merit review and will be eliminated from further consideration.

A.2 Merit Review Criteria

The following evaluation criteria and weights will be used to evaluate applications submitted in response to this FOA. Rating criteria include whether applicant has shown how the project will increase or enhance research and/or teaching capabilities. The below criteria in Part I, Sections A.2.1 and A.2.2 are dependent on the program area.

A.2.1 University Research Reactor Upgrades Infrastructure

1. (55%) Safety and/or Security: potential of the requested equipment, instrumentation, or modification to:
 - a. Enhance the safety, performance, control, or operational reliability of research reactor systems; or
 - b. Increase the quality, safety/security, or efficiency of the operation of the research reactor facility;
2. (15%) Impact: potential of the requested equipment, instrumentation, or modification to facilitate, improve, or expand ongoing DOE-NE research and training capabilities;
3. (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 actually provided by the facility; and
4. (15%) Execution: capability to implement the full scope of the project, including timely project completion, personnel qualifications, budget, and feasibility.

A.2.2 University General Scientific Infrastructure (GSI) Support

1. (25%) Impact: potential of the requested equipment, instrumentation, or modification to facilitate, improve, or expand ongoing DOE-NE research and training capabilities;
2. (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 and/or services actually provided by the facility;

3. (15%) NSUF Priority: importance of the proposed upgrade to the NSUF as either improving an existing partner facility or as a potential partner facility;
4. (25%) Execution; capability to implement the full scope of the project including timely project completion, personnel qualifications, budget, and feasibility; and
5. (10%) Educational Innovation: uses of equipment for educational purposes.

A.3 Other Selection Factors

Program Policy Factors. The selection official may also consider the following program policy factors in the selection process under all FOA areas, as appropriate (not listed in order of importance):

- Degree to which proposed project optimizes/maximizes use of available DOE-NE funding to achieve DOE program goals and objectives. This includes how those infrastructure projects support DOE-NE research; it may also include how the infrastructure project supports other complementary efforts or projects, which, when taken together, will best achieve program research goals and objectives.
- Application selection may optimize appropriate mix of projects to achieve DOE-NE research goals and objectives.
- Impact of the proposed project on the NSUF.
- Other Cost/Budget considerations, including how well the proposed budget for the equipment or instrumentation will achieve the proposed objectives, and availability of funding.
- The demonstrated ability of the applicant to complete projects in the specified timeframe. This includes prior year DOE applicant awards in progress or not yet completed, as well as any existing or pending no-cost extensions.
- Existing Nuclear Science and Engineering (NS&E) Program, or realistic plan to establish NS&E program.
- Cost share or cost match, if any, proposed.
- Extent or degree to which projects provide a balanced programmatic effort, a variety of research capabilities among various sizes and kinds of organizations, and their geographic distribution.
- Whether the proposed project may directly or indirectly benefit disadvantaged communities or exhibits team member diversity, with participants including but not limited to those from Minority Serving Institutions (e.g. Historically Black Colleges and Universities (HBCUs) /Other Minority Institutions (OMIs)), Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, or members within disadvantaged communities.

The above program policy factors may be used by the Selection Official to assist in determining which application(s) shall receive DOE funding support. These factors, while not indicators of the application's technical excellence, applicant's ability, etc., are essential to the process of selecting the application that, individually or collectively, will best achieve the program objectives and maximize public benefits.

B. REVIEW AND SELECTION PROCESS

B.1 Merit Review

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in DOE's *Merit Review Guide for Financial Assistance and Unsolicited*

Proposals. This guide is available under Financial Assistance Policy and Guidance at <http://energy.gov/management/office-management/operational-management/financial-assistance>.

B.2 Selection

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

B.3 Discussions and Award

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: 1) the budget is not appropriate or reasonable for the requirement; 2) only a portion of the application is selected for award; 3) the Government needs additional information to determine whether the recipient is capable of complying with the requirements in 2 CFR part 200; and/or 4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. ANTICIPATED NOTICE OF SECTION AND AWARD DATES

DOE anticipates notifying applicants selected for award and making awards by July 31, 2023. DOE reserves the right to make additional award selections using applications submitted in response to this FOA. Award(s) for this project are subject to the availability of Federal funding.

PART VI – AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

A.1 Notice of Selection

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV, Section G, with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible.

A.2 Notice of Award

An Assistance Agreement issued and signed by the Contracting Officer is the authorizing award document. It normally includes either as an attachment or by reference the following: 1) Special Terms and Conditions; 2) Applicable program regulations, if any; 3) Application as approved by DOE; 4) DOE assistance regulations at 2 CFR part 200, as amended by 2 CFR part 910; 5) National Policy Assurances, to be incorporated as award terms; 6) Budget Summary; and 7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

B.1 Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR part 200, as amended by 2 CFR part 910 (see <http://ecfr.gpoaccess.gov>). Grants and cooperative agreements made to universities, non-profits, and other entities, subject to Title 2 CFR, are subject to the Research Terms and Conditions located on the National Science Foundation website at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp>.

B.2 System For Award Management And Unique Entity Identifier Requirements

Applicants that do not have an exemption under 2 CFR 25.110 must:

- (1) Be registered in the System for Award Management (SAM) at <https://www.sam.gov> prior to submitting an application or plan;
- (2) Provide its unique entity identifier in each application or plan it submits to DOE;
- (3) Maintain an active SAM registration with current information, including information on a its immediate and highest-level owner and subsidiaries, as well as on all predecessors that have been awarded a Federal contract or financial assistance award within the last three years, if applicable, at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency;
- (4) Remain registered in the SAM database after the initial registration;
- (5) Update its information in the SAM database as soon as it changes;
- (6) Review its information in the SAM database on an annual basis from the date of initial registration or subsequent updates to ensure it is current, accurate and complete; and

(7) Not make a subaward to any entity unless the entity has provided its unique entity identifier. Subrecipients are not required to obtain an active SAM registration but must obtain a Unique Entity Identifier.

(8) For purposes of this FOA provision:

a. System for Award Management (SAM) means the Federal repository into which an applicant must provide information required for the conduct of business as a recipient of Federal funds. Additional information about registration procedures may be found at the SAM internet site (currently at <https://www.sam.gov>).

b. Unique Entity Identifier means the identifier assigned by SAM to uniquely identify business entities.

c. Entity includes non-Federal entities as defined at 2 CFR 200.1 and also includes all of the following for purposes of this part:

i. A foreign organization;

ii. A foreign public entity;

iii. A domestic for-profit organization; and

iv. A Federal agency.

d. Subaward has the meaning given in 2 CFR 200.1.

e. Subrecipient has the meaning given in 2 CFR 200.1.

B.3 Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are in 2 CFR part 170 (see <http://www.ecfr.gov/cgi-bin/ECFR?page=browse>). Prime awardees must register with the new FFATA Subaward Reporting System (FSRS) database, and report the required data on their first tier subawardees. Prime awardees must report the executive compensation for their own executives as part of their registration profile in the System for Award Management (SAM).

B.4 Special Terms and Conditions and National Policy Requirements

Special Terms and Conditions and National Policy Requirements. The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at: <http://energy.gov/management/downloads/special-terms-and-conditions-use-most-grants-and-cooperative-agreements>.

The National Policy Assurances to Be Incorporated as Award Terms are located at: <http://www.nsf.gov/bfa/dias/policy/rtc/appc.pdf>.

Intellectual Property Provisions. The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at: <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>.

Lobbying Restrictions. By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

B.5 Nondisclosure And Confidentiality Agreements Representations (JUNE 2015)

In submitting an application in response to this FOA the Applicant represents that:

- (1) It does not and will not require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.
- (2) It does not and will not use any Federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - a. “These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.”
 - b. The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

Notwithstanding provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

C. NO-COST TIME EXTENSIONS

Unilateral no-cost time extensions will **NOT** be permitted to awards made under this FOA. All no-cost time extensions must provide adequate justification and receive written approval from the Contracting

Officer. No-cost time extensions should be requested as soon as the need is identified, and normally, no later than 3 months before the original project end date.

One no-cost time extension request may be granted for up to 12 months, pending review and approval.

No-cost time extension information and form can be found at:

<https://neup.inl.gov/SitePages/Research%20and%20Development.aspx>.

D. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. A sample checklist is available under Award Form at:

<http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>.

PART VII – QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the announcement must be submitted to the Agency Contact listed in Part VII, Section B of this Infrastructure FOA. Questions and comments concerning this FOA shall be submitted not later than ten (10) calendar days prior to the application due date. Questions submitted after that date may not allow the Government sufficient time to respond.

B. AGENCY CONTACT

Name: Mr. Andrew Ford

E-mail: fordaj@id.doe.gov

Phone: 208-526-3059

C. INFORMATIONAL WEBINAR

DOE-NE holds a webinar each year to discuss changes to its FOAs and workscope areas for upcoming opportunities. Applicants can watch the live webinar and submit questions to be answered in real time. All webinar presentations are recorded and posted on www.NEUP.gov for review by all applicants. Webinar presentations from past years can also be found in the “Archive” section of the www.NEUP.gov website.

PART VIII – OTHER INFORMATION

A. AMENDMENTS

Notices of any amendments to this announcement will be posted on www.FedConnect.net and www.Grants.gov, and, as a courtesy, will also be posted on both <https://nsuf.inl.gov/> and <https://neup.inl.gov>. It is recommended that applicants check the <https://nsuf.inl.gov/> site frequently to ensure they receive timely notice of any modifications or other announcements.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement, and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual, who can make awards and commit the Government to the expenditure of public funds. A commitment by anyone other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages [Insert pages] of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government’s right to use or disclose data obtained without restriction from any source, including the applicant.”

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

“The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct independent reviews, as well as routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/ administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an

application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM

Patent Rights. Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic non-profit organizations to retain title to subject inventions.

Class Patent Waiver. For applicant's that are not domestic small businesses or nonprofit organizations, the Office Nuclear Energy (NE) Class Patent Waiver W(C) 2020-002 may be applicable to an award made under this announcement. The class patent waiver will provide applicants, not subject to the Bayh-Dole Act, the option to retain title to their own inventions, subject to the same government retained rights identified in the Act above. To receive the class waiver, an applicant, must agree to provide statutory minimum cost share required under the award and agree to substantially manufacture technology created under the award in the U.S., or provide other economic benefits to the U.S. in accordance with the U.S. Competitiveness provision set forth in the above-referenced class patent waiver.

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required, except as specifically negotiated in an agreement to satisfy DOE's own needs or to ensure the commercialization of technology developed under a DOE agreement.

Special Protected Data Statutes. This program is covered by a special protected data statute. These special protected data statutes apply to only those applicants who cost share. The provisions of the statute provide for the protection from public disclosure, for a period of up to five (5) years from the development of the information, of data that would be a trade secret, or commercial or financial information that is privileged or confidential, if the information had been obtained from a non-Federal party. Generally, the provision entitled, Rights in Data - Programs Covered Under Special Protected Data Statutes (Item 4 under 2 CFR 910, Appendix A to Subpart D), would apply to an award made under this announcement. This provision will identify data or categories of data first produced in the performance of the award that will be made available to the public, notwithstanding the statutory authority to withhold data from public dissemination, and will also identify data that will be recognized by the parties as protected data.

G. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities, such as the collection and dissemination of information related to potential, planned, or pending legislation.

H. CONFERENCE SPENDING

The recipient shall not expend funds for the purpose of defraying the cost to the United States Government of a conference that was more than \$20,000 [described in subsection (c) of the Consolidated and Further Continuing Appropriations Act of 2013]; or circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General, or senior ethics official for any entity without an Inspector General, of the date, location, and

number of employees attending such conference that is not directly and programmatically related to the purpose of the grant or cooperative agreement.

APPENDIX A – REQUIRED USE OF AMERICAN IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS BUY AMERICA REQUIREMENTS FOR INFRASTRUCTURE PROJECTS

A. Definitions

For purposes of the Buy America requirements, the following definitions apply:

Construction materials includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives^a—that is or consists primarily of:

- non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- glass (including optic glass);
- lumber; or
- drywall.

Infrastructure includes, at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

In addition to the above, the infrastructure in question must be publically-owned or must serve a public function; privately owned infrastructure that is solely utilized for private use is not considered “infrastructure” for purposes of Buy America applicability. The Agency, not the applicant, will have the final say as to whether a given project includes infrastructure, as defined herein. Accordingly, in cases where the “public” nature of the infrastructure is unclear, DOE strongly recommends that applicants complete their full application with the assumption that Buy America requirements will apply to the proposed project.

Project means the construction, alteration, maintenance, or repair of infrastructure in the United States.

B. Buy America Requirements for Infrastructure Projects (“Buy America” requirements)

In accordance with section 70914 of the BIL, none of the project funds (includes federal share and recipient cost share) may be used for a project for infrastructure unless:

- (1) all iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;

^a BIL, § 70917(c)(1).

(2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and

(3) all construction materials^b are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. The Buy America requirements only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America requirements apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

The Buy America requirements only apply to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does the Buy America requirements apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

These requirements must flow down to all sub-awards, all contracts, subcontracts and purchase orders for work performed under the proposed project.

For additional information related to the application and implementation of these Buy America requirements, please see OMB Memorandum M-22-11, issued April 18, 2022: <https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>

C. DOE Submission Requirements for Full Application

Within the first two pages of the workplan, applicants must provide a short statement on whether the project will involve the construction, alteration, and/or repair of infrastructure in the United States. The ultimate determination about whether a project includes infrastructure remains with DOE, but the applicant's statement will assist project planning and integration of domestic preference requirements, which may impact the project's proposed budget.

D. Waivers

In limited circumstances, DOE may waive the application of the Buy America requirements where DOE determines that:

(1) applying the Buy America requirements would be inconsistent with the public interest;

^b Excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

(2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or

(3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

If an applicant is seeking a waiver of the Buy America requirements, it must include a written waiver request with the Full Application. A waiver request must include:

- A detailed justification for the use of “non-domestic” iron, steel, manufactured products, or construction materials to include an explanation as to how the non-domestic item(s) is essential to the project
- A certification that the applicant or recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with potential suppliers;
- Applicant /Recipient name and Unique Entity Identifier (UEI)
- Total estimated project cost, DOE and cost-share amounts
- Project description and location (to the extent known)
- List and description of iron or steel item(s), manufactured goods, and construction material(s) the applicant or recipient seeks to waive from Domestic Content Procurement Preference requirement, including name, cost, country(ies) of origin (if known), and relevant PSC and NAICS code for each.
- Waiver justification including due diligence performed (e.g., market research, industry outreach) by the applicant or recipient
- Anticipated impact if no waiver is issued

DOE may require additional information before considering the waiver request.

Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver described at [\[link to awarding agency web site with information on currently applicable general applicability waivers\]](#).

The applicant does not have the right to appeal DOE’s decision concerning a waiver request.