

**DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION
OFFICE OF DEFENSE NUCLEAR NONPROLIFERATION**



**NUCLEAR SCIENCE AND ENGINEERING CONSORTIUM
FOR NONPROLIFERATION**

**NOTICE OF FUNDING OPPORTUNITY ANNOUNCEMENT (NOFO)
NUMBER: DE-FOA-0003437**

**NOFO TYPE: NEW AND RENEWAL
ASSISTANCE LISTING NUMBER: 81.113**

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<i>*Full applications are due at 11:59 PM ET (or 2359 ET) on their respective deadlines.</i>	

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SECTION I – FUNDING OPPORTUNITY DESCRIPTION

A. PROGRAM DESCRIPTION

The U.S. Department of Energy, National Nuclear Security Administration (DOE/NNSA), Office of Defense Nuclear Nonproliferation Research and Development (DNN R&D) drives innovative research that develops technologies and expertise to detect foreign nuclear proliferation activities and produces technologies for integration into operational systems by leveraging capabilities at the DOE National Laboratories, Plants, and Other Field Sites, as well as at universities and within private industry. DNN R&D supports U.S. nuclear security objectives to reduce global nuclear security threats through the innovation of unilateral and multi-lateral technical capabilities to detect, identify, and characterize:

1. Foreign nuclear weapons development activities.
2. Illicit diversion of special nuclear materials.
3. Nuclear explosions globally.

Additionally, DNN R&D sustains and develops foundational nonproliferation technical capabilities by providing targeted, long-term support for enabling infrastructure, science and technology, and an expert workforce.

For DNN R&D, the role of Institutions of Higher Education (as defined in [Section III](#)) is to innovate, develop, and prove some of the most challenging basic aspects of new technology and methods in coordination with the DOE National Laboratories, which can in turn fulfill their unique role to perform mission-specific research and development that improves on capabilities until they are either adopted by operational enterprises or transitioned into private industry for commercialization. Transparency and effectively linking the roles of these Institutions of Higher Education (IHEs) and DOE National Laboratories represents the core of how DNN R&D proposes to meet its objectives.

The DOE NNSA Office of Defense Nuclear Nonproliferation Research and Development (DNN R&D) Notice of Funding Opportunity (NOFO), **DE-FOA-0003437**, and succeeding awarded agreements, are made possible from NNSA's statutory authority, and are managed by applicable guidance, regulations, and laws.

Throughout this document, the term DOE National Laboratories is used to collectively refer to DOE National Laboratories, Plants, Other Field Sites, and complexes.

B. PRIMARY PURPOSE AND BACKGROUND

The primary purpose of this opportunity is to direct-fund basic research at universities that complements applied research in nuclear nonproliferation at the DOE National Laboratories. This includes foundational disciplines of nuclear physics, science and engineering, radiation detection, nuclear material science, radiochemistry, and mass spectrometry. A secondary benefit to this research is the development of a diverse and highly talented cadre of technical professionals, including as scientists, engineers, technicians, and operational personnel, who become the next generation of technical leaders in nuclear missions, such as nonproliferation, arms control, incident response, intelligence, and energy. These professionals are expected to primarily benefit the DOE National Laboratories as future research staff but will also benefit academia, private industry, and U.S. government agencies, including Energy, State, Defense, Homeland

Security, Justice, and the Intelligence Community.

The intent of this NOFO is to award one (1) five-year cooperative agreement to a consortium consisting of accredited IHEs to provide the opportunity to receive and administer Federal financial assistance funds for student and faculty research, fellowships, and scholarship funding awarded by DOE/NNSA, DNN R&D.

The envisioned cooperative agreement will be awarded to a consortium of IHEs which will include the participation of DOE National Laboratories as consortium-member(s). Individual IHEs consortium-member shall make specific contributions and shall receive specified portions of the funding.

The consortium may include student and research fellows and must have a long-term objective of building expertise in scientific disciplines directly relevant to nuclear nonproliferation. Research results should be incorporated readily into IHE curricula. Students, faculty, and researchers must be able to work unencumbered while moving across organizational and bureaucratic boundaries of the academic and governmental facilities engaged in the consortium, while properly protecting critical information and materials. The consortium should establish reciprocal DOE National Laboratory arrangements between the lead IHE and other IHEs as well as relationships with appropriate DOE National Laboratories (See Attachment 2).

C. INTEGRATION WITH DNN R&D NEEDS

Integration of the research and development efforts provides the technical base for U.S. security agencies to meet their nonproliferation, counterproliferation, and counterterrorism responsibilities.

Sponsored research at the DOE National Laboratories conducted by small businesses and the academic community are leveraged to ensure the advancement of research. New research results and challenges continually emerge from the U.S. Government's nuclear nonproliferation needs; thus, the management plan must detail innovative ideas with formal mechanisms for leveraging these capabilities. Where topically appropriate, DNN R&D encourages collaboration and innovative thinking across all nuclear science disciplines to develop technologies and approaches that will advance its mission.

DNN R&D management expects to be an active partner in the award. Therefore, the recipients and subrecipients will participate in DNN R&D's annual University Program Review (UPR) and should budget accordingly. In addition to the participation, periodic assessments are conducted by DNN R&D to verify progress towards meeting the proposed topical/focus areas and applicable milestones. These assessments focus on but are not limited to the IHE's effective and efficient use of provided resources; maintaining nonproliferation-related disciplines through research and development; and conducting work pertinent to current and emerging nonproliferation activities.

D. STATUTORY AUTHORITY

- Atomic Energy Act of 1954, as amended, Section 31, Public Law 83-703, 68 Stat. 919, 42 U.S.C. 2051
- Energy Reorganization Act of 1974, Title 1, Section 107, Public Law 93-438, 88 Stat. 1240, 42 U.S.C. 5817
- Federal Nonnuclear Energy Research and Development Act of 1974, Public Law 93-577; Department of Energy Organization Act of 1977, as amended, Public Law 95-91, 42 U.S.C. 7101 et. seq.

E. APPLICABLE REGULATIONS AND GUIDANCE

Applicable regulations and guidance include, but is not limited to the following:

- Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, codified at 2 CFR 200.
- U.S. Department of Energy Financial Assistance Requirements, codified at 2 CFR 910.
- Department of Energy – Guide to Financial Assistance.

F. UNCLASSIFIED

All projects funded through the Office of Defense Nuclear Nonproliferation program announcement are required to be unclassified.

Reminders:

- The Technical Project Officer (TPO) and Grant Officer are the only NNSA federal staff members that are allowed to provide direction on the Nuclear Science and Engineering Consortium awarded cooperative agreements.
- Appropriated funds for the use under the cooperative agreement may not be used to pay for any DOE NNSA staff to include those staff members of a DOE National Laboratory.

G. MISSION AREA REQUIREMENTS

For DNN R&D, the role of IHEs is to innovate, develop, and demonstrate some of the most challenging basic aspects of new technology and methods in coordination with the DOE National Laboratories that in turn fulfill their unique role to perform mission-specific research and development that improves on capabilities until they are either adopted by operational enterprises or transitioned into private industry for commercialization. Transparency and effectively linking the roles of these IHE and DOE National Laboratories enables the attainment of DNN R&D's objectives. To lead the investment in research and development of new technologies in support of the Nation's nuclear security and nonproliferation goals, DNN R&D sponsors research and development across all disciplines of nuclear science and security.

A successful consortium must be comprised of a rich collaborative environment between university members, their student and faculty researchers, and the DOE National Laboratory scientists and staff. This environment should have a priority on building skill sets in the critical nuclear disciplines such as:

- nuclear physics, science and engineering
- radiation detector science
- nuclear material science
- nuclear chemical engineering
- computational and optimization methods for nuclear applications

Therefore, the proposed consortium must address:

- Producing research results in nuclear science or engineering of a basic or fundamental nature.
- Achieving the original congressional goals to support the continued development of the nuclear

engineering and science disciplines.

- Enabling collaborative research relationships between universities, the DOE National Laboratories, and other government agencies.
- Transitioning basic science and technology from universities to U.S. government applications.
- Motivating talented researchers toward careers in universities, the DOE National Laboratories, and government agencies with nuclear missions.

The application must contain:

- A minimum of three other university partners who meet the above definition of IHE as consortium members. An integrated approach to the work will be essential in tackling the proposed tasks under the consortium. The lead university is discouraged from including an overly large number of loosely connected university partners.
- A minimum of one or more DOE National Laboratories as consortium members in accordance with the “Other Eligibility Requirements” under [Section III](#). It is essential that the IHEs engage DOE National Laboratory partners early in application development to forge a connection to collaborate on future work and have unique and innovative approaches to accomplish proposed tasks.

The proposed consortium may focus on other concepts and support:

- Creation of early-career professorial fellowships relating to nuclear science and engineering to include research support funds.
- Post-doctoral research fellowships relating to nuclear science and engineering, including nonproliferation research at DOE National Laboratories.
- Undergraduate basic research internships and graduate research fellowships relating to nuclear science and engineering.
- Improvements to university and college infrastructures for conducting basic research and development relating to nuclear science and engineering.
- Incorporation of outcomes of sponsored research into continuous nuclear science and engineering expertise development improvement (e.g. curriculum improvements).

H. COLLABORATION WITH DOE/NNSA NATIONAL LABORATORIES

The consortium is required to collaborate with DOE National Laboratories. The IHE’s prime applicant (lead) Principal Investigator (PI) must contact the Grants Officer immediately should they have any concerns or issues with any required or optional collaboration.

IHEs must engage with DOE National Laboratories as early as possible in their application process. Universities are encouraged to engage with a moderate number of well-considered DOE National Laboratories identifying specific areas of collaboration rather than simply providing generic support partnership letters to the proposed consortium. The DOE National Laboratory members will leverage existing DNN R&D funding to support involvement – including any mentoring – to the extent it delivers mutual benefit. DNN R&D will provide management consortium support funds directly to DOE National Laboratory team members (as done for previous consortia awards) to assist in managing the Laboratory-University interactions and manage student and faculty rotations with the DOE National Laboratory.

The consortium should include student and early career research fellowships and have a long-term vision to build expertise in nuclear security and nonproliferation. Students, faculty, and researchers must be able to work unencumbered across organizational and bureaucratic boundaries of the academic and governmental facilities engaged in the consortium, while properly protecting critical information and materials. Thus, the consortium should establish reciprocal arrangements between the home academic institution and other degree-granting institutions as well as relationships with appropriate DOE National Laboratories.

DOE National Laboratory Rotations

Postdoctoral (U.S. citizens and permanent residents) will be expected to conduct a lab/site/complex rotation with one of the partner DOE National Laboratories. A reasonable number of professors should expect to participate via a short detail, 4-8 weeks, at a Laboratory with their student(s). The intent is to motivate professor and student teams to forge new collaborative relationships with the DOE National Laboratories and provide access to varying degrees of professional knowledge, application, and equipment resources. Universities should plan accordingly and budget to participate in these rotations. In addition, cost efficiencies for travel should be considered for long-term stays (e.g., 4-8 weeks). For example, hotels similar to Extended Stay America at [Affordable Short & Long-Term Hotels | Extended Stay America](#) may offer better daily rates for longer stays (e.g., 4-8 weeks) than standard hotels or standard lodging per diem rates on GSA Travel.

Collaboration with DOE National Laboratories

The collaborations with DOE National Laboratories may include but is not limited to DOE/NNSA staff serving in ancillary activities such as guest lectures or on doctoral committees; mentoring students and staff; and presenting congruent topics at symposia or workshops. Because NNSA staff are held to specific Code of Ethics and even NNSA staff may need to obtain approval by NNSA Office of the General Counsel to serve or collaborate in some requested areas.

While DOE National Laboratory staff may mentor the consortium's participants (staff and students), DOE/NNSA staff are not authorized to perform any portion of the technical work or research authorized in the awards under this NOFO.

For all collaboration activities that have associated travel, applicants should use their entity's travel and per diem policy when requesting the funding. If an entity does not have a travel per diem policy, they may use GSA's guidelines for per diem rates which can be found at, <https://www.gsa.gov/policy-regulations/policy/travel-management-policy-overview>. The budget justification must reflect each cost requested.

DOE National Laboratories

DOE National Laboratories are not eligible to compete as the prime or subapplicant under this NOFO; however, each lead IHE application must propose one or more DOE Laboratories as collaborators subject to the below guidelines.

Authorization for DOE National Laboratories participation: The cognizant Contracting Officer for the DOE National Laboratory must authorize in writing the participation of the DOE National Laboratory(s) on the proposed project and this authorization is requested at selection and must be submitted upon request. Further, collaboration letters from the collaborating DOE National Laboratory employee(s) must be submitted with the application to include a statement that no grant funds will be provided to the lab and/or site/complex from the awarded cooperative agreement.

The following language is acceptable for the cognizant Contracting Officer authorization and may be used when selected and upon request:

"Authorization is granted for the [Name] Laboratory and/or Site/Complex to participate in the proposed project. The work proposed for the laboratory and/or Site/Complex is consistent with or complimentary to the missions of the laboratory and/or site/complex, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory and/or site/complex, and will not place the laboratory and/or site/complex in direct competition with the domestic private sector."

The portion of the effort to be performed by all DOE National Laboratory's collaborators in aggregate shall not approach or exceed 50% of the total effort. In addition, the DOE National Laboratories' effort should be well thought out rather than having all labs and/or site/complexes issue generic partnership letters to all university applicants. The intent is that the DOE Laboratories may not play a role comprising most of the teaming arrangement and work effort.

DOE National Laboratories are to provide a **Draft of the Authorization** discussed above and a Field Work Proposal in accordance with the Work Authorization System or [NNSA SD 412.1](#), Work Authorizations as applicable, Work Authorization System with the lead university consortium application, and a Final to be submitted 30-45 days from notice of selection. This authorization is sought by and submitted by the Prime Applicant.

Funding for any work being done by a DOE National Laboratories will be funded directly by the program office. This funding will be transmitted to the laboratory via an internal Work Authorization Implementation Plan (IP) process. The amount of funds that a laboratory uses in teaming with the IHE will not be factored into the IHE's total award amount.

- **Value/Funding:** The value of, and funding for, the DOE National Laboratories' portion of the work should not be included in the prime IHEs proposed budget.

NNSA will examine the continuity and consistency of program objectives and assure that the objectives are responsive to all disciplines of nuclear science and security needs of NNSA and the nation. NNSA members will include the Program Manager and other senior NNSA officials as required.

The Proliferation Detection Office, as a part of DNN R&D, will directly fund the DOE National Laboratories to support the consortium. The funding will be resourced in accordance with a Life Cycle Plan (LCP) to be submitted by each participating DOE National Laboratory. The consortium can freely discuss participation with their DOE National Laboratory partners, but the Program Office retains control of funding and scope.

- Collaborative DOE National Laboratories will facilitate coordination of research between National Laboratories and the consortium.
- Laboratory employees may rotate through the IHE to aid in research and the laboratory will cover their associated fees that may include per diem, lodging, and travel expenses.

The following DOE/NNSA Roles and Responsibilities are not all-inclusive but are being highlighted to better define the expectations of participant organizations. Upon selection, the following will be added to the consortium's award:

- DOE/NNSA will participate in overall program management of the Consortium and is primarily represented by the NNSA Program Manager. The Program Manager coordinates the activities of IHE with Headquarters and the Grants Officer.
- The DOE/NNSA Program Manager reviews all deliverables and reviews/recommends approval of any other changes on the Cooperative Agreement to the Grant Officer.
- The DOE/NNSA Program Manager also reviews, recommends, and submits a Purchase Requisition (PR) to the Grant Officer for annual incremental funding on the Cooperative Agreement and assures orderly progression of work from year-to-year which is referred to as the Continuation Application and included in the Terms and Conditions of the Cooperative Agreement.

Consortium Role and Responsibilities

Consortium professor/student teams may detail to a DOE National Laboratory collaborator for forging new relationships and conducting research and the IHE will cover all associated fees that may include stipends, tuition, per diem, lodging and travel expenses.

Responsibility of Successful Applicant (Lead IHE)

The selected applicant of the award (Prime or lead university) is the lead or prime recipient, and responsible for managing the entire scope, schedule, and cost of the project, to include all reporting. The selected Prime (lead) applicant will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the DOE National Laboratories and other consortium members.

This cooperative agreement will ONLY provide funding to the university members of the consortium. The DOE National Laboratory members will leverage existing DNN R&D funding to support involvement – including any mentoring – to the extent it delivers mutual benefit. DNN R&D will provide management consortium support funds directly to DOE National Laboratory team members (as done for previous consortia awards) to assist in managing the laboratory-University interactions, managing:

- IHE Credit for Student: The lead IHE and consortium members should establish a program to acknowledge students who participate in DOE National Laboratory stints and working with DOE National Laboratory mentors. This can be done at the discretion of the IHE; for example, by providing a one semester credit or internship for that student.
- Eligible Students for Direct Benefit: Students who are directly funded and/or provided benefit by assisting with research and associated projects should be in their junior year or beyond for undergraduate academic studies or a graduate student who is pursuing studies toward a subject pertaining to the topic(s) being supported by their group. The program will periodically request corroborating eligibility data when assembling metrics and various internal reports.

I. LETTER OF SUPPORT FROM APPLICANT'S VICE PRESIDENT FOR RESEARCH

Applicants are required to include a letter of support from the applicant's Vice President for Research, or someone in a comparable position, which affirms the proposed Consortium will comply with the following performance requirements:

- The IHE's Prime (Lead) Principal Investigator and all personnel on the award will actively participate in an annual meeting with NNSA staff involved with Nuclear Science and Engineering Consortium on an DNN R&Ds Annual University Program Review (UPR) and interface with the DOE National Laboratories.

- The Principal Investigator will provide a minimum of an annual progress report that describes key advances in their scientific discipline and/or enabling technology development, and other issues, in addition to responses to the recommendations of the annual consortium review meetings. Reports will include the consortium's technical goals for the coming year and provide an updated project plan, as appropriate.
 - The Prime (Lead) awarded entity will be held responsible for managing the entire scope, schedule, and cost of the project, to include all financial and program reporting, per DOE F-4600.2, Federal Assistance Reporting Checklist and Instructions.
 - The Prime (Lead) will provide a list of major items of equipment already available to the personnel on the application/award as well as annually provide a list of any new items of equipment purchased through this award.
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SECTION II – AWARD INFORMATION

A. AWARD INSTRUMENT

DOE/NNSA will award a cooperative agreement under this NOFO. DOE/NNSA seeks a multi-institution team submitted as a prime and subaward model with one application submitted by the lead institution (prime applicant). For definition of an cooperative agreement, please see [2 CFR 200.1](#).

DOE/NNSA will be substantially involved with each awarded Consortium and will collaborate with each recipient in evaluating, accepting, and achieving proposed milestones. The DOE/NNSA Federal Technical Project Officer will provide technical direction to the overall program, as well as the individual program elements as it is determined to be necessary and appropriate by DOE/NNSA. DOE/NNSA subject matter experts will meet with recipients at least annually to provide set-aside time to collaborate and exchange ideas and best practices. DOE/NNSA will also have the right to have DOE National Laboratories perform independent tests and evaluations of each cooperative agreement's deliverables to provide an additional measure of technical progress.

The DOE/NNSA Grants Officer/Specialist, and DOE/NNSA Federal Technical Project Officer will negotiate a Statement of Substantial Involvement with each selected Consortium and resulting cooperative agreement award recipient prior to award in respect to individual needs beyond what is listed above. The substantial involvement by DOE/NNSA under each Award will remain in effect for the term of the cooperative agreement unless otherwise amended in writing by the Grants Specialist/Officer. The statement of substantial involvement by DOE/NNSA does not increase the Department of Energy's liability under the Agreement award.

B. ESTIMATED FUNDING

Approximately \$25,000,000 is available for a cooperative agreement for award under this NOFO. Funding for all awards and future budget periods are contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

DOE/NNSA will not provide funding for any costs associated with preparing or of work related to submission of an application and reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this NOFO.

NOTE: *Federal funds, including any funds of current NNSA awards, are not allowed to be used to prepare or submission of an application under this NOFO.*

C. AWARD SIZE

Maximum and Minimum Award Size

Ceiling (i.e., the maximum amount for an individual award made under this NOFO): \$25,000,000 and is expected to be available contingent upon the availability of funds for all five years for awards under this announcement.

It is expected that the award will be incrementally funded approximately \$5 million per year and is expected to be available for an award under this announcement and is contingent upon the availability of appropriated funds.

D. EXPECTED NUMBER OF AWARDS

DOE/NNSA anticipates making no more than one (1) award from this NOFO and is dependent on the availability of appropriated funds, the meritorious application, and other program policy factors. NNSA reserves the right to make no awards or to make fewer awards than would be possible at the grand-total level at its sole discretion.

E. PERIOD OF PERFORMANCE

DOE/NNSA anticipates making an award with an estimated project period of up to five (5) years from the date of award. The overall project duration will be subdivided into annual budget periods. Continuation funding (funding for subsequent budget periods, past year 1 of the base award) is contingent on the following: 1) availability of funds appropriated by Congress and future year budget authority; 2) substantial progress towards meeting the objectives of the approved Statement of Work; 3) submittal of required reports; and 4) compliance with the terms and conditions of the award.

[DOE/NNSA anticipates notifying the applicants selected for award as per the NOFO Cover Page](#). The awards are estimated to be awarded as noted on the [Cover Page of this NOFO](#), depending on availability of Federal government funds. DOE/NNSA anticipates making awards that will not exceed a 5-year period of performance.

F. TYPE OF APPLICATION

DOE/NNSA will accept new and renewal applications under this announcement. Renewal applications are requests for additional funding for a period after that provided by a current award. Renewal applications compete with all other applications and must be submitted by the established due date/deadline. In preparing a renewal application, applicants should assume that reviewers will not have access to previous applications.

The application whether a renewal or new application should be developed as fully and as thoroughly as is possible and as though the applicant is applying for the first time. The application must include all the information required for a new project as well as include within the project narrative element a discussion of the results from previous awards and whether there is a current funded award currently in process.

G. SELECTED APPLICANT REQUIREMENTS

The selected PRIME (Lead) recipient of the award is considered the lead university and responsible for managing the entire scope, schedule, and cost of the project, to include all reporting. This cooperative agreement will ONLY provide funding to the university members of the consortium.

SECTION III – ELIGIBILITY INFORMATION

A. APPLICANTS

In accordance with [2 CFR 910.126\(b\)](#) and DNN's mission, eligibility for award is restricted to U.S. Institutes of Higher Education (IHE), defined at [20 USC 1001: General definition of institution of higher education](#), with professional doctorate degrees.

Eligible Entities

For this funding opportunity, an applicant must be an IHE that offers programs for graduate students to earn professional doctorate degrees. It must be an IHE in any State, Federal District, or United States (U.S.) territory that is a public or private nonprofit educational institution that:

- Is in a State.
- Admits as regular students only persons who
 - Have a high school diploma.
 - Have the recognized equivalent of a high school diploma; or
 - Are beyond the age of compulsory school attendance in the State in which the institution is physically located.
- Is legally authorized to provide an educational program beyond secondary education in the State in which the institution is physically located.
- Provides an educational program —
 - For which it awards an associate, baccalaureate, graduate, or professional degree.
 - That is at least a two-academic-year program acceptable for full credit toward a baccalaureate degree; or
 - That is at least a one academic year training program that leads to a certificate, or other non-degree recognized credential, and prepares students for gainful employment in a recognized occupation; and
 - May provide a comprehensive transition and postsecondary program, as described in [eCFR :: 34 CFR Part 668 Subpart O -- Financial Assistance for Students With Intellectual Disabilities](#); and is an accredited or pre-accredited entity; or approved by state agency listed in the FEDERAL REGISTER in accordance with [eCFR :: 34 CFR Part 603](#) - Secretary's Recognition Procedures for State Agencies, if the institution is a public postsecondary vocational educational institution that seeks to participate only in Federal student assistance programs.

The following types of Higher Education Institutions are always encouraged to apply for NNSA support as Public or Private Institutions of Higher Education:

- Hispanic-serving Institutions
- Historically Black Colleges and Universities (HBCUs)
- Tribally Controlled Colleges and Universities (TCCUs)
- Alaska Native and Native Hawaiian Serving Institutions

Restricted Eligibility

Should an award result from this NOFO, the recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE/NNSA-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 the DOE/NNSA Federal Technical Project Officer and Grants Officer/Specialist 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/NNSA may modify and add requirements related to this prohibition to the extent required by law.

NOTE: *At the time of this NOFO publication, DOE/NNSA has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.*

Federally Funded Research and Development Centers (FFRDC)

Federally Funded Research and Development Centers (FFRDC) (both DOE National laboratories and other Federal Agency-Sponsored FFRDCs) are not eligible for a direct award under this NOFO. However, FFRDCs may participate as collaborators to:

- Promote and sustain scientific interactions between the academic community and scientists at the FFRDC Laboratories through exchange of information and/or personnel.
- Increase the availability of unique experimental facilities sited at the FFRDC Laboratories to the academic community, particularly for collaborations in areas of relevance to stockpile stewardship.
- Develop and maintain a long-term recruiting pipeline to the DOE/NNSA FFRDC's by increasing the visibility of the DOE/NNSA scientific activities to the U.S. faculty and student communities.

NOTE: *FFRDCs are not eligible to receive any funding under this NOFO.*

B. PRINCIPAL INVESTIGATORS

Individuals with the skills, knowledge, and resources necessary to carry out the proposed research as a Principal Investigator (PI) are invited to work with their entity to develop an application. The Lead (Prime Applicant) is responsible for the submitting the application and coordinating with subapplicants. Individuals from underrepresented groups and individuals with disabilities are encouraged to serve as PIs. Co-PIs may serve under this NOFO.

- Each prime applicant is required to have an identified Lead PI from the prime applicant's entity.
- Applications may have co-PIs from the prime applicant or subapplicant's IHE.
- Each identified PI and Co-PI for proposed agreements are required to be a U.S. Person and must be an active member of the teaching/research faculty of an IHE (see [Section III\(A\)1](#)).
- Adjunct professors, visiting professors, and post-doctoral fellows are ineligible to be PIs or Co-PIs.
- Individuals employed by foreign entities, irrespective of citizenship, are ineligible to be PIs or Co-PIs.

C. RESTRICTED ELIGIBILITY

The DNN R&D University Consortium Program seeks the long-term development of expertise in academic

fields supporting nuclear nonproliferation. Furthermore, one of DNN R&D's goals within this program is to support a pipeline of talent that is well- prepared for nuclear nonproliferation careers in the DOE National Laboratories and with the U.S. Government.

These careers require the ability to attain and maintain a national security clearance. As such, it is important to restrict the eligibility for Senior/Key Persons, such as Principal Investigators, to U.S. citizens or permanent residents. Several of the DOE/NNSA goals are not achievable by foreign nationals.

In conformity with the Guidance on Department of Energy (Guidance on Department of Energy Order 142.3A (lbl.gov)), applicants selected for award are required to submit and complete a form prior to award whereby the Principal Investigator and Co-Principal Investigator(s) are U.S. citizens or permanent residents (refer to "[Research & Related Personal Data](#)" form found at Grants.gov R&R Family Forms and resubmit as needed (example: Replacement of a Principal Investigator or Co-Principal Investigator. The NOFO further restricts the eligibility of scholarships and fellowships (Post-doctoral Fellows, graduate students, and undergraduate students) to U.S. citizens or permanent residents.

NOTE: *Non-U.S. Persons are prohibited from receiving direct government or cost share funding under the cooperative agreement.*

A "U.S. Person" is defined as an individual that is a citizen of the United States or an alien lawfully admitted for permanent residence.

Adjunct professors, visiting professors, and post-doctoral fellows are ineligible to be PIs. Investigators from foreign universities or academic institutions, irrespective of citizenship, are ineligible to be PIs.

Such individuals may receive funding under a subaward if the Principal Investigator requests and receives written permission for such funding from the Technical Project Officer of DNN R&D. There may be security restrictions on participation by foreign nationals at certain facilities and conferences, in accordance with applicable U.S. Department of Energy Security Policy, Directives, Regulations, or Requirements.

All persons receiving funding or direct involvement in the activities supported under this cooperative agreement must be a U.S. Person or the Director/Principal Investigator must request and receive written permission for such funding from the program official of DNN. Requests for addition of non-US-persons is required throughout the period of award.

D. COST SHARING

This award does not require cost sharing but may be offered. Cost share must come from non-federal sources, offering cost share will not bolster chances of selection since, under 2 CFR 200, Federal agencies are no longer allowed to use voluntary committed cost share as a consideration in the merit review process. For further information, there are two types of cost share:

- **Voluntary Cost Sharing:** Cost share is considered "voluntary" when the applicant describes a quantifiable amount of resources it will contribute to the project.
- **Voluntary Committed Cost Sharing:** NNSA will consider any voluntary cost sharing offered at the application stage as "committed" cost sharing at the award stage and occurs when the applicant/subapplicant pledges cash or in-kind resources towards a project but is not obligated to do so by the NOFO.

Any quantified cost sharing offered in submitted applications becomes fiscally and/or programmatically auditable and must be documented and reported to DOE/NNSA, if the application is funded.

If voluntary committed cost share is provided, the R&R Fed + NonFed Budget Form must be utilized by both the Prime applicant and subapplicant. This form may be found at [R&R Family | Grants.gov](#).

In addition, some universities at their discretion may require subapplicants to cost share. Voluntary committed cost-share occurs when applicant/subapplicant pledges cash or in-kind resources towards a project but is not obligated to do so by the program solicitation/announcement.

E. PROGRAM INCOME

Program income is allowable under this NOFO. Applications that choose to use program income are to include estimated income and source of income planned to be used with this project.

Any program income funds with the award must be used to further project directives and in accordance with the terms and conditions of the award.

If program income is not reviewed at the time of award, post-award prior approval for the use of program income must be received and approved prior to use by the Grants Officer/Grants Specialists.

F. UNCLASSIFIED WORK

All proposed work to be funded through this NOFO is required to be UNCLASSIFIED. No applications for CLASSIFIED work will be accepted.

SECTION IV – APPLICATION AND SUBMISSION INFORMATION

NNSA is accepting full applications under this NOFO. A full application is required to be submitted via Grants.gov to be considered for merit review and award.

A. APPLICATION (MANDATORY)

The applications should include the following information, with the font size NOT any smaller than Times New Roman 11 and in a Portable Document Format (PDF). An entity may submit more than one application, given that it meets all the required and following conditions:

- Each submission must have a different lead Principal Investigator (PI) or Prime Applicant (Lead).
- Each submission must target a significantly different application and/or enabling research and development.
- A letter acknowledging and supporting the application submission from the Vice President for Research, or someone in a comparable position. [See Section I, I.](#)

Registrations

NNSA is participating in the Grants.gov initiative to provide the financial assistance community with a single site to find and apply for funding opportunities for grants and cooperative agreements. Applicants are required to complete a series of registrations to submit applications in response to this NOFO via grants.gov. These registrations include [SAM.gov](#), [Grants.gov](#), [FedConnect](#), and the [Federal Funding Accountability and Transparency Act Subaward Reporting System](#) (FSRS). It is encouraged that the Prime (Lead) applicant register with FSRS and also register subapplicants, prior to award.

Applicants are encouraged to read the registration instructions carefully and prepare the requested information prior to beginning the registration process. Reviewing and assembling the required documentation and information before beginning the registration process may alleviate last-minute searches for required information. Registration in each of the below is mandatory.

System for Award Management (MANDATORY)

Applicants MUST register and maintain an active registration at <https://sam.gov/content/home>. The website SAM.gov issues registered entities a Unique Entity Identifier (UEI) Number and a Grants.gov account to apply under this NOFO. Failure to register with SAM will prevent an entity from applying through Grants.gov. (There are NO fees to register.) Applicants must have or obtain a Unique Entity ID (UEI) at <https://sam.gov/content/entity-registration> to complete the application in Grants.gov. Applicants not currently registered with SAM.gov should allow at least four weeks to complete these requirements. Additionally, applicants are required to provide a Taxpayer Identification Number (TIN) to complete a registration in www.SAM.gov. An applicant's TIN is an Employer Identification Number (EIN) assigned by the Internal Revenue Service (IRS). Entities may apply for an EIN from the IRS at <https://www.irs.gov/businesses/small-businesses-self-employed/employer-id-numbers>. Registration in SAM.gov must be renewed annually for all prime recipients. SAM.GOV may have its own requirements for a preferred Internet Browser. Contact SAM.Gov at <https://sam.gov/content/about/contact>. DOE/NNSA staff are not able to provide substantive support to the database.

GRANTS.Gov (MANDATORY)

Applicants MUST have an active account on [Grants.gov](#) to apply. Applicants not currently registered with Grants.gov should allow up to four weeks to complete these requirements. There is no charge to create

an account. To create an account in Grants.gov, applicant(s) registration is required. All entities applying for funding must have a UEI Number to submit their application in grants.gov. Instructions for obtaining a UEI may be found at [SAM.gov](https://sam.gov). Note that Grants.gov may have its own requirements for a preferred Internet Browser. Grants.gov provides detailed instructions and offers trainings and FAQs for applicants on their website at <https://www.grants.gov/applicants>. Grants.gov support center is available at <https://www.grants.gov/support>. Contact Grants.gov directly for technical assistance. DOE/NNSA staff are not able to provide substantive support to the database.

FEDConnect (MANDATORY)

Applicants MUST register with FedConnect to obtain updates on the NOFO and be able to submit questions to NNSA through the FedConnect portal. There is no charge for creating an account. Applicants may register with [FedConnect](https://www.fedconnect.net/FedConnect/PublicUserRegistration.aspx) at <https://www.fedconnect.net/FedConnect/PublicUserRegistration.aspx> via [www.FedConnect.net](https://www.fedconnect.net). For support see [Support : Unison FedConnect Support](#).

Federal Funding Accountability & Transparency Act Subaward Reporting System (FSRS)

Prime Recipients awarded a Federal grant or cooperative agreement greater than or equal to \$30,000 will be subject to FFATA sub-award reporting requirements. There is no charge for creating an account. Prime Recipients are required to file a FFATA subaward report by the end of the month following the month in which the prime recipient awards any sub-award greater than or equal to \$30,000. Prime applicants that are applying with sub-applicants are encouraged to register with <https://www.fsr.gov/> prior to award.

B. GRANTS.GOV APPLICATION SUBMISSION AND RECEIPT PROCEDURES (MANDATORY)

Grants.gov Application Submission

Applicants are required to submit an electronic application to this NOFO through Grants.gov at <https://www.Grants.gov/>.

To start the application: Go to <https://www.Grants.gov>; Select "Search Grants." Enter the Assistance Listing Number (formerly known as Catalog of Federal Domestic Assistance (CFDA)) number (81.113) or the NOFO number, DE-FOA-0003437. Select the "Apply" button to access the application package.

Applicants are required to use the compatible version of Adobe Reader software to complete an application package. Verify your compatible version of Adobe Acrobat Reader at <https://www.grants.gov/applicants/adobe-software-compatibility>.

Applicants may use the online Grants.gov Workspace. Workspace is a shared, online environment where members of a team may simultaneously access and edit different webforms within an application for each NOFO. The Workspace Overview is located at <https://www.grants.gov/applicants/workspace-overview>. The Workspace is the standard way for organizations or individuals to apply for federal grants in Grants.gov. Workspace allows a grant team to simultaneously access and edit different forms within an application. Plus, the forms can be filled out online or offline — your choice.

Workspace Tips: *Add participants to the workspace, complete all the required forms, and check for errors before submission.*

Adobe Reader: If you decide not to apply by filling out webforms you can download individual PDF forms in Workspace so that they will appear similar to other Standard forms. The individual PDF forms can be downloaded and saved to your local device storage, network drive(s), or external drives, then

accessed through Adobe Reader.

Mandatory Fields in Forms: In the forms, you will note fields marked with an asterisk and a different background color. These fields are mandatory fields that must be completed to successfully submit your application.

Complete SF-424 Fields First: The forms are designed to fill in common required fields across other forms, such as the applicant's name, address, and UEI number. To trigger this feature, an applicant must complete the SF-424 information first. Once it is completed, the information will transfer to the other forms.

An application may be submitted through Workspace by clicking the Sign and Submit button on the Manage Workspace page, under the Forms tab. Grants.gov recommends submitting the application package at least 24-48 hours prior to the close date to provide you with time to correct any potential technical issues that may disrupt the application submission.

When applications are submitted through Grants.gov, the name of the organization applicant with the Authorized Organization Representative (AOR) role that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The AOR is the individual designated to make legally binding commitments on behalf of the entity as a user with the AOR role. Contact Grants.gov with any issues with Grants.gov via <https://www.grants.gov/support/> or by calling 1-800-518-4726 or emailing support@grants.gov.

To Prevent Submission Errors

Review the Grants.gov Workspace at [Workspace-Overview | Grants.gov](#) for a clear understanding of the application submission process. Files that are attached to the forms must be PDF files unless otherwise specified in this NOFO. Attached PDF files must be plain files consisting of text, numbers, and images without editable fields, signatures, passwords, redactions, or other advanced features available in some PDF-compatible software. Do not use PDF portfolios or binders.

Limit file names to 50 or fewer characters. All attachments to the application must have a unique name. Do not attach any documents with the same name. Use only the following characters when naming your attachments: A-Z, a-z, 0-9, underscore, hyphen, space, period, parenthesis, curly braces, square brackets, ampersand, tilde, exclamation point, comma, semi colon, apostrophe, at sign, number sign, dollar sign, percent sign, plus sign, and equal sign. Attachments that do not follow this rule may cause the entire application to be rejected or cause issues during processing.

If you experience difficulties with your submission, it is best to call the Grants.gov Support Center and obtain a ticket number. The Support Center ticket number will assist with tracking your issue and understanding background information on the issue. Additional information about Grants.gov support is located at https://gditshared.servicenowservices.com/hhs_grants.

Application Receipt

Proof of timely submission is automatically recorded by Grants.gov. An electronic date/time stamp is generated within the system when the application is successfully received by Grants.gov. The applicant AOR will receive an acknowledgement of receipt and a tracking number (GRANTXXXXXXXX) from Grants.gov with the successful transmission of their application. Applicant AORs will also receive the official date/time stamp and Grants.gov Tracking number in an email serving as proof of their timely

submission.

When DOE/NNSA successfully retrieves the application from Grants.gov and acknowledges the download of submissions, Grants.gov will provide an electronic acknowledgment of receipt of the application to the email address of the applicant with the AOR role.

Proof of timely submission shall be the official date and time that Grants.gov receives your application. Applications received by Grants.gov after the established due date for the program will be considered late and may not be considered for funding by DOE/NNSA.

Applicants using slow internet connection should be aware that transmission can take some time before Grants.gov receives an application.

Grants.gov will provide either an error or a successfully received transmission in the form of an email sent to the applicant with the AOR role. The Grants.gov Support Center reports that some applicants end the transmission because they think that nothing is occurring during the transmission process. Be patient and give the system time to process the application.

Resubmission of Applications

If an applicant withdraws the application, it may be resubmitted providing the NOFO is still open for the submission of applications. Applications submitted under this NOFO may be withdrawn from consideration at any time between when the applicant submits the application and when DOE/NNSA makes the application available to merit reviewers. Such withdrawals, as determined by DNN R&D, take effect immediately and cannot be reversed. Such resubmissions will only count as one submission.

DOE/NNSA will consider the last submission, according to its Grants.gov timestamp, to be the intended version. The AOR must consult with DOE/NNSA identified NOFO points of contact within two business days after the last submission to resolve any confusion about which version of an application should be considered for review.

Controlled Access of Applications

Applications submitted under this NOFO will be stored in controlled-access systems. Applications may be made publicly available if an award is made.

Applications and progress reports can be requested under the Freedom of Information Act (FOIA). As such, it is critical that applicants follow these guidelines:

- Do not include information subject to any legal restriction on its open distribution, whether classified, export control, or unclassified controlled nuclear information.
- Do not include sensitive and protected personally identifiable information, including social security numbers, birthdates, citizenship, marital status, or home addresses. Pay particular attention to the content of biographical sketches and curriculum vitae.
- Do not include letters of support from Federal officials.
- Do not include letters of support on Federal letterhead. Letters that are not letters of support (such as letters confirming access to sites, facilities, equipment, or data; or letters from cognizant Contracting Officers) may be on Federal letterhead.
- Clearly mark all proprietary or trade-secret information.

Change of Recipient

If a recipient chooses to relinquish an award made under this NOFO or to permit the transfer of the award to a new entity, the proposed succeeding entity must apply under this NOFO to be considered for award by DOE/NNSA.

C. APPLICATION (MANDATORY)

All applicants including subapplicants must complete the mandatory standard forms (e.g., SF-424 (R&R) or Disclosure of Lobbying Activities (SF-LLL)) and any applicable optional forms in accordance with the instructions on the forms and the additional instructions below. The forms to include are cited below and must be filled in and submitted for both prime and subapplicants. Please coordinate with the Prime Applicant, if you are a subapplicant to ensure all required forms are submitted. **See Attachment 1** for more information on both applicant and subapplicant required forms and formats and below for a quick summary of forms required.

NOTE: All of the below standard forms are required of both the Prime (lead) applicant and subapplicants.

SF-424 (R&R) (MANDATORY)

In Grants.gov workspace, complete the SF-424 Fields first: The forms are designed to fill in common required fields across other forms, such as the applicant's name, address, and UEI number. To trigger this feature, an applicant must complete the SF-424 information first. Once it is completed, the information will transfer to the other forms.

Certifications and Assurances referenced in 21 Field 17 of the Application for Federal Assistance are now contained in the System for Award Management (SAM) as Financial Assistance General Certifications and Representations. It is recommended to complete the SF-424 (R&R) form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. The list of certifications and assurances form (SF-424B Assurances for Non-Construction Programs) is found at the Grants.gov website at <https://grants.gov/forms/forms-repository/r-r-family> under Certifications and Assurances. Applicants are bound by their representations and certifications in SAM.gov.

The UEI and Employer Identification Number (EIN) fields on the SF-424 (R&R) form are used to confirm the identity of the entity applying (Fields 5 and 6). Enter each number as a nine-digit number. Do not use hyphens or dashes.

A new application is one in which DOE/NNSA support for the proposed research is being requested for the first time. NNSA will accept new and renewal applications under this NOFO. Type of Application (Field 8). DOE/NNSA does not make use of the Resubmission or Continuation options under this NOFO.

If substantially similar, identical, or closely related research objectives are being submitted to another Federal agency, indicate the agency or agencies to which the similar objectives have been submitted. For "Other Agency Applications," answer "yes" to the question, "Is this application being submitted to other agencies?"

Senior/Key Contacts

Applicants are required to enter total funds requested for senior/key on the SF424. If senior/key personnel

are included, a budget justification narrative is required and must explain the need for requested senior/key personnel. See Pg. 39 for more information.

Research and Related (R&R) Other Project Information (MANDATORY)

Complete questions in fields 1 through 6. The bulk of your application will consist of files attached to the Research and Related Other Project Information form. The files must comply with the following instructions. See Attachment 1 for detailed information on formatting and forms.

Note regarding question 4.a. and 4.b.: If any environmental impact, positive or negative, is anticipated, indicate “yes” in response to question 4.a., “potential impact – positive or negative - on the environment.” Disclosure of the impact should be provided in response to question 4.b. First indicate whether the impact is positive or negative and then identify the area of concern (e.g., air, water, exposure to radiation). Should the applicant have any uncertainty, they should check, “yes.”

DOE understands the phrase in field 4.a., “potential impact ... negative” to apply if the work described in the application could potentially have any of the impacts listed in (1) through (5) of 10 CFR 1021, Appendix B, Conditions that Are Integral Elements of the Classes of Action in Appendix B (<https://www.ecfr.gov/current/title-10/chapter-X/part-1021>).

Additionally, for actions which could have any other adverse impacts to the environment or have any possibility for adverse impacts to human health (e.g., use of human subjects, Biosafety Level 3-4 laboratory construction/operation, manufacture or use of certain nanoscale materials which are known to impact human health, or any activities involving transuranic or high level radioactive waste, or use of or exposure to any radioactive materials beyond de minimis levels), applicants should indicate a “negative” impact on the environment.

Lastly, 1) if there would be extraordinary circumstances (i.e., scientific or public controversy) related to the significance of environmental effects (10 CFR 1021.410 (b)(2)), 2) if the work is connected to other actions with potentially significant impacts (10 CFR 1021.410 (b)(3), or 3) if the work is related to other nearby actions with the potential for cumulatively significant impacts (10 CFR 1021.410 (b)(3)), applicants should indicate a “negative” impact on the environment.

NOTE: Attached is the DOE NEPA Checklist for your perusal; if selected for award, the Prime and Subapplicant's may be required to fill-in and return the document.

SUBAPPLICANT APPLICATION REQUIREMENTS

The subapplicant is required to submit 1) Cover Page; 2) Project Narrative; 3) Statement of Objectives; and 4) Appendices. **Page limit for subapplicant application requirements (cover page, project abstract, and statement of objectives) is limited to 12 Pgs. (includes cover page).**

Cover Page (MANDATORY)

Subapplicants participating as a consortium member, must provide a Title Page. Subapplicants must collaborate with the lead university (e.g., Lead Applicant – Prime). Therefore, it is critical to work in partnership AND collaboration to submit an application that is an efficiently developed program that balances risk, cost, schedule, and performance. To achieve this goal, the consortium must collaborate with the Prime (Lead) applicant in the development and submission of the Cover Page, Abstract, and Statement of Objectives.

Each subapplicant must submit its own Cover Page, Abstract, Statement of Objectives; and Appendices to the lead university (Prime Applicant). The Prime Applicant (Lead) will determine placement of the documents submitted by each subapplicant.

Cover Page for Subapplicant (MANDATORY) – Limited to 4 Pgs. along with the Abstract
The Cover Page must include the following items beginning with the Project Title and all other information following the title of the project. See above for sample of Cover Page.

- Entity Name
- Name and role of all Senior Key Personnel to include the Co-Principal
- Contact Information of each Senior Key Personnel
- AOR for the Project from the Office of Sponsored Research
- Budget for Subapplicant as depicted below with only the budget categories. Please see the R&R Budget (Total Fed+NonFed). If providing cost share, please include a line below K showing cost share. If not providing cost share, leave blank.

Budget Categories		Year 1 Budget	Year 2 Budget	Year 3 Budget	Year 4 Budget	Year 5 Budget	Total Budget
A	Senior/ Key Personnel & Other						
B	Other Personnel						
C	Equipment						
D	Travel						
E	Participant/Trainee Support Costs						
F	Other Direct Costs						
G	Direct Costs Total (A-F)						
H	Indirect Costs						
I	Total Direct & Indirect Costs						
J	Fee						
K	Total Costs & Fee (I+J)						

Project Abstract (MANDATORY) – Limited to 4 Pgs. along with Cover Page for Subapplicant
The project abstract is a summary of the proposed activity suitable for distribution to the public and sufficient to permit potential reviewers to identify conflicts of interest. The Project Abstract should consist of the below (some of these may be part of the Cover Page and do not duplicate the information).

Statement of Objectives (MANDATORY)
A Statement of Objectives is required of the Subapplicant and must contain a clear, concise description of all activities to be completed during project performance. This document must address how the objectives will be met and is generally less than 4 pages in total for the proposed work which does not include the cover page. Following are the requirements of the subapplicant for this section.

- Title Depicting Work to be Performed
Insert the title of the project in whole – this is a collaborative application and there is only one Project Title.
- Statement of Objectives
Must include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work. This must be submitted by each subapplicant along with a description of the collaborative work towards meeting the top-level objectives of the project.
- Scope of Work:
Must not exceed one-half page and should summarize the effort and approach to achieve the

objective(s) of the work for each Phase.

- **Tasks to be Performed**

Must be concisely written, should be provided in a logical sequence, and divided into the phases of the project, as appropriate. This section provides a summary of the planned approach to this project. An outline of the Project Management Plan (referenced in Task 1.0 below and required to be submitted with your application) is provided below in this Section.

PHASE I		
1.	Task 1.0	Project Management Plan
	a.	Subtask 1.1 Description
2.	Task 2.0	Title
PHASE II (OPTIONAL)		
	Task 3.0	Title

PRIME (LEAD) APPLICANT REQUIREMENTS

Title Page

- The Project Title (limit to 50 characters)
- NNSA Program Office: Office of Defense Nuclear Nonproliferation Research and Development
- NOFO Number: DE-FOA-0003437
- Applicant/Institution: Street Address/City/State/Zip, Postal Address (5-digit zip code + 4 Code Lookup)
- Lead PI name, telephone number, email
- Administrative Point of Contact/Authorized Organization Representative name, telephone number, email
- Senior/Key Personnel, Name of Institution, telephone number and email of each.
- Consortium (Team Members), IHE Name, telephone number and email for each.
- Authorized Organization Representative for Lead PI and of each Team member, telephone number and email for each.
- List DOE National Laboratories personnel that are collaborating on the project and will serve as a co-PI or other for the project.
- Include a table modeled as below providing summary budget information from all institutions. Please see below for an example of how to submit the total costs of the budget.
- Provide the total costs of the budget request by year of funding for each institution as below and the totals for all rows and columns. Expand table as necessary but it must only contain 5-Yr budget periods as this is a 5-year period of performance award.

	Senior/Key Personnel (PI/co-PI)	IHE (Institution Name)	Year 1 Budget	Year 2 Budget	Year 3 Budget	Year 4 Budget	Year 5 Budget	Total Budget
Prime								
Sub-1								
Sub-2								
Sub-3								
Total Budget	N/A	N/A	Total	Total	Total	Total	Total	Total

**Example budget table (\$ in thousands)*

A sample of the Title Page is below:

<p>Project Title</p> <p>NOFO: DE-FOA0003437</p> <p>A. Smith, Lead Institution (Name of Institution) (Principal Investigator)</p> <p>A. Brown, Institution 2 (Name of Institution) (Co-Investigator)</p> <p>A. Jones, Institution 3 (Co-Investigator)</p>

This document must not include any proprietary or sensitive business information as the Department may make it available to the public after awards are made. The project summary must not exceed 4 (four) pages when printed using standard letter-size (8.5-inch x 11 inch) paper with 1-inch margins (top, bottom, left and right) with font not smaller than 11-point.

PROJECT NARRATIVE (MANDATORY)

The project narrative must not exceed 30 pages total, including table of contents (optional), charts, graphs, maps, photographs, tables, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1-inch margins (top, bottom, left, and right) and single spaced with font size not smaller than 11-point. The Scientific and Technical Merit element, including required plans detailed below, should comprise most of the narrative. Suggested page lengths for each section and subsection are listed below. However, while each section is required, proposers may structure each section and its length to best convey the elements of the proposed project. The Project Narrative is attached to Field 8 on the Research and Related Other Project Information Form.

REVIEWERS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING PARAGRAPH.

Do not include any Internet addresses that provide information necessary to review the application. Information on any external information (e.g., Uniform Resource Locators) will not be reviewed. Proprietary information in the application must be marked appropriately.

Instructions: The narrative must begin with a title page that will not count toward the project narrative page limitation (30 Pgs.). The Project Narrative will include the Title Page, Statement of Objectives and Merit Review Criterion Discussion.

The collaborative application must provide the following information on a separate page as a supplement to the title page and should only be one-page in length and must be coordinated with the Prime Applicant (Lead). This page will not count towards the 30-page limit of the project narrative page limitation. The Cover Page must contain the below:

- List the institution by name with each institution's PI on the same line.
- Indicate the lead PI who will be the point of contact and coordinator for the combined research activity.
- Indicate the co-PIs for the subapplicant: name, email and address
- List the Authorized Organization Representative: name, email, and address.

Statement of Objectives (MANDATORY)

The project narrative must provide a detailed description of the project objectives. The objectives should

provide a clear, concise statement of the specific objectives/aims of the proposed project. Below is a synopsis or listing of the elements required within the Statement of Objectives.

FIGURE 1: Elements of the Statement of Objectives

PRIME (LEAD) APPLICANT
Title Page – limited to 1-2 Pgs. Not a part of the 30 Pg. Limit
Introduction (at best, limited to 50 characters)
Objectives (1-2 Paragraphs)
Data Management Plan – limited to 10 Pgs. (Standalone Document)
Project Management Plan - limited to 10 Pgs. (Standalone Document)
Merit Review Criterion Discussion
Collaboration Plan
Risk Management
Relevance and Outcomes/Outcomes (0.5-1 Pgs.)
Project Timetable (0.5-1 Pgs.)
Milestone Log

The **Statement of Objectives (SO)** is part of the Project Narrative. This is a stand-alone document and is generally less than 4 pages in total. The SO addresses how the objectives of the project will be met. The SO must contain a clear, concise description of all activities to be completed during the project period of performance and follow the structure discussed below. The SO may be released to the public by NNSA in whole or in part after award. It is therefore required that it not contain proprietary or confidential business information.

The SO content should be tailored to the proposed consortium. The key is to keep the SO clear and concise and provide enough information and detail to structure a sound program designed to be executable and satisfy objectives. Therefore, the SO must contain and discuss the below information tailored to meet the specific program needs. The Statement of Objectives will include, at a minimum:

- **Introduction of the Statement of Objectives:** A concise and descriptive summarizing the work to be performed (No more than 50 characters).
- **Objectives:** One paragraph on the overall objectives of the work and each phase of the work must have an objective. The decision-making and resource allocation process.
- **Scope of Work:** This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work for each Phase.
- **Organizational Chart:** Visual perspective of how the consortium will best achieve the objectives of the project. The organizational chart should include all the funded collaborators showing how the roles and responsibilities of the consortium will work together to achieve the objectives of the project.
- **Identification of Tasks and Performance:** Tasks, concisely written, should be provided in a logical sequence and divided into the phases of the project, as appropriate. This section provides a summary of the planned approach to this project. Task identification is essential for creating effective job descriptions/roles that accurately reflect the duties of a position. Clearly defined tasks can lead to improved employee performance by setting clear expectations and measurable outcomes. Therefore, provide clear expectations and measurable outcomes for each of the roles whether a PI/co-PI or Senior Key Personnel. This section should also provide clear definition of the roles and responsibilities

of each of the Post-docs for each of the supporting IHEs. Once this is developed, the organizational chart will show the individuals providing the support to the Prime (lead) applicant. Individuals are defined as co-Principals and/or Senior Key Personnel.

- **Risk Management:** Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues or identified major risks and associated mitigation strategies.
- **Relevance and Outcomes/Impacts (0.5-1 page):** This section is to explain the relevance of the effort to the DNN R&D Program Objectives stated in Section 1.G. of this NOFO and the expected outcomes and/or impacts.
- **Project Timetable (0.5-1 page):** This section is to 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.
- **Milestone Log:** Provide milestones for each budget period (or phase) of the project. Each milestone should include a title and planned completion date. Milestones should be quantitative and show progress toward budget period and/or project goals. The Milestone Status will present actual performance in comparison with Milestone Log and include: 1) The actual status and progress of the project; 2) Specific progress made toward achieving the project's milestones; and 3) Any proposed changes in the project's schedule required to complete milestones. Note: During project performance, the Recipient must report the Milestone Status as part of the required quarterly Progress Report as prescribed under Attachment 4, DOE 4600.2 Federal Assistance Reporting Requirements Checklist (Financial Assistance Forms and Information For Applicants and Recipients | Department of Energy).

The Project Narrative must contain and discuss, in more detail, the elements within the Statement of Objectives referenced above and detail the below information tailored to meet the specific applicant's project description.

FIGURE 2: Elements of the Project Narrative

PRIME (LEAD) APPLICANT
Introduction (at best, limited to 50 characters)
Project Objectives (1-2 Paragraphs)
Project Management Plan
Merit Review Criterion Discussion
Relevance of Outcomes
Roles of Participants
Collaboration Plan
Reference related to DEIA removed and no longer required as defined in Executive Order 13985 issued January 27, 2025, entitled Ending Radical and Wasteful Government DEI Programs and Preferencing.
Proposed Consortium Resources
Data Management Plan
Appendices

- **Project Objectives:** This section should provide a clear, concise statement of the specific objectives/aims of the proposed project. It should summarize the project objectives as stated in the

Statement of Objectives and not be different from those presented in the project abstract.

- **Project Management Plan:** This section is a standalone document and should include (limited to 10 Pgs.): 1) How the program will be organized and managed, both in terms of day-to-day operation and in establishing and maintaining longer-term goals; and 2) How the overall system integration will be organized; how the software development will be coordinated and integrated within the consortium framework. The Project Management Plan should be detailed to include the following sections. Note that the Project Management Plan is not the Project Narrative. This plan should describe the structure of the proposed partnership and roles of each member of the organization include the DOE National Laboratories. This section should also include management/monitoring plans for all subawards and mechanisms for verifying completed milestones:
 - Executive Summary:
Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information is included in the Project Narrative and should be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document. A data management plan should also be included.
 - Management Process:
Provide a description of the proposed approach to manage the coordination of activities within and amongst the IHEs and DOE National Laboratories of the consortium. The management process should include prioritization, quality, and out-year selection of research including multi-site research; and dialog among, and if needed replenishment of, key personnel.
 - Success Criteria at Decision Points:
Provide success criteria for each decision point in the project, including go/no-go decision points at the conclusion of each budget periods and for the entire project. The success criteria should be objective and stated in terms of specific, measurable, and repeatable data. Usually, the success criteria pertain to desirable outcomes, results, and observations from the project.
 - Funding and Cost Profile:
Provide a table (the Project Funding Profile) that shows, by budget period, the amount of government funding going to each project team member. Also provide a table (the Project Costing Profile) that projects, by month, the expenditure of government funds for the first budget period, at a minimum.
 - Project Timeline:
Provide a milestone schedule, as described in the Statement of Project Objectives. The timeline should include for each task, a start date, and end date. The timeline should show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section C).
- **Merit Review Criterion Discussion (MANDATORY) (1-2 Pgs.):**
The Merit Review Criterion discussion should be formatted to address each of the merit review criterion and sub-criterion listed in Section on Merit Review V.A.1. of the Application Review Information. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria.

The Merit Review Discussion requires that the first three bullets are summarized in a single page “roadmap” that shows how all the pieces fit together to support the overall research goals. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. **NOTE:** NNSA will evaluate and consider only those applications that address each Merit Review Criterion and subcriterion separately. This information is found in [SECTION V](#).

- **Relevance and Outcomes/Impacts:**
This section must explain the relevance of the effort to the DNN R&D Program Objectives in the program announcement and the expected outcomes and/or impacts.
- **Roles of Participants:**
Further discussion of the element contained within the Statement of Objectives of the multi-organizational or multi-investigator project, describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed. Discuss the roles and responsibilities of the team members, external partners (can include other universities and other sponsoring or participating entities), and all collaborators and the collaborative support of each team member, etc. Additionally, this section should discuss how the collaborating institutions and all aspects of its research plan will be integrated and managed; how priorities will be set and if necessary, how they will be enforced.
- **Collaboration Plan (1-2 Pgs.)**
Describe management and coordination mechanisms and how the work of the consortium shall be coordinated and integrated with the partner DOE National Laboratories (See Attachment 2 for List of DOE National Laboratories. This plan should address ideas for interacting with the DOE National Laboratories, including exposing laboratory technical personnel to work being done by the proposed consortium and academia personnel to work done by the DOE National Laboratories. This plan should also address the required internships at DOE National Laboratories (NNSA-funded graduate students are required to complete a 10-consecutive week internship during their graduate career. Post-docs and research staff are required to visit the lab for one week during each year they receive DNN R&D funding) and other proposed collaboration between the applicant and the DOE National Laboratories. Describe management and coordination mechanisms and how the work of the consortium shall be coordinated and integrated with the partner DOE National Laboratories. **NOTE:** Collaborations with other IHEs and industry while DOE/NNSA may expect and give preference to a selected consortium to be primarily focused on a single lead university, collaborations with other universities, and industry are appropriate.
- ***Reference made to Diversity, removed as per Executive Order 13985 issued January 27, 2025, entitled Ending Radical and Wasteful Government DEI Programs and Preferencing is suspended and removed.*** The submission of a DEI Plan is not required, and submission of such DEI plan will not be considered (even if such plan has been submitted, it will not be evaluated to align the Federal agency’s enforcement activity with the policy of equal dignity and respect identified in Executive Order 13985, “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.”

- **Proposed Consortium Resources (2-3 Pgs.)**

The narrative is to include discussion of the competency and adequacy of the proposed consortium resources, including collaborations, as well as facility and computer resources. The discussion must present a team of personnel with proven capabilities in the relevant field(s) of endeavor and describe the roles and the work to be performed by each participant and member of the Consortium.

- **Data Management Plan:**

APPENDICES TO PROJECT NARRATIVE (MANDATORY FOR BOTH PRIME (LEAD) APPLICANT AND SUBAPPLICANT)

The Prime Applicant (Lead) is to gather and ensure the appropriate information is provided to support the application requirement. Appendix 1 Biographical Sketch and Appendix 2 Current and Pending Support must be attached to the RESEARCH & RELATED Senior/Key Person Profile (Expanded) Form. Appendices 3 to 10 are attached to the final Project Narrative document as PDF documents and labeled accordingly.

Attached to the Project Narrative are the Appendices which are to be saved as one single document in PDF format, attached to the Project Narrative and uploaded to Grants.gov via the R&R Other Project Information Form, (part of the Application Package in the Grants.gov Workspace). To attach the completed Project Narrative in PDF format, click "Add Attachment" button next to Field 8 of the R&R Other Project Information form in Grants.gov Workspace. The appendices do not count in the Project Narrative page limitation.

Appendix 1: Biographical Sketch

The Biographical Sketches are used to assess how well qualified the individuals and teams are to conduct the proposed activities. A Biographical Sketch (limited to three pages) must be provided separately for everyone designated as the Principal Investigator and key/senior personnel. The Biographical Sketch documents must be in PDF format and attached to the RESEARCH & RELATED Senior/Key Person Profile (Expanded) Form. The Biographical Sketch for each person must not exceed three pages when printed on letter-size (8.5-inch x 11 inch) paper with 1-inch margins (top, bottom, left, and right) with font not smaller than 11-point. **Instructions for the Biographical Sketch states: "Starting May 20, 2024, biographical sketches should no longer include information on synergistic activities. These activities must instead be listed in the new Synergistic Activities document." Therefore, save the Synergistic Activities document as a standalone document and include it with the "Attachments Form" in the Grants.gov Workspace under Manage Workspace Tab, Forms Tab.**

The Biographical Sketch format is generated by the Science Experts Network Curriculum Vita (SciENCv); a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>. Instructions for the Biographical Sketch is located at <https://new.nsf.gov/funding/senior-personnel-documents#biographical-sketch-0bd>. To format the Biographical sketch, please review the National Science Foundation's website located at [SciENCv: Science Experts Network Curriculum Vitae](https://www.nsf.gov/sciencv/).

DOE/NSA requires a biographical sketch for each individual identified as senior/key personnel. A brief outline of the information you will need to include is provided below.

- Identifying Information
- Organization and Location
- Professional Preparation

Provide a list of the senior person's professional preparation (e.g., education and training), listed in

reverse chronological order by start date. Include all postdoctoral and fellowship training, as applicable, listing each separately. Also include the baccalaureate degree or other initial professional education.

- **Appointments and Positions**

Provide a list, in reverse chronological order by start date, of all the senior person's academic, professional, or institutional appointments and positions, beginning with the current appointment.

- **Products**

Provide a list of up to 10 publications most closely related to the proposed project. In addition, if applicable, provide a list of up to five products most closely related to the proposed project and up to five other significant products.

- **Synergistic Activities**

List no more than five professional and scholarly activities related to the effort proposed.

Tip: *Include only requested information that NNSA and merit reviewers will use for the review of the application. Do not include sensitive and protected personally identifiable information (PII) including social security numbers, birthdates, citizenship, marital status, or home addresses.*

NOTE: This format required by DOE/NNSA is intended to reduce the administrative burden to researchers by promoting the use of common formats. This appendix does not count towards the project narrative page limitation and is to be attached to the Project Narrative.

Appendix 2: Current and Pending Support

The Current and Pending Support Appendix documents must be in PDF format and attached to the RESEARCH & RELATED Senior/Key Person Profile (Expanded) Form.

The Current and Pending Support Appendix:

(a) All resources made available, or expected to be made available, to an individual in support of the individual's RD&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for an award or directly to the individual; or (iii) whether the resource has monetary value; and (b) includes in-kind contributions requiring a commitment of time and directly supporting the individual's RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning as the term Other Support as applied to researchers in [NSPM-33](#): For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resource and/or financial support from all foreign and domestic entities, including but not limited to, gifts provided with terms or conditions, financial support for laboratory personnel, and participation of student and visiting researchers supported by other sources of funding.

Senior/key personnel – an individual who contributes to a substantive, meaningful way to the scientific development or execution of a R&D project proposed to be carried out with a DOE award. DOE has designated any individual who meets the definition of senior/key personnel as a covered individual responsible for completing a current and pending support disclosure. DOE may further designate covered individuals during award negotiations or the award period of performance.

Current and Pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. The PI and each senior/key person at the prime applicant and any proposed subapplicants must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private- sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All involvement in foreign government-sponsored talent recruitment programs must be identified in current and pending support.

The format generated by the Science Experts Network Curriculum Vita (SciENCv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/> is available with additional information, required disclosures, and frequently asked questions via <https://new.nsf.gov/funding/senior-personnel-documents> at [Documents Required for Senior/Key Personnel - Funding at NSF | NSF - National Science Foundation](#). To formatting of the Current and/or Pending Support, please review the NSF website and click on the link for instructions found at [NSTC Research Security Subcommittee NSPM-33 Implementation Guidance Requirements & Standardization](#).

Individuals required to submit Current and/or Pending (Other) Support disclosures must provide a digital persistent identifier (PID) as part of the NOFO application. Included PIDs must meet the common/core standards specified in the [NSPM-33 Implementation Guidance](#) or successor guidance (e.g., an [ORCID iD](#)). The inclusion of an individual's PID will be optional until May 1, 2025, and mandatory thereafter.

The format for submission of the two types of support proposals and active projects - for every activity, include the following items:

- Name – enter the name of the senior/key person (Last Name, First Name, and Middle Name including any applicable suffix).
- Persistent Identifier PID of the Senior/Key Person – Enter the PID of the senior key person. The PID is the unique, open digital identifier that distinguishes the individual from every other researcher with the same or a similar name.
- Position Title – enter the current position title of the senior/key person.
- Location – enter the City, State/Province, and Country where the primary organization is located. If the State/Province is not applicable, enter N/A.
 - Proposals and Active Projects – in this section, disclose ALL proposals and active projects in accordance with the definition of current and pending support.
 - Title – enter the title of each proposal/active project being reported
 - Status of Support – Select the appropriate status as defined below:
 - Current – all active projects or projects with ongoing obligations, from whatever source irrespective of whether such support is provided through the proposing organization or is provided directly to the individual.
 - Pending – any proposal that is being considered for funding from a potential funding organization (including this proposal) irrespective of whether such support is provided through the proposing organization or is provided directly to the individual.
 - The sponsor of the activity or the source of funding
 - The award or other identifying number
 - The title of the award or activity. If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research.

- The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending applications, provide the total amount of requested funding.
- The award period of performance (start date – end date).

If required to identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support.

Certification Statement (MANDATORY)

Each current and pending support disclosure must be signed and dated and include the following certification statement:

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. ([18 U.S.C. §§ 1001 and 287](#), and [31 U.S.C. 3729-3733 and 3801-3812](#)). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

If the fillable NSF PDF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above. If the online version is used in SciENCv, a signature, date, and a certification statement must be attached until the [SciENCv](#) website automatically attaches a certification statement.

Individuals required to submit Current and/or Pending (Other) Support disclosures must provide a digital persistent identifier (PID) in such disclosures as part of the NOFO application. Included PIDs must meet the common/core standards specified in the [NSPM-33 Implementation Guidance](#) or successor guidance (e.g., an [ORCID iD](#)). The inclusion of an individual's PID will be optional until May 1, 2025, and mandatory thereafter.

Appendix 3: Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers

A list of potential conflicts of interest or bias in selection of reviewers for your application is required to be submitted via a tabular format, preferably as Microsoft Excel (.xls or .xlsx) files. This is a separate document from that is required under Appendix 3 and is a part of the Current and Pending Support. Do not combine Appendix 3 with Appendix 2 Current and Pending Support. These are two separate documents and must not be combined or merged.

Do not identify any personnel at the applicant institution or any proposed subrecipient or team institution; These staff are prohibited from serving as merit reviewers. Large collaborations of 50 or more researchers do not require that all collaborators be identified: rather, only list the researchers with whom the senior/key person actually collaborated.

For all identified individuals, list in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48-months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24-months preceding the

submission of this application. If there are no collaborators or co-editors to report, state "None." For Appendix 3, please provide the below information:

- Collaborators and Co-editors:
List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."
- Graduate and Postdoctoral Advisors and Advisees:
List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates.

Appendix 4: Bibliography & References Cited

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. For research areas where there are routinely more than 10 coauthors of archival publications, you may use an abbreviated style such as the Physical Review Letters (PRL) convention for citations (listing only the first author). For example, your paper may be listed as, "A Really Important New Result," A. Aardvark et. al. (MONGO Collaboration), PRL 999. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. **NOTE:** Do not attach a separate file. This appendix will not count in the project narrative page limitation. Must be in PDF format and attached to the Project Narrative.

Appendix 5: Facilities & Other Resources

Institutional Facilities: Discussion should include computing and experimental resources, available facilities, and budget, in relation to other commitments. Support of the Center by the prime institution is required and will be evaluated; the institution must ensure that the required infrastructure to support a successful Center is, or will be, in place. 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 the project such as machine and electronics shops.

This information is used to assess the capability of the organizational resources, including subrecipient resources, available to perform the effort proposed. 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 the project such as machine and electronics shops. For proposed investigations requiring access to experimental user facilities maintained by institutions other than the applicant, provide a document from the facility manager confirming that the researchers will have access to the facility. Such documents, provided that they do not become letters of support or recommendation, may be printed on any letterhead or with the header of, Appendix 5. Facilities and Other Resources. Letters of

support from entities or IHEs may be attached but should not be part of the description for Facilities and Other Resources provided for that entity.

Allocation of resources / facility use time: If collaboration with a DOE National Laboratory is proposed in which experiments will take place at a DOE/NNSA facility, the application should discuss how access to the facility will be accomplished. The PI is responsible for contacting the DOE/NNSA facility director to discuss any facility-related activities, including beam-time availability, shot schedule, etc. The process by which access to the necessary experimental facility is obtained should be discussed in the application. If possible, a letter from either the facility director or program manager (who has experiment schedule authority at the facility) should be included with the application indicating the facility has the appropriate availability and that the proposed work on the facility is feasible.

When the activities of the proposed project for award may use a facility owned or operated by the prime applicant (home institution of the PI), the application should include or reference the facility use plan for the facility, detailing the process by which Collaborators within the award and other researchers will be allotted facility use or experimental time.

NOTE: Do not attach a separate file. This appendix will not count in the Project Narrative page limitation. Must be in PDF format and attached to the Attachment Form. Letters of support for Facilities and Other Resources may be attached but note that they will not be considered part of the narrative description of equipment provided by entities or collaborators.

Appendix 6: Equipment

List important items of equipment already available for this project and, if appropriate, note the location and pertinent capabilities of each. If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used. Provide the Equipment information as Appendix 6 to your project narrative. Letters of support from entities or IHEs should be attached to Appendix 6 but should not be part of the narrative or discussion of equipment provided by collaborators or IHEs.

If applicable, the application must present a detailed scientific justification for any request for capital equipment and for construction investments necessary for the cooperative agreement to achieve its scientific goals. Requests for construction investments not specifically related to the scientific goals of the grant and requests for facility operating funds outside of that needed to conduct experiments to achieve the scientific goals of the proposed project for award will not be considered.

The following is important to mention and include in the appendix:

- Access to lab equipment, mentors, and facilities will be coordinated by the DOE National Laboratory and a listed point of contact and/or project coordinator at that site.
- The DOE National Laboratories are responsible for the cost of equipment or facility usage incurred by the Consortium's Postdoctoral (typically a Ph.D.), Graduate Fellows, or Interns, except for reimbursement for use of facilities that require "user fees" in accordance with the labs policies and procedures.
- Access to the IHE equipment, colleagues and students, and facilities will be coordinated by the IHE and a listed point of contact and/or Principal Investigator (PI) at that site. The IHE staff may be either the Prime (Lead) PI or the subaward co-PI.

NOTE: *Do not attach a separate file. This appendix will not count in the Project Narrative page limitation. Attach in PDF format to the Attachment Form. Letters of support for Equipment may be attached but are not considered part of the narrative description of equipment required by the team.*

Appendix 7: Non-U.S. Citizen Support List

As previously stated, no foreign persons are allowed to be funded through the awarded consortia, but the following information is still required. Provide a list of foreign persons including full name, countries of birth and citizenship, and U.S. status that are planned to be supported in this application, either through Federal funds or IHE cost-share funds. Failure to provide this information may result in disqualification of your project application.

NOTE: *NNSA must approve, in-writing, any foreign person participating in the project that is approved at award or post-award. If you do not have any foreign persons listed in your application, please indicate in Appendix 7, "None."*

Appendix 8: Letters of Collaboration/Support

Collaboration Letters or Letters of Support (from each collaborator named on the application describing the contribution to the proposed research). PDF the Letters of Collaboration and attach to the Project Narrative as Appendix 10, Letters of Collaboration and/or Support.

NOTE: *This appendix will not count in the project narrative page limitation. Attach as a pdf document to the Project Narrative.*

RESEARCH AND RELATED BUDGET or RESEARCH AND RELATED FED+NONFED BUDGET (MANDATORY only if cost sharing)

Applicants are required to submit a completed Standard Form, Research and Related Budget and a Budget Justification (Excel Spreadsheet format) for each year of the proposed activity and support under this NOFO. Applicants may request funding within any of the categories appropriate for their proposed activity.

There are two types of Research and Related Budgets: 1) Research and Related Fed+NonFed Budget (for cost share budgets); and 2) Research and Related Budget (for non-cost share budgets). These unique forms are accessible via the Workspace or Grants.gov. The Research & Related Fed+NonFed Budget is for those applicants providing cost share while those not providing cost share, will use the Research and Related Budget. In the upper left-hand side of these forms, the subapplicant will check the box to denote consortium/subaward. Please coordinate with the Prime (Lead) Applicant.

The Research and Related Budget or the Research and Related Fed+NonFed Budget form must be completed in accordance with the instructions on the form in Grants.gov Workspace (Activate Help Mode to see instructions). Applicants must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. Applicants must complete all the mandatory information on the form before the NEXT PERIOD button is activated. Applicants may request funds for any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability, reasonableness, and allocability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this NOFO.

When completing the form in Grants.gov Workspace, applicants can hover over the specific fields within the form to view instructions for completing the fields.

SUBAPPLICANT BUDGET (R&R) (MANDATORY; to be used if no cost share is provided)

Budgets for Subapplicants: If subapplicants are included in your application, a separate Research and Related Budget and budget justification is mandatory for each sub-applicant.

In either the Research and Related Budget or the Research and Related Budget Fed+NonFed Budget, select the consortium/subaward button on the upper left-hand corner of the budget forms. Each subapplicant is required to submit a separate budget (please collaborate with the Prime Applicant to determine how it is to be submitted). After the subrecipient has either emailed its completed budget back to you or completed it within Workspace, attach it to one of the blocks provided on the form. Use up to 10 letters of the subrecipient's name (plus.pdf) as the file name (e.g., ucla.pdf or energyres.pdf). Filenames must not exceed 50 characters. Prime applicants should ensure that any files received from proposed subapplicants are the PDF files extracted from the SUBAPPLICANT BUDGET ATTACHMENT(S) FORM.

NOTE: *Errors will be created if a subapplicant sends a prime applicant a budget form that was not extracted from the application package.*

If the project involves more subapplicants than there are places in the SUBAWARD BUDGET ATTACHMENT(S) FORM, the additional subaward budgets may be saved as PDF files and appended to the Budget Justification attached to Field L or may be attached to the Attachments Form.

Applicants should consult with their local information technology ("IT") support resources for any necessary assistance in converting the forms downloaded from Grants.gov into plain PDF files that can be combined into one non-Portfolio PDF file (the Budget Justification).

BUDGET JUSTIFICATION (Excel Spreadsheet) (MANDATORY for both Prime Applicant and Subapplicants)

A Budget Justification Narrative is required for both the Prime Applicant and Subapplicant. The budget and correlating justification detail how the project will allocate funds to support the specific budget categories and the project. It is an essential component of the application. Both the Prime Applicant and Subapplicant must submit a budget and budget justification and is required to identify how the cost estimates were developed (e.g., standard university labor rates, institution policy, vendor quotes, market research estimates, etc.).

The required budget justification is provided in Attachment 12 while a budget narrative justification (Attachment 13) can be used to supplement the Budget Justification Excel Spreadsheet to further justify the costs requested in the budget. A sample Budget Justification Excel Spreadsheet is included as Attachment 12 to this NOFO for use and describes the level of detail required in the budget justification. The budget justification must contain the level of detail instructed in the workbook. Do not PDF this document as it is used to verify the formulas of costs requested.

Instructions for attaching the Budget Justification to the Research and Related Budget: For the Applicant, to attach the completed Budget Justification Summary, click "Add Attachment" in Field L – Budget Justification of the Research and Related Budget form in Grants.gov Workspace. The file automatically carries over to each budget year. These instructions apply to either the Research and Related Budget (no cost share provided) and the Research and Related Fed+NonFed Budget.

Budget and Budget Narrative Tips

- Organize the justification by listing items in the same order as presented on the budget.
- Ensure that the narrative correlates with the budget in dollar amounts and language.
- Explain the line items. If costs are estimated, provide a basis for the estimate.
- Explain if costs are based on prior experience of similar activities or from a quote. If a cost is based on the product of two numbers (such as a number of items at a per-item price), ensure that your calculation is correct.
- Explain the basis for any inflationary factor should an inflationary factor for future budget periods be proposed.
- Provide any other information you wish to submit to justify your budget request.
- If the application includes sub-applicants, a separate budget justification for each subapplicant must be included following their detailed budget. Each sub-applicant's budget justification narrative should be separate from the prime recipient's justification and address just those items that pertain to their portion of the proposed award. See "R&R Subaward Budget Attachment(s)" below.
- Include the indirect cost rate agreement used in preparing a budget as a part of the budget justification.

Categories in the Research and Related Budget include the below and are further explained below.

Section A:	Senior/Key Personnel
Section B:	Other Personnel
Section C:	Equipment Description
Section D:	Travel
Section E:	Participant/Trainee Costs
Section F:	Other Direct Costs
Section G:	Direct Costs
Section H:	Indirect Costs
Section I:	Total Direct and Indirect Costs

For Cost Share: NonFed applies to cost share and must use the R&R Fed+NonFed Budget

Section A: Senior/Key Personnel

Applicants are required to enter total funds requested for senior/key on the SF424. If senior/key personnel are included, a budget justification narrative is required and must explain the need for requested senior/key personnel.

For each Senior/Key Person, enter the requested information (e.g., list personnel, base salary, the number of months that person will be allocated to the project, requested salary, fringe benefits, and the total funds requested for each person). Funds requested for personnel must be justified as the product of their effort on the project and their institutional base salary.

Funds requested for fringe benefits must be calculated as the product of the requested salary and, if present, the negotiated fringe benefit rate contained in an institution's negotiated indirect cost rate agreement.

The fringe benefit rate used must be explained if it is not the standard faculty rate. Provide the details of all senior/key personnel who will be working on the award, regardless of their source(s) of compensation. Explain their source(s) of compensation if it is not from this award. Include the indirect cost rate agreement as a part of the budget justification, if applicable.

Section B: Other Personnel

Applicants are required to enter total funds requested for other personnel on the SF424. If other personnel are included, a budget justification narrative is required and must explain the need for requested the other personnel and provide the number of positions being filled in each category of other personnel.

For each Other Personnel, enter the requested information (e.g., list personnel, the number of months that person will be allocated to the project, requested salary fringe benefits, and the total funds requested for each person). Funds requested for personnel must be justified as the product of their effort on the project and their institutional base salary. Funds requested for fringe benefits must be calculated as the product of the requested salary and, if present, the negotiated fringe benefit rate contained in an institution's negotiated indirect cost rate agreement.

Provide the details of all other personnel who will be working on the award, regardless of their source(s) of compensation. Explain their source(s) of compensation if it is not from this award. Include the indirect cost rate agreement as a part of the budget justification, if applicable.

The below sections are not separate documents and will not be provided but are included in the Research and Related Budget Form and justified in the Budget Narrative Excel Spreadsheet. However, you may use the Budget Narrative format to provide a full narrative justification of each of the costs below, if necessary.

Section A&B: Fringe Benefits

Except as otherwise provided, all project grants and cooperative agreements awarded by the Department shall include funds for the amount of indirect costs applicable to the awards, based on the Federally Negotiated Indirect Cost Rate in effect for the recipient at the time of the award. All Yellow Highlighted Rows/Columns Must be Filled-in, provided costs are included. Attach a copy of the Negotiated Indirect Cost Rate Agreement.

Section C: Equipment

Applicants are required to enter total funds requested for equipment on the SF424. If equipment is included, a budget justification narrative is required and must explain the need for the equipment.

Equipment is defined as tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the applicant's institution for financial statement purposes, or \$10,000. (Note that this designation applies for application budgeting only and differs from the DOE definition of capital equipment.)

Allowable items will be limited to research equipment and apparatus not already available for the conduct of the work. General-purpose office equipment is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research.

List each item of equipment separately and justify each in the budget justification narrative. Do not aggregate items of equipment.

If equipment that is already available is requested, the justification must explain why the current equipment is insufficient to accomplish the proposed research and how the new equipment's use will be

allocated specifically to the proposed research.

General purpose equipment, such as desktop computers and laptops, that will be used on multiple projects or for personal use should not be listed as a direct cost but should come out of the F&A costs, unless primarily or exclusively used in the actual conduct of the proposed scientific research. Price quotations that are unexpired must be provided to support the requested funding.

If application is selected for negotiation, be prepared to submit quotes for requested equipment items.

Section D: Travel – Domestic and Foreign Travel

Applicants are required to enter total funds requested for travel on the SF424. A budget justification narrative is required for all travel.

Senior and key personnel travel requests must be included in the budget request and budget justification narrative. Trainee and participant travel may be requested in Section E for participant/trainee costs.

The budget justification narrative must clearly state the purpose of the travel and how the travel is directly related to the proposed project research and activity. To qualify for support, attendance at meetings or conferences must be related to the project of the award and enhance the individual(s) on the award capability to perform the research, plan extensions of it, or disseminate its results.

The budget justification narrative is to include: 1) the destination (if known, at least for year 1), 2) number of people traveling, 3) dates or duration of the stay for all anticipated travel; and 4) cost breakdown for transportation, per diem meals (e.g., number of days), per diem lodging (e.g., number of nights), using the entity's policy. Indicate the basis for the cost estimate (e.g., Low prices for (e.g., flight, car rental etc.,) could be obtained from travel websites that compete for customers such as: Expedia.com, Travelocity.com, Orbitz.com, or Priceline.com.

Applicants must include access to or a copy of their entity's travel policy in the budget justification. If an applicant entity does not have a travel policy, this must be reported and the recipient must use the U.S. federal government guidance for domestic travel is located at <https://www.gsa.gov/travel/plan-book/per-diem-rates>, and for foreign travel is located at [U.S. Department of State | Home Page](https://www.state.gov/department-of-state/home-page) for foreign budget requests.

Applicants should budget travel expenses (including transportation to and from the U.S. IHE and DOE Laboratory, lodging, and meals per their home institution's policy) for each student internship and postdoc/staff laboratory visit and continue to pay salary at regular rate.

Domestic travel is to be justified separately from foreign travel.

For foreign travel alerts/advisories, please review information at the Department of State <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories.html/>.

All requests for foreign travel during performance of an awarded cooperative agreement, not initially authorized by the grants officer, must be submitted in advance (a minimum of 45 calendar days) and in writing, to the Grants Officer for prior approval. The prior approval request submitted by the AOR must include the travel dates, location (including any personal travel during the trip), purpose, justification, and cost. NNSA will not support travel allowance that is more than per diem rates established via the U.S. Department of State and the U.S. General Services Administration (GSA), or allowable from an IHE's policy. Each recipient must refer to their institution's travel policy for guidance on how to arrange the travel.

Section E: Participant Support/Trainee Costs

Applicants are required to enter total funds requested for participant/trainee costs on the SF424. A budget justification narrative is required for requested participant/trainee costs.

Training costs include the educational projects that intend to support trainees (college, graduate, and postgraduate students).

Requested training costs may include stipend levels and amounts, tuition, and travel. All costs must be included and explained in the budget justification narrative.

Applicants should budget travel expenses (including transportation to and from U.S. institution of higher learning and NNSA Laboratory, lodging, and meals per their home institution's policy) for each student internship and postdoc/staff laboratory visit and continue to pay salary at regular rate.

Participant costs are those costs associated with conferences, workshops, symposia, or institutes. Requested participant costs may include registration and travel to program related conferences, workshops, symposia, or institutes.

The budget justification narrative is to indicate the number of participants, cost for each participant, purpose of the activity, dates and places of activity and any related administrative expenses. It is also to include the same information for travel as listed above in the travel category, as well as indicate the basis for the cost estimate (e.g., quotes from vendors or suppliers, experience of similar professional events, or some other basis).

Section F: Other Direct Costs

Applicants are required to enter requested costs for each of the following sections.

Worksheet F-1: Materials & Supplies

Materials and Supplies: Enter total funds requested for materials and supplies in the appropriate fields on the SF424.

If funds are requested for materials and supplies, a budget justification is required for them. The budget justification narrative must clearly state how the materials and supplies are directly related to the proposed research or activity.

The budget justification narrative is to indicate general categories such as laboratory supplies, glassware, chemicals, including an amount for each category (items not identified under "Equipment"). Line items for supplies/materials less than \$1,000 are not required to be itemized.

Indicate the basis for the cost estimate (e.g., if available, include on-line weblinks and/or addresses such as those beginning with HTTPS://, vendor quote(s) from vendors or suppliers, experience of similar items, or some other basis to justify the request).

Unexpired price quotations will be required, at the time of award discussions and negotiations, to support individual items exceeding \$5,000 in Material & Supplies. If available, include website for search of costs, vendor quote(s) or suppliers.

Worksheet F-2: Publication Costs

Enter the total publication funds requested on the Research and Related Budgets or Research and Related Fed+NonFed Budget. Applicants may request funds for the costs of documenting, preparing, publishing

or otherwise making available to others the findings and products of the work conducted under the award. The budget justification narrative is to include supporting information and indicate the basis for the cost estimate (e.g., quotes from vendors or suppliers, experience of similar items, or some other basis).

Worksheet F-3 Consultant Services: Enter total funds requested for all consultant services on the Research and Related Budgets or Research and Related Fed+NonFed Budget. The budget justification narrative is to identify each consultant, the services he/she/they will perform, total number of calendar days, travel costs, and total estimated costs, as well as indicate the basis for the cost estimate (e.g., quotes from vendors or suppliers, experience of similar services, or some other basis).

Worksheet F-5 ADP/Computer Services:
Enter total funds requested for ADP/Computer Services on the Research and Related Budgets or Research and Related Fed+NonFed Budget. Any cloud computing costs must be included under this item. The cost of computer services, including computer-based retrieval of scientific, technical and education information may be requested. The budget justification narrative is to include the established computer service rates at the proposing organization, if applicable, as well as indicate the basis for the cost estimate (e.g., quotes from vendors or suppliers, experience of similar services, or some other basis).

Worksheet F-5 Subawards/Consortium/Contractual Costs: Enter total costs for all subawards/consortium organizations and other contractual costs proposed for the project on the SF424. The budget justification narrative is to detail the associated costs.

Worksheet F-6 Equipment or Facility Rental/User Fees:
Enter total funds requested for Equipment or Facility Rental/User Fees on the SF424. The budget justification narrative is to identify each rental/user fee and provide an explanation of its need, as well as indicate the basis for the cost estimate (e.g., copy of Equipment or Facility Rental User Fee Agreement, quotes from vendors or suppliers, experience of similar user fees, or some other basis).

Worksheet F-7 Alterations & Renovations
Provide a description of the alterations and renovation costs (including repairs, painting, removal or installation of partitions, shielding, or air conditioning, and applicable square footage and costs) by year and explain how they will benefit the project. Provide supporting documentation and quotes.

Worksheet F-7 Tuition & Fees Remission Costs
Provide number of students, graduate or undergraduate, and full or part time per year will be funded. Also provide web site reference to institution policy regarding tuition costs that reflects amounts and/or percentages of tuition costs that will be charged to the Government.

Worksheet F-9 Other Direct Costs
Other: Add text to describe any other Direct Costs not requested above. Enter costs associated with "Other" item(s) on the SF424. Use the budget justification to further itemize and provide need rationale.
Direct Costs: This section represents Total Direct Costs (Sections A through F).

Section G: Indirect Costs

Applicants are required to enter the Indirect Cost information, including the rates and bases being used, for each field. Only four general categories of indirect costs are allowed/requested on this form, so please consolidate if needed. Include the cognizant Federal agency and contact information if using a negotiated rate agreement. Within the budget justification, explain the use of multiple rates, if multiple rates are

used.

Section I: Total Direct and Indirect Costs: This is the total of Sections G and H.

PROJECT/PERFORMANCE SITE LOCATION(S) (MANDATORY)

Applicants are required to indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), applicants must identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the **2-digit state code** followed by a dash and a 3-digit Congressional district code, for example VA-001. Hover over this field for additional instructions. To find the accurate Congressional district code, log onto [My Congressional District](#). Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

CERTIFICATION REGARDING LOBBYING OR DISCLOSURE OF LOBBYING ACTIVITIES (MANDATORY)

- Certification Regarding Lobbying Form

Prime recipients and subapplicants may not use any Federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters. Both the Prime Applicant and Subapplicants must complete the "Certification Regarding Lobbying" form to certify that no appropriated funds will be or have been used for lobbying activities. This form is part of the Application Package that should be completed in Grants.gov Workspace.

- Disclosure of Lobbying Activities (SF-LLL)

If any funds other than Federal appropriated funds 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, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying." Both the Prime Applicant and Subapplicant must complete the Disclosure of Lobbying Activities form (SF-LLL)

GOVERNMENT APPROVED INDIRECT RATES AND COST ALLOCATIONS (MANDATORY)

If a Negotiated Indirect Cost Rate Agreement (NICRA) has been negotiated and approved for the Prime and Subapplicant(s) (IHEs) by its the cognizant federal agency, this document must be submitted with the application. The NICRA must be uploaded in PDF format to the Grants.gov R&R Other Project Information form, which is part of the Application Package in Grants.gov Workspace. To attach the Negotiated Indirect Rate Agreement, click the "Add Attachments" in the Attachments Form, Attachment 1 in Grants.gov Workspace.to the Grants.gov Workspace.

The Prime Applicant and Subapplicant may request indirect costs under this NOFO if a negotiated indirect cost rate does not exist, provide supporting documentation for a proposed indirect rate. If an entity is proposing indirect costs and does not already have an Indirect Cost Rate Agreement with your Cognizant Federal Agency or documentation of rates accepted for estimating purposes by DOE/NNSA or another Federal agency, it is recommended that you begin preparing an Indirect Cost Rate Application to be submitted, upon request, to the NNSA Grants Officer/Specialist who will evaluate your application if you are considered for award.

SUMMARY OF REQUIRED FORMS/FILES

For minimum eligibility, an application must include the standard forms and additional mandatory forms found in **Attachment 1 Applicant and Subapplicant Required Forms and Format**. The below is not a complete list of all required documentation and standard forms required.

SUBMISSIONS FROM APPLICANTS CONSIDERED FOR FUNDING

National Environmental Policy Act (NEPA) Compliance

Question 4.a. on the "Research and Related Other Project Information" document indicates "potential impact on the environment," or if DOE/NNSA's own review indicates it, DOE/NNSA may ask the applicant to provide additional information on those impacts in order to prepare an environmental critique/synopsis per 10 CFR 1021.216. Note that this pre-award environmental critique/synopsis process would be separate from the preparation of a NEPA document such as an environmental impact statement (EIS) or an environmental assessment (EA). If DOE/NNSA determines the latter documentation is necessary, this process would need to be completed, funded by and with the participation of the recipient, prior to them taking any action on the proposed project that could have adverse environmental effects or that could limit the choice of reasonable alternatives. Note that in most cases, even when "Potential Impact to the Environment" is checked "Yes," preparation of such NEPA documents is rarely necessary, but DOE/NNSA has the expectation that the Applicant will disclose the potential, which would serve to initiate dialog with DOE/NNSA if necessary. The inability to satisfy the NEPA requirements after an award would result in cancellation of the award.

If selected for potential award, DOE/NNSA reserves the right to request additional or clarifying information for any reason deemed necessary. The request may include but not be limited to:

- Environmental Information
- Indirect cost information
- Information to determine risk posed
- Letter from Vice President for Research (or equivalent), as described in Section I-I.
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See [10 CFR 1040.5](#))
- Other budget information
- Representation of Limited Rights Data and Restricted Software ([52.227-5](#)), if applicable

DELIVERABLES, IF SELECTED FOR AN AWARD

The DOE F-4600.2, Federal Assistance Reporting Checklist provides instructions for submission of reports both financial and performance.

NOTE: The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered. The DOE F 4600.2 Federal Assistance Reporting Checklist can be found at (Financial Assistance Forms and Information for Applicants and Recipients | Department of Energy). These reports shall also be identified within the text of the Statement of Project Objectives. The Prime Applicant (Lead) is the responsible entity that will submit all Performance Reports; however, it is critical that a subapplicant provide bi-annual reports (or as requested by the Prime Applicant). The information from the subapplicants flows up and is combined to provide a quarterly performance report as well as financial reports.

The Prime Applicant is responsible for and:

- Has its performance measured in relation to whether the objectives of a Federal program were met.
- Has responsibility for programmatic decision-making.
- Is responsible for adherence to applicable Federal program requirements specified in the Federal award.
- Implements a program for a public purpose specified in authorizing statute, as opposed to providing goods or services for the benefit of the pass-through entity.

D. SUBMISSION DATES AND TIMES

Application Due Date: [The application due date is printed on the cover of this NOFO.](#) Entities are encouraged to submit applications well before the deadline. Applications may be submitted at any time between the publication of this NOFO and the stated deadline.

Late Submissions: Entities are responsible for beginning the submission process in sufficient time to accommodate reasonably foreseeable incidents, contingencies, and disruptions. DOE/NNSA may consider accepting late applications and full applications should there be a significant natural disaster in the prime entity's location or an incapacitating or life-threatening illnesses of the individual responsible for submitting the application on behalf of the entity. Should this occur, the entity's Authorized Organizational Representative (AOR) must submit an extension request with documentation to justify the late submission request no more than 30 calendar days, post deadline. There is no guarantee that the request will be approved for late submission.

SECTION V - APPLICATION REVIEW INFORMATION

A. CRITERIA

The section includes the criteria reviewers will use to evaluate and score applications, information on the merit review and award selection process, as well as anticipated announcement and award dates.

Application requirements cover a diverse set of topics and include not just a detailed project narrative but also a robust set of application attachments. Application attachments differ based on each program's unique requirements and may have included, for example, organizational and governing documents; resumes of board members and senior management; legal and compliance risk management policies and procedures; financial statements; workplans for the first year of program implementations, and budget and budget narratives. The Selection Official is responsible for reviewing each of the required elements and from this action, determine eligibility for award.

B. APPLICATION ELIGIBILITY – COMPETITIVE APPLICATION REVIEW PROCESS

Prior to conducting the comprehensive merit review, an initial review will be performed to determine whether: (1) the Applicant is eligible for an award; (2) the information required by the NOFO has been submitted; (3) all requirements of the NOFO are satisfied; and (4) the proposed project is responsive to the program objectives of the NOFO (program determination). The initial review for eligibility and responsiveness may be performed by the GO/GS or a designated official as designated by the GO in writing. The results of this review will be documented on the Initial Review form.

Initial Compliance Review

All applications that are received by the application due date and time, as specified in the NOFO, will be subject to an initial compliance review, and upon satisfactorily passing the initial review, will be subjected to a comprehensive evaluation. If an application is submitted past the deadline and deemed ineligible for consideration, the Grants Officer/Grants Specialist (GO/GS) will promptly notify the applicant in writing that the application cannot be considered for award. An application is late if the date and time stamp for submission to Grants.gov is after the stated closing date and time. A late application may be reviewed if the applicant provides evidence of technical issues that the Grants.gov helpdesk failed to resolve prior to the receipt date and time or if the entity received approval from the GO based on the late submissions policy in the NOFO, regarding significant natural disaster or incapacitating or life-threatening illness.

Reminder: To be eligible for the Merit Review, applicants are to ensure that they have addressed all mandatory requirements in their application submission.

Applications that pass the initial review will be subjected to a merit review in accordance with [2 CFR 200.205](#). Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "[Department of Energy Merit Review Guide for Financial Assistance](#)."

C. COMPREHENSIVE MERIT REVIEW

All timely applications that satisfactorily pass the initial review will be eligible for comprehensive merit review. The comprehensive review will be conducted in two stages: independent review and consensus review. The evaluation criteria are listed in [Section V.D](#). If necessary, the merit review panel will conduct pre-selection clarifications detailed in [Section V.D](#).

D. MERIT REVIEW CRITERIA

All timely applications that satisfactorily pass the initial review will be eligible for comprehensive merit review. The comprehensive review will be conducted in two stages: independent review and consensus review. Applications passing the initial review will be evaluated in accordance with the following Merit Review Criteria.

Criterion 1 – Technical Merit – 40%

- The proposal clearly lays out a plan for conducting innovative research across multiple objectives.
- The proposed research complements on-going research at the DOE National Laboratories.
- What is the likelihood the stated research objectives are achievable? Is the risk well understood
- Extent to which the application supports the continued development of nuclear nonproliferation-related disciplines.
- Extent to which the application supports the development and sustainment of the next generation of nuclear nonproliferation professionals.
- Extent to which the plan integrates multiple scientific, engineering, and other disciplines to achieve stated objectives, and that proposed activities are well-reasoned, well-organized, and based on a sound rationale.

Criterion 2 – Applicant Team Capabilities – 40%

- The likelihood that the applicant's described approach and structure (e.g., communication, coordination, and integration) to managing the consortium, including a framework for coordinating DOE National Laboratories interactions, will lead to the successful performance of the proposed work and objectives under this NOFO.
- Qualifications, capabilities and experience of the principal investigators, team leaders, and key personnel involved.
- PI time commitment to the project (refer to current and pending support): If the same PI is already working on multiple awards, consideration should be given if the PI can make significant contribution to the proposed project considering time commitments to other project awards.
- The likelihood that the applicant's resources and facilities, including key and unique facilities, as identified by the applicant, will lead to the successful achievement of the proposed work and objectives under this NOFO.

Criterion 3 – Past Experience – 20%

- Extent of experience the lead institution has in implementing and managing similar programs of this size.
- Extent of experience the lead institution has with building and managing a multi-component consortium/organization, and to what extent has the applicant had past or on-going working relationships with the DOE National Laboratories.
- Likelihood the consortium's relevant experience and past, and on-going relationships with the DOE National Laboratories will lead to success.

Proposed budgets and costs will be evaluated for those applications which receive the highest merit review ratings to determine whether the budgets are substantiated and reasonable. NNSA reserves the right to request applicants to provide additional/supplemental information to verify costs and to justify proposed budgets. NNSA also reserves the right to negotiate changes to any proposed budget and/or project scope prior to making award to any applicant. NNSA shall not make awards based on unreasonable budgets or where costs outweigh any advantages in the technical approval.

E. PROGRAM POLICY REVIEW

Each application deemed a finalist by the merit review panel may receive a program policy review. The program policy factors will not be point scored, but the Selecting Official (SO) may consider them in making the selections for negotiation of award. The SO may request that an independent person(s) (i.e., not member(s) of the Merit Review Panel) aid in the application of the program policy factors. These factors, while not indicators of the application's merit (e.g., technical excellence, cost, applicant's ability), nevertheless, may be essential to the process of selecting the application(s) that, individually or collectively, will best achieve the program objectives. Such factors are often beyond the control of the applicant. The SO will evaluate applications based on the program policy factors listed below:

- A group of awards which represent a diversity of technical approaches and methods.
- A group of awards that are complementary which, when taken together, will best achieve the research goals and objectives.
- A group of awards that provide a balanced programmatic effort and a variety of different technical perspectives.
- A group of awards that provide a balance in geographic regions.

F. REPORTING OF MATTERS RELATED TO RECIPIENT INTEGRITY

The DOE/NNSA, prior to making a federal award with a total amount of Federal share greater than the simplified acquisition threshold (SAT), is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM.

The applicant may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM.

The DOE/NNSA will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in [2 CFR 200.206](#).

G. ANTICIPATED SELECTION OF AWARD

The Selection Official will consider the availability of funds, the distribution of funds among the topic areas, program priorities, program policy factors, and the merit review results when selecting applications to be considered for award.

Award Negotiation

NNSA may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to the following: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) NNSA needs additional information to determine that the recipient is capable of complying with the requirements in 2 CFR 200 as modified by 2 CFR 910 (DOE Financial Assistance Regulation); and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the NNSA will preclude award to the applicant.

H. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

DOE/NNSA anticipates notifying the applicant(s) selected for potential awards as per the dates on the Cover Page of this NOFO. For a start date, please see the NOFO Cover Page, depending on availability of funds.

SECTION VI – FEDERAL AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

Notice of Selection

Selected Applicant Notification: If an application is considered for award by NNSA, the applicant will be notified by the NNSA Grants Officer/Grants Specialist. This notice of selection is not an authorization to begin performance; it is a notice that NNSA may begin award negotiations with the selected applicant.

Non-selected Notification: Entities whose applications have not been selected will be notified as promptly as possible via non-selection letter by DOE/NNSA.

B. NOTICE OF AWARD: COOPERATIVE AGREEMENT

A Cooperative Agreement will be issued by the DOE/NNSA Grants Officer and is the authorizing award document.

C. TERMS, CONDITIONS, AND REQUIREMENTS

All awards under this NOFO are subject to this NOFO and its applicable program regulations, in addition to any special terms and conditions, unless explicitly written into the award that they are not required: (i) Federal Assistance Reporting Checklist and Instructions; (ii) National Policy Assurances; (iii) Intellectual Property Provisions; (iv) Government Research Terms and Conditions; (v) DOE Agency Specific Requirements; (vi) Uniform Guidance (2 CFR 200), (vii) DOE Financial Assistance Regulations, [2 CFR 200](#) as amended by [2 CFR 910](#); (viii) and Application as approved by NNSA. The below will be attached to the Cooperative Agreement:

- Federal Assistance Reporting Checklist and Instructions, DOE F-4600.2
The DOE Federal Assistance Reporting Checklist and Instructions is located at <https://www.energy.gov/management/financial-assistance-forms-and-information-applicants-and-recipients>.
- National Policy Assurances
The National Policy Assurances that will be incorporated as award terms are located at [Financial Assistance Forms and Information For Applicants and Recipients | Department of Energy](#).
Intellectual Property Provisions
- The DOE Standard Intellectual Property (IP) Provisions for Financial Assistance Awards are located at [Standard Intellectual Property \(IP\) Provisions for Financial Assistance Awards | Department of Energy](#).
- Special Terms and Conditions for Use in Most Grants and Cooperative Agreements
Found at [Financial Assistance Forms and Information For Applicants and Recipients | Department of Energy](#)
- Government-wide Research Terms and Conditions
Found at <https://www.nsf.gov/awards/managing/rtc.jsp>.
- DOE Financial Assistance Regulations
The Department of Energy's Financial Assistance Regulations are located at [Financial Assistance | Department of Energy](#) and the DOE FA Guide is located at:

<https://www.energy.gov/management/articles/department-energy-guide-financial-assistance>.

- PART 200—Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards and 2 CFR 200 as amended by [2 CFR 910](#). The Government-wide Uniform Regulations for Financial Assistance, 2 CFR Part 200, located at [eCFR :: 2 CFR Part 200 -- Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards](#). The Government-wide Uniform Regulations for Financial Assistance, as amended by Part 910 for the Department of Energy are located at [eCFR :: 2 CFR Part 910 -- Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards](#).

Preaward Costs

Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 2 CFR part 200 as amended by 2 CFR part 910. Recipient must notify the Grants Officer in writing if the 90-day pre-award cost option will be used. Recipients must obtain the prior approval of the Grants Officer for any preaward costs that are for periods greater than this 90-day calendar period.

Upon selection of the applicant, requests for pre-award costs REQUIRES PRIOR APPROVAL FROM THE GRANTS OFFICER and should include a justification needed to cover requested pre-award costs along with a detailed breakdown of budget by cost element (i.e., labor, travel, materials, supplies, etc.). Pre-award costs are allowable only to the extent that they would have been allowable if incurred after the date of the Federal award. Pre-award costs are incurred at the applicant's risk. DOE/NNSA is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected. IHEs are encouraged to start recruitment of students and postdocs early and be prepared for an immediate start at the beginning of Period of Performance. Consequently, there may be a substantial lead time necessitating the request for pre-award costs beyond 90 days. Additional information may be found at 2 CFR [200.438](#).

For further information related to the Federal Award Administration, please see **Attachments 3, 4, 5, and 6**.

Section VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Grants.gov Questions

Direct questions relating to the Grants.gov registration process, system requirements, application form, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@Grants.gov. DOE/NNSA staff are unable to answer Grants.gov questions.

NOFO Program and Technical Questions

Direct specific program and technical questions to FedConnect at www.FedConnect.net. Questions sent to an email address will be referred to www.FedConnect.net

NOFO Financial and Administrative Questions

Direct specific financial and administrative questions submitting your question to www.FedConnect.net. Do not address questions related to the application process to the emails provided below. Please use FedConnect.

B. AGENCY CONTACTS

Title/Team	Contact Information
Federal Program Manager and Technical Project Officer	Jeffrey Rivas 505-845-5161 Jeffrey.Rivas@nnsa.doe.gov
Federal Grants Officer	Virginia Hernandez 240-688-5349 Virginia.Hernandez@nnsa.doe.gov

C. UNAUTHORIZED COMMUNICATION

Any questions or comments about the NOFO must be directed to FEDConnect at www.FedConnect.net. E-Mails or telephone calls made directly to the above agency contacts will not be considered.

D. OTHER PERTINENT RESOURCES

Attachment 1. Applicant and Subapplicant Required Forms – For Reference Only

Attachment 2. DOE National Laboratories – For Reference Only

Attachment 3: Policy Provisions

Attachment 4. Administrative and National Policy Requirements

Attachment 5: Glossary of Terms and Conditions

Attachment 6: Reference Materials - WEBLINKS